

REALOGY HOLDINGS CORP.  
Form 10-K  
February 26, 2019  
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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

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FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2018

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File No. 001-35674

REALOGY HOLDINGS CORP.

(Exact name of registrant as specified in its charter)

20-8050955

(I.R.S. Employer Identification Number)

Commission File No. 333-148153

REALOGY GROUP LLC

(Exact name of registrant as specified in its charter)

20-4381990

(I.R.S. Employer Identification Number)

Delaware

(State or other jurisdiction of incorporation or organization)

175 Park Avenue

Madison, NJ 07940

(Address of principal executive offices) (Zip Code)

(973) 407-2000

(Registrants' telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

	Title of each class	Name of each exchange on which registered
Realogy Holdings Corp.	Common Stock, par value \$0.01 per share	New York Stock Exchange
Realogy Group LLC	None	None

Securities registered pursuant to Section 12(g) of the Act: None

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Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Realogy Holdings Corp. Yes  No  Realogy Group LLC Yes  No

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act.

Realogy Holdings Corp. Yes  No  Realogy Group LLC Yes  No

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Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Realogy Holdings Corp. Yes  No  Realogy Group LLC Yes  No

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files).

Realogy Holdings Corp. Yes  No  Realogy Group LLC Yes  No

Indicate by check mark if disclosure of delinquent filer pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Realogy Holdings Corp.  Realogy Group LLC

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

	Large accelerated filer	Accelerated filer	Non-accelerated filer	Smaller reporting company	Emerging growth company
Realogy Holdings Corp.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Realogy Group LLC	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Realogy Holdings Corp. Yes  No  Realogy Group LLC Yes  No

The aggregate market value of the voting and non-voting common equity of Realogy Holdings Corp. held by non-affiliates as of the close of business on June 30, 2018 was \$2.8 billion. There were 113,485,998 shares of Common Stock, \$0.01 par value, of Realogy Holdings Corp. outstanding as of February 22, 2019.

Realogy Group LLC meets the conditions set forth in General Instruction I(1)(a) and (b) of Form 10-K and is therefore filing this Form with the reduced disclosure format applicable to Realogy Group LLC.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the Proxy Statement prepared for the Annual Meeting of Stockholders to be held May 1, 2019 are incorporated by reference into Part III of this report.

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FORWARD-LOOKING STATEMENTS

Forward-looking statements included in this Annual Report and our other public filings or other public statements that we make from time to time are based on various facts and derived utilizing numerous important assumptions and are subject to known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Forward-looking statements include the information concerning our future financial performance, business strategy, projected plans and objectives, as well as projections of macroeconomic and industry trends, which are inherently unreliable due to the multiple factors that impact economic trends, and any such variations may be material. Statements preceded by, followed by or that otherwise include the words "believes," "expects," "anticipates," "intends," "projects," "estimates," "plans," and similar expressions or future or conditional verbs such as "will," "should," "would," "may" and "could" are generally forward-looking in nature and not historical facts. You should understand that the following important factors could affect our future results and cause actual results to differ materially from those expressed in the forward-looking statements:

- adverse developments or the absence of sustained improvement in general business, economic and political conditions or the U.S. residential real estate markets, either regionally or nationally, including but not limited to:
  - a decline or a lack of improvement in the number of homesales;
  - stagnant or declining home prices;
  - a reduction in the affordability of housing;
  - increasing mortgage rates and/or constraints on the availability of mortgage financing;
  - insufficient or excessive home inventory levels by market and price point;
  - a lack of improvement or deceleration in the building of new housing and/or irregular timing or volume of new development closings;
  - the potential negative impact of certain provisions of the Tax Cuts and Jobs Act of 2017 (the "2017 Tax Act") (i) on home values over time in states with high property, sales and state and local income taxes and (ii) on homeownership rates; and/or
  - the impact of recessions, slow economic growth, or a deterioration in other economic factors that particularly impact the residential real estate market and the business segments in which we operate, whether broadly or by geography and price segments;
- increased competition in the industry and for independent sales agents, including through:
  - competing real estate brokerages, including those seeking to disrupt historic real estate brokerage models;
  - competitors seeking to eliminate brokers or agents from, or minimize the role they play in, the homesale transaction;
  - and
  - other industry participants otherwise competing for a portion of gross commission income;
- continuing pressure on the share of gross commission income paid by our company owned brokerages and our affiliated franchisees to affiliated independent sales agents and independent sales agent teams;
- our inability to successfully develop or procure technology that supports our strategy to grow the base of independent sales agents at our company owned and franchisee real estate brokerages;
- our geographic and high-end market concentration, including the heightened competition for independent sales agents in those geographies and price points;
- our inability to enter into franchise agreements with new franchisees or renew existing franchise agreements at current contractual royalty rates without increasing the amount and prevalence of sales incentives;
- the lack of revenue growth or declining profitability of our franchisees and company owned brokerage operations;
- the loss of a significant affinity client or multiple significant relocation clients or changes in corporate relocation practices resulting in fewer employee relocations, reduced relocation benefits and/or increasing competition in corporate relocation;
- an increase in the experienced claims losses of our title underwriter;
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our failure or alleged failure to comply with laws, regulations and regulatory interpretations and any changes or stricter interpretations of any of the foregoing (whether through private litigation or governmental action), including but not limited to (1) state or federal employment laws or regulations that would require reclassification

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of independent contractor sales agents to employee status, (2) privacy or data security laws and regulations and (3) RESPA or other federal or state consumer protection or similar laws;

risks relating to our ability to return capital to stockholders;

risks associated with our substantial indebtedness and interest obligations and restrictions contained in our debt agreements, including risks relating to having to dedicate a significant portion of our cash flows from operations to service our debt and risks relating to our ability to refinance or repay our indebtedness or incur additional indebtedness; and

risks and growing costs related to both cybersecurity threats to our data and customer, franchisee, employee and independent sales agent data, as well as those related to our compliance with the growing number of laws, regulations and other requirements related to the protection of personal information.

Other factors not identified above, including those described under "Item 1A.—Risk Factors" and "Item 7.—Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Annual Report, may also cause actual results to differ materially from those described in our forward-looking statements. Most of these factors are difficult to anticipate and are generally beyond our control. You should consider these factors in connection with any forward-looking statements that may be made by us and our businesses generally.

All forward-looking statements herein speak only as of the date of this report and are expressly qualified in their entirety by the cautionary statements included in or incorporated by reference into this report. Except as is required by law, we expressly disclaim any obligation to publicly release any revisions to forward-looking statements to reflect events after the date of this report. For any forward-looking statement contained in this Annual Report, our public filings or other public statements, we claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995.

### TRADEMARKS AND SERVICE MARKS

We own or have rights to use the trademarks, service marks and trade names that we use in conjunction with the operation of our business. Some of the more important trademarks that we own or have rights to use that appear in this Annual Report include the CENTURY 21<sup>®</sup>, COLDWELL BANKER<sup>®</sup>, ERA<sup>®</sup>, CORCORAN<sup>®</sup>, COLDWELL BANKER COMMERCIAL<sup>®</sup>, SOTHEBY'S INTERNATIONAL REALTY<sup>®</sup>, BETTER HOMES AND GARDENS<sup>®</sup> Real Estate, CLIMB REAL ESTATE<sup>®</sup>, CARTUS<sup>®</sup>, ZIPREALTY<sup>®</sup> and ZAPLABS<sup>®</sup> marks, which are registered in the United States and/or registered or pending registration in other jurisdictions, as appropriate to the needs of our relevant business. Each trademark, trade name or service mark of any other company appearing in this Annual Report is owned by such company.

### MARKET AND INDUSTRY DATA AND FORECASTS

This Annual Report includes data, forecasts and information obtained from independent trade associations, industry publications and surveys, and other information available to us. Some data is also based on our good faith estimates, which are derived from management's knowledge of the industry and independent sources. As noted in this Annual Report, the National Association of Realtors ("NAR"), the Federal National Mortgage Association ("Fannie Mae") and the Federal Home Loan Mortgage Corporation ("Freddie Mac") were the primary sources for third-party industry data and forecasts. While data provided by NAR and Fannie Mae are two indicators of the direction of the residential housing market, we believe that homesale statistics will continue to vary between us and NAR and Fannie Mae because:

they use survey data and estimates in their historical reports and forecasting models, which are subject to sampling error, whereas we use data based on actual reported results;

there are geographical differences and concentrations in the markets in which we operate versus the national market.

For example, many of our company owned brokerage offices are geographically located where average homesale prices are generally higher than the national average and therefore NAR survey data will not correlate with NRT's results;

comparability is also diminished due to NAR's utilization of seasonally adjusted annualized rates whereas we report actual period-over-period changes and their use of median price for their forecasts compared to our average price;

NAR historical data is subject to periodic review and revision and these revisions have been material in the past, and could be material in the future; and

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NAR and Fannie Mae generally update their forecasts on a monthly basis and a subsequent forecast may change materially from a forecast that was previously issued.

In addition, we base our calculation of the gross commission income generated in the United States in part on data from Real Trends, a provider of residential brokerage industry analysis. We also base certain calculations on data from the U.S. Census Bureau as updated through November 2018, rather than the full year, as the U.S. federal government shutdown resulted in delays in the posting of full year information. While we believe that the industry data presented herein is derived from the most widely recognized sources for reporting U.S. residential housing market statistical data, we do not endorse or suggest reliance on this data alone.

Forecasts regarding rates of home ownership, median sales price, volume of homesales, and other metrics included in this Annual Report to describe the housing industry are inherently uncertain or speculative in nature and actual results for any period could materially differ. Industry publications, surveys and forecasts generally state that the information contained therein has been obtained from sources believed to be reliable, but such information may not be accurate or complete. We have not independently verified any of the data from third-party sources nor have we ascertained the underlying economic assumptions relied upon therein. Statements as to our market position are based on market data currently available to us. While we are not aware of any misstatements regarding industry data provided herein, our estimates involve risks and uncertainties and are subject to change based upon various factors, including those discussed under the headings "Risk Factors" and "Forward-Looking Statements." Similarly, we believe our internal research is reliable, even though such research has not been verified by any independent sources.



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PART I

Except as otherwise indicated or unless the context otherwise requires, the terms "we," "us," "our," "our company," "Realogy," "Realogy Holdings" and the "Company" refer to Realogy Holdings Corp., a Delaware corporation, and its consolidated subsidiaries, including Realogy Intermediate Holdings LLC, a Delaware limited liability company ("Realogy Intermediate"), and Realogy Group LLC, a Delaware limited liability company ("Realogy Group"). Neither Realogy Holdings, the indirect parent of Realogy Group, nor Realogy Intermediate, the direct parent company of Realogy Group, conducts any operations other than with respect to its respective direct or indirect ownership of Realogy Group. As a result, the consolidated financial positions, results of operations and cash flows of Realogy Holdings, Realogy Intermediate and Realogy Group are the same.

Realogy Holdings is not a party to the Amended and Restated Credit Agreement dated as of March 5, 2013, as amended from time to time (the "Senior Secured Credit Facility"), and the Term Loan A Agreement dated as of October 23, 2015, as amended from time to time (the "Term Loan A Facility"), and certain references in this Annual Report to our consolidated indebtedness exclude Realogy Holdings with respect to indebtedness under the Senior Secured Credit Facility and Term Loan A Facility. In addition, while Realogy Holdings is a guarantor of Realogy Group's obligations under its unsecured notes, Realogy Holdings is not subject to the restrictive covenants in the indentures governing such indebtedness.

As used in this Annual Report, the terms "3.375% Senior Notes," "4.50% Senior Notes," "5.25% Senior Notes" and "4.875% Senior Notes" refer to our 3.375% Senior Notes due 2016 (paid in full at maturity in 2016), our 4.50% Senior Notes due 2019 (paid in full in February 2019), our 5.25% Senior Notes due 2021 and our 4.875% Senior Notes due 2023, respectively, and referred to collectively as "Unsecured Notes."

Item 1. Business.

Our Company

We are the leading and most integrated provider of residential real estate services in the U.S. We are the world's largest franchisor of residential real estate brokerages with some of the most recognized brands in the real estate industry, the leading U.S. residential real estate brokerage (based upon transaction volume), the leading provider of global relocation services and a significant provider of title and settlement services.

The core of our integrated business strategy is to grow the base of productive independent sales agents at our company owned and franchisee brokerages and provide them with compelling data and technology products and services to make them more productive and their businesses more profitable.

Our revenue is derived on a fee-for-service basis, and given our breadth of complementary service offerings, we are able to generate fees from multiple aspects of a residential real estate transaction. Our operating platform is supported by our portfolio of industry leading franchise brokerage brands, including Century 21<sup>®</sup>, Coldwell Banker<sup>®</sup>, Coldwell Banker Commercial<sup>®</sup>, ERA<sup>®</sup>, Sotheby's International Realty<sup>®</sup> and Better Homes and Gardens<sup>®</sup> Real Estate. In addition, in January 2019, we launched franchise sales of the Corcoran<sup>®</sup> brand.

We also own and operate company owned brokerages under the Coldwell Banker<sup>®</sup>, Coldwell Banker Commercial<sup>®</sup>, Corcoran<sup>®</sup>, Citi Habitats<sup>SM</sup>, Climb Real Estate<sup>®</sup>, Sotheby's International Realty<sup>®</sup> and ZipRealty<sup>®</sup> brands.

Our multiple brands and operations allow us to derive revenue from many different segments of the residential real estate market, in many different geographies and at varying price points.

Segment Overview

We report our operations in four segments, each of which receives fees based upon services performed for our customers: Real Estate Franchise Services ("RFG"), Company Owned Real Estate Brokerage Services ("NRT"), Relocation Services ("Cartus<sup>®</sup>") and Title and Settlement Services ("TRG").

**Real Estate Franchise Services.** We are the largest franchisor of residential real estate brokerages in the world through our portfolio of well-known brokerage brands, including Century 21<sup>®</sup>, Coldwell Banker<sup>®</sup>, Coldwell Banker Commercial<sup>®</sup>, ERA<sup>®</sup>, Sotheby's International Realty<sup>®</sup> and Better Homes and Gardens<sup>®</sup> Real Estate. In January 2019, to expand and enhance our existing portfolio of brands, we launched Corcoran<sup>®</sup> as a new franchise brand, which has historically been operated solely as part of our company owned brokerage segment.



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As of December 31, 2018, our real estate franchise systems and proprietary brands had approximately 299,400 independent sales agents worldwide, including approximately 191,700 independent sales agents operating in the U.S. (which included approximately 50,200 company owned brokerage independent sales agents). As of December 31, 2018, our real estate franchise systems and proprietary brands had approximately 16,600 offices worldwide in 113 countries and territories, including approximately 6,000 brokerage offices in the U.S. (which included approximately 760 company owned brokerage offices).

The average tenure among U.S. franchisees is approximately 22 years as of December 31, 2018. Our franchisees pay us fees for the right to operate under one of our trademarks and to enjoy the benefits of the systems and business enhancing tools provided by our real estate franchise operations. In addition to highly competitive brands that provide unique offerings to our franchisees, we support our franchisees with dedicated national marketing and servicing programs, technology including the Zap<sup>®</sup> technology platform, training, education, learning and development to facilitate our franchisees in growing their business and increasing their revenue and profitability. We believe that one of our strengths is the strong relationships that we have with our franchisees, as evidenced by our 98% retention rate as of December 31, 2018. Our retention rate represents the annual franchisee gross commission income for the year ended December 31, 2017 generated by our franchisees that remain in our franchise systems as of December 31, 2018, measured against the annual gross commission income of all franchisees for the year ended December 31, 2017.

**Company Owned Real Estate Brokerage Services.** We own and operate the leading residential real estate brokerage business (based upon transaction volume) in the U.S. under the Coldwell Banker<sup>®</sup>, Corcoran<sup>®</sup>, Sotheby's International Realty<sup>®</sup>, ZipRealty<sup>®</sup>, Citi Habitats<sup>SM</sup> and Climb Real Estate<sup>®</sup> brand names. We offer full-service residential brokerage services in many of the largest metropolitan areas of the U.S. NRT, as the broker for a home buyer or seller, derives revenues primarily from gross commission income received at the closing of real estate transactions. NRT also has relationships with developers, primarily in major cities, to provide marketing and brokerage services in new developments. To complement its residential brokerage services, NRT offers home ownership services that include comprehensive single-family residential property management in many of the nation's largest rental markets. This segment also included the Company's share of equity earnings or losses related to our former 49.9% ownership of PHH Home Loans LLC ("PHH Home Loans"), our former home mortgage joint venture with PHH Mortgage Corporation ("PHH"), which was sold to PHH in the first quarter of 2018. The Company's share of equity earnings or losses related to our 49.9% ownership of Guaranteed Rate Affinity, LLC ("Guaranteed Rate Affinity"), our current mortgage origination joint venture, which began doing business in August 2017 on a phased-in basis, is included in the financial results of the Title and Settlement Services segment.

**Relocation Services.** We are the leading provider of global relocation services and operate in key international relocation destinations. We offer a broad range of world-class employee relocation services designed to manage all aspects of an employee's move to facilitate a smooth transition in what otherwise may be a complex and difficult process for the

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employee and employer. Our relocation services business serves corporations, including 56% of the Fortune 500 companies. We also service affinity organizations such as insurance companies and credit unions that provide our services to their members. In 2018, we assisted in over 171,000 corporate and affinity relocations in 150 countries for approximately 660 active clients. As of December 31, 2018, our top 25 relocation clients had an average tenure of approximately 20 years with us. Member brokers of the Cartus Broker Network, including certain franchisees and NRT, receive referrals from the relocation services, affinity services and from each other in exchange for a referral fee.

**Title and Settlement Services.** We assist with the closing of real estate transactions by providing full-service title and settlement (i.e., closing and escrow) services to customers, real estate companies, affinity groups, corporations and financial institutions with many of these services provided in connection with the Company's real estate brokerage and relocation services businesses. In 2018, TRG was involved in the closing of approximately 176,000 transactions of which approximately 53,000 related to NRT. In addition to our own title and settlement services, we also coordinate a nationwide network of attorneys, title agents and notaries to service financial institution and relocation clients on a national basis. We also serve as an underwriter of title insurance policies in connection with residential and commercial real estate transactions. This segment also includes the Company's share of equity earnings and losses for our Guaranteed Rate Affinity mortgage origination joint venture.

**Housing Market and Market Share**

**U.S. Gross Commission Income.** Residential real estate brokerage companies typically realize revenues in the form of a sales commission earned from closed homesale sides (either the "buy" side and/or the "sell" side of a real estate transaction), which we refer to as gross commission income. We believe that the level of gross commission income generated in the U.S. represents a substantial addressable market. We estimate that more than \$70 billion in gross commission income was generated by U.S. residential existing homesale transactions involving a broker in 2018. Our company owned brokerages and franchisees earned approximately \$13 billion in gross commission income in the same period.

**Market Share.** As measured in a comparison to the volume of all existing homesale transactions in the U.S. as reported by NAR (regardless of whether an agent or broker was involved in the transaction), we estimate that our market share in 2018 increased modestly year-over-year to approximately 16.1% compared to 15.9% in 2017. Our estimated share of all U.S. existing homesale unit transactions in 2018 remained at approximately 13.5%.

**Basis of Calculation**

**U.S. Gross Commission Income Calculation.** We estimate U.S. gross commission income by multiplying NAR's published existing homesale transaction units, reduced to approximately 89% (to reflect 87% of the total homes that were bought using an agent or broker and 91% of the total homes that were sold using an agent or broker in 2018 according to NAR), by (a) NAR's published average sales price and (b) the average annual broker commission rate in 2017 as published by Real Trends, a provider of residential brokerage industry analysis, of 5.08%.

**Market Share Calculation.** We measure our market share transaction volume by the ratio of (a) homesale transaction volume (sides times average price) in which we and our franchisees participate to (b) NAR's existing homesale transaction volume (regardless of whether an agent or broker was involved in the transaction)—calculated by doubling the number of existing homesale transactions reported by NAR to account for both the buy and sell sides of a transaction multiplied by NAR's average sales price. Homesale unit transaction market share is calculated similarly but without including average sales price in either the numerator or denominator.

\* \* \*

Our headquarters is located at 175 Park Avenue, Madison, New Jersey 07940. Our general telephone number is (973) 407-2000. We were incorporated on December 14, 2006 in the State of Delaware. The Company files electronically with the Securities and Exchange Commission (the "SEC") required reports on Form 8-K, Form 10-Q and Form 10-K; proxy materials; ownership reports for insiders as required by Section 16 of the Securities Exchange Act of 1934; registration statements and other forms or reports as required. Certain of the Company's officers and directors also file statements of changes in beneficial ownership on Form 4 with the SEC. Such materials may be

accessed electronically on the SEC's Internet site ([www.sec.gov](http://www.sec.gov)). We maintain an Internet website at <http://www.realogy.com> and make available free of charge on or through our website our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, Section 16 reports and any amendments to these reports in the Investor Relations section of our website as soon as reasonably practicable after such material is electronically filed with or furnished to the SEC. Our website address is

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provided as an inactive textual reference. The contents of our website are not incorporated by reference herein or otherwise a part of this Annual Report.

Industry Trends

Industry definition. We primarily operate in the U.S. residential real estate industry, which is approximately a \$1.8 trillion industry based on 2018 transaction volume (i.e. average homesale price times number of new and existing homesale transactions) and derive substantially all of our revenues from serving the needs of buyers and sellers of existing homes rather than new homes manufactured and sold by homebuilders. Residential real estate brokerage companies typically realize revenues in the form of a commission that is based on a percentage of the price of each home sold. As a result, the real estate industry generally benefits from rising home prices and increasing homesale transactions (and conversely is adversely impacted by falling prices and lower homesale transactions). We believe that existing homesale transactions and the services associated with these transactions, such as mortgage origination, title services and relocation services, represent one of the most attractive segments of the residential real estate industry for the following reasons:

- the existing homesales segment represents a significantly larger addressable market than new homesales. Of the approximately 6.0 million homesales in the U.S. in 2018, NAR estimates that approximately 5.3 million were existing homesales, representing approximately 89% of the overall sales as measured in units;

- existing homesales afford us the opportunity to represent either the buyer or the seller and in some cases both the buyer and the seller; and

- we are able to generate revenues from ancillary services provided to our customers.

While substantially all homebuyers start their search for a home using the Internet, according to NAR, 87% of home buyers and 91% of home sellers used an agent or broker in 2018. We believe that agents or brokers will continue to be directly involved in most home purchases and sales, primarily because real estate transactions have certain characteristics that benefit from the service and value offered by an agent or broker, including the following:

- the average homesale transaction size is very high and generally is the largest transaction one does in a lifetime;

- homesale transactions occur infrequently;

- there is a compelling need for personal service as home preferences are unique to each buyer;

- a high level of support is required given the complexity associated with the process, including specific marketing and technology services; and

- there is a high variance in price, depending on neighborhood, floor plan, architecture, fixtures, and outdoor space.

Cyclical nature of industry. The U.S. residential real estate industry is cyclical but has historically shown strong growth over time. Based on information published by NAR, existing homesale units increased at a compound annual growth rate, or CAGR, of 1.9% from 1972 through 2018, with 29 annual increases, versus 17 annual decreases.

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During that same period, median existing homesale prices increased at a CAGR of 5.1% (not adjusted for inflation) from 1972 through 2018, a period that included four economic recessions.

According to NAR, the existing homesale transaction volume (median homesale price times existing homesale transactions) grew at a CAGR of 7.1% from 1972 through 2018.

The U.S. residential real estate industry was in a significant and lengthy downturn from the second half of 2005 through 2011. Based upon data published by NAR from 2005 to 2011, the number of annual U.S. existing homesale transactions declined by 40% and the median existing homesale price declined by 24%. Beginning in 2012, the U.S. residential real estate industry began a recovery. Based upon data published by NAR from 2011 to 2018, the number of annual U.S. existing homesale units and the median existing homesale price improved by 25% and 56%, respectively. However, in 2018 homesale transaction volume did not grow from 2017, driven by a 3% year-over-year decline in homesale transactions to 5.3 million homes offset by a 3% increase in the average homesale price.

Long-term demographics. We believe that long-term demand for housing and the growth of our industry is primarily driven by the affordability of housing, the economic health of the U.S. economy, demographic trends such as generational transitions, increases in U.S. household formation, mortgage rate levels and mortgage availability, certain tax benefits, job growth, increases in renters that qualify as homebuyers, the inherent attributes of homeownership versus renting and the influence of local housing dynamics of supply versus demand. We believe that the residential real estate market will benefit over the long-term from expected positive fundamentals, including expected growth in the number of U.S. households over the next decade, in particular among the millennial generation.

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Participation in Multiple Aspects of the Residential Real Estate Market

We participate in services associated with many aspects of the residential real estate market. Our four complementary businesses and mortgage joint venture work together, allowing us to generate revenue at various points in a residential real estate transaction, including the purchase or sale of homes, corporate relocation and affinity services, settlement and title services, and franchising of our brands. The businesses each benefit from our deep understanding of the industry, strong relationships with real estate brokers, sales agents and other real estate professionals and expertise across the transactional process. Unlike other industry participants who offer only one or two services, we can offer homeowners, our franchisees and our corporate and affinity clients ready access to numerous associated services that facilitate and simplify the home purchase and sale process. These services provide further revenue opportunities for our owned businesses and those of our franchisees. Specifically, our brokerage offices and those of our franchisees participate in purchases and sales of homes involving relocations of corporate transferees and affinity members using Cartus® relocation services and we offer customers (purchasers and sellers) of both our owned and franchised brokerage businesses convenient title and settlement services. These services produce incremental revenues for our businesses and franchisees. In addition, we participate in the mortgage process through our 49.9% ownership of Guaranteed Rate Affinity, which began doing business in August 2017 on a phased-in basis. All four of our businesses and our mortgage joint venture can derive revenue from the same real estate transaction.



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## Our Brands

Our brands are among the most well-known and established real estate brokerage brands in the real estate industry. Our real estate franchise brands are listed in the following chart, which includes information as of December 31, 2018 for both our franchised and company owned offices:

## Franchise Brands (1) (2)

Worldwide Offices (3)	9,600	3,200	2,300	1,000	360
Worldwide Brokers and Sales Agents (3)	127,500	94,200	40,300	22,600	12,100
U.S. Annual Sides	393,184	709,117	128,416	123,113	76,844
# of Countries with Owned or Franchised Operations	80	44	36	72	4

Characteristics	A leader in brand awareness and the most recognized name in real estate	Longest running national real estate brand in the U.S. (since 1906)	Driving performance through innovation, collaboration and shared accountability	Synonymous with luxury access to consumers, marketing channels and content through its brand licensing relationship with a leading media company
	Significant international office footprint	Known as an innovator in real estate and a leader in smart home technology	Unique branding and products providing the flexibility of choice for our customer, community, agent, and brokerage	Established in 1744 global presence

Does not include proprietary brands that we own, but did not franchise as of December 31, 2018 such as, (1) ZipRealty® and Citi Habitats<sup>SM</sup> or Corcoran® and Climb Real Estate® (franchise sales of Corcoran® were launched in January 2019).

(2) Information presented for Coldwell Banker® includes Coldwell Banker Commercial®.

Includes information reported to us by independently owned franchisees (including an aggregate of approximately (3) 10,600 offices and approximately 107,700 related brokers and independent sales agents of non-U.S. franchisees and franchisors).

## Real Estate Franchise Services

Our primary objectives as the largest franchisor of residential real estate brokerages in the world are to retain and expand existing franchises, sell new franchises, and most importantly, provide branding and support to our franchisees. At December 31, 2018, our real estate franchise systems and proprietary brands had approximately 16,600 offices worldwide in 113 countries and territories in North and South America, Europe, Asia, Africa, the Middle East and Australia, including approximately 6,000 brokerage offices in the U.S. (which included approximately 760 company owned brokerage offices).

We derive substantially all of our real estate franchising revenues from royalties and marketing fees received under long-term franchise agreements with our domestic franchisees (typically ten years in duration) and NRT. These

royalties are based on a percentage of the franchisees' sales commission earned from closed homesale sides (either the "buy" side and/or the "sell" side of a real estate transaction), which we refer to as gross commission income. Our franchisees pay us royalties, net of volume incentives achieved (other than NRT), for the right to operate under one of our trademarks and to utilize the benefits of the franchise systems. We provide our franchisees with systems and tools that are designed to help our franchisees serve their customers, attract new or retain existing independent sales agents, and support our franchisees with servicing programs, technology and education, as well as branding-related marketing which is funded through contributions by our franchisees and us (including NRT). We operate and maintain an Internet-based reporting system for our domestic franchisees which generally allows them to electronically transmit listing information and other relevant reporting data to us. We also own and operate websites for each of our brands for the benefit of our franchisees and their independent sales agents.

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RFG's domestic annual net royalty revenues from franchisees other than our company owned brokerages can be represented by multiplying (1) that year's total number of closed homesale sides in which those franchisees participated by (2) the average sale price of those homesales by (3) the average brokerage commission rate charged by these franchisees by (4) RFG's net contractual royalty rate. The net contractual royalty rate represents the average percentage of our franchisees' commission revenues paid to us as a royalty, net of volume incentives achieved (or for some larger franchisees, flat fee royalties) and net of non-standard incentives granted to franchisees. Non-standard incentives may be used as consideration to attract new franchisees, grow franchisees (including through independent sales agent recruitment) or extend existing franchisee agreements, although such incentives are generally not available to most franchisees, in contrast to volume incentives. The domestic royalty revenue from NRT is calculated by multiplying homesale sides by average sale price by average brokerage commission rate by 6% royalty rate. NRT does not receive volume incentives or non-standard incentives. In addition to domestic royalty revenue, RFG earns revenue from marketing fees, listing fees, the preferred alliance program, international affiliates and upfront international fees. The following chart illustrates the key drivers for revenue earned by RFG:

We believe one of our strengths is the strong relationships that we have with our franchisees as evidenced by the retention rate of 98% as of December 31, 2018. Our retention rate represents the annual franchisee gross commission income for the year ended December 31, 2017 generated by our franchisees that remain in our franchise systems as of December 31, 2018, measured against the annual gross commission income of all franchisees for the year ended December 31, 2017. On average, our domestic franchisees' tenure with our brands was approximately 22 years as of December 31, 2018. During 2018, none of our franchisees (other than NRT) generated more than 1% of the total revenue of our real estate franchise business.

The franchise agreements set forth guidelines on the business and operations of the franchisees and require them to comply with the mandatory identity standards set forth in each brand's policy and procedures manuals. A franchisee's failure to comply with these restrictions and standards could result in a termination of the franchise agreement. The franchisees generally are not permitted to terminate the franchise agreements prior to their expiration, and in those cases where termination rights do exist, they are very limited (e.g., if the franchisee retires, becomes disabled or dies). Generally, new domestic franchise agreements have a term of ten years and require the franchisees to pay us an initial franchise fee for the franchisee's principal office plus, upon the receipt of any commission income, a royalty fee in most cases equal to 6% of their commission income. One exception to this flat 6% royalty fee structure is our Better Homes and Gardens® Real Estate franchise business, which launched a "capped fee model" on January 9, 2019 that applies to any new franchisee as well as preexisting franchisees who elect to switch from their current royalty fee structure to the capped fee model. Under this capped fee model, franchisees pay a royalty fee (generally equal to 5% of their commission income) capped at a set amount per independent sales agent per year, subject to our right to annually modify or increase the independent sales associate cap. Our franchise systems offer a volume incentive program, whereby each franchisee is eligible to receive a refund of a portion of the royalties paid upon the satisfaction of certain conditions (or in the case of Corcoran, a reduced royalty based upon volume). The volume incentive is calculated for each eligible franchisee as a progressive percentage of each franchisee's annual gross revenue (paid timely) for each calendar year. Under the current form of the franchise agreements, the volume incentive varies for each franchise system, and will generally result in a net or effective royalty rate of 6% to 3% for each individual franchisee. The volume incentive program is not offered to Better Homes and Gardens® Real Estate capped model franchisees or Coldwell Banker Commercial® franchisees.

We provide a detailed table to each eligible franchisee that describes the gross revenue thresholds required to achieve a volume incentive and the corresponding incentive amounts. We reserve the right to increase or decrease the percentage and/or dollar amounts in the table on an annual basis, subject to certain limitations. Our company owned brokerage offices do not participate in the volume incentive program.



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Each of our current franchise systems require franchisees and company owned offices to make monthly contributions to marketing funds maintained by each brand, although required contributions for Corcoran® franchisees and franchisees under the capped fee model in effect for certain Better Homes and Gardens® Real Estate franchisees decrease if certain financial thresholds are achieved by the franchisee. These contributions are used primarily for the development, implementation, production, placement and payment of national and regional advertising, marketing, promotions, public relations and/or other marketing-related activities, such as lead generation, all to promote and further the recognition of each brand and its independent franchisees and their affiliated independent sales agents. In addition to the contributions from franchisees and company owned offices, the Real Estate Franchise Services group may be, in certain instances, required to make contributions to certain marketing funds and may make discretionary contributions (at its option) to any of the marketing funds.

The Company also offers support services to its independent franchisees and their affiliated independent sales agents, including technology-enabled solutions such as customer relationship management (CRM), lead generation and productivity tools.

Under certain circumstances, we extend conversion notes to eligible franchisees for the purpose of providing an incentive to join the brand, to renew their franchise agreements, or to facilitate their growth opportunities. Growth opportunities include the expansion of franchisees' existing businesses by opening additional offices, through the consolidation of operations of other franchisees, as well as through the acquisition of independent sales agents and offices operated by independent brokerages. Many franchisees use the proceeds from the conversion notes to update marketing materials, upgrade technology and websites, or to assist in acquiring companies or recruiting agents. The notes are not funded until appropriate credit checks and other due diligence matters are completed, and the business is opened and operating under one of our brands. Upon satisfaction of certain revenue performance based thresholds, the notes are forgiven ratably over the term of the franchise agreement. If the revenue performance thresholds are not met, franchisees may be required to repay all or a portion of the outstanding notes.

In addition to offices owned and operated by our franchisees, as of December 31, 2018, we, through NRT, own and operate approximately 710 offices under the Coldwell Banker®, Coldwell Banker Commercial® and Sotheby's International Realty® brand names. NRT pays intercompany royalty fees and marketing fees to our Real Estate Franchise Services Segment in connection with its operation of these offices. These fees are recognized as income or expense by the applicable segment level and eliminated in the consolidation of our businesses.

In the U.S., we employ a direct franchising model whereby we contract with and provide services directly to independent owner-operators. We also utilize a direct franchising model outside of the U.S. for Sotheby's International Realty® and Corcoran® and, in some cases, Better Homes and Gardens Real Estate®. For all other brands, we generally employ a master franchise model outside of the U.S., whereby we contract with a qualified third party to build a franchise network in the country or region in which franchising rights have been granted. Under both the direct and the master franchise model outside of the U.S., we typically enter into long-term franchise agreements (often 25 years in duration) and receive an initial area development fee and ongoing royalties. Under the master franchise model, the ongoing royalties we receive are generally a percentage of the royalties received by the master franchisor from its franchisees with which it contracts. Under the direct franchise model, a royalty fee is paid to us on transactions conducted by our franchisees in the applicable country or region.

We also offer third-party service providers an opportunity to market their products to our franchisees and their independent sales agents and customers through our preferred alliance program. To participate in this program, service providers generally agree to provide preferred pricing to our franchisees and/or their customers or independent sales agents and to pay us a combination of an initial licensing or access fee, subsequent marketing fees and/or commissions based upon our franchisees' or independent sales agents' usage of the preferred alliance vendors. We also transmit listings to various platforms and services.

We own the trademarks Century 21®, Coldwell Banker®, Coldwell Banker Commercial®, Corcoran®, ERA® and related trademarks and logos, and such trademarks and logos are material to the businesses that are part of our real estate franchise segment. Our franchisees and our subsidiaries actively use these trademarks, and all of the material

trademarks are registered (or have applications pending) with the United States Patent and Trademark Office as well as with corresponding trademark offices in major countries worldwide where these businesses have significant franchised operations.

We have an exclusive license to own, operate and franchise the Sotheby's International Realty® brand to qualified residential real estate brokerage offices and individuals operating in eligible markets pursuant to a license agreement with SPTC Delaware LLC, a subsidiary of Sotheby's ("Sotheby's"). Such license agreement has a 100-year term, which consists

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of an initial 50-year term ending February 16, 2054 and a 50-year renewal option. We pay a licensing fee to Sotheby's for the use of the Sotheby's International Realty® name equal to 9.5% of the net royalties earned by our Real Estate Franchise Services Segment attributable to franchisees affiliated with the Sotheby's International Realty® brand, including our company owned offices.

In October 2007, we entered into a long-term license agreement to own, operate and franchise the Better Homes and Gardens® Real Estate brand from Meredith. The license agreement between Realogy and Meredith is for a 50-year term, with a renewal option for another 50 years at our option. We pay a licensing fee to Meredith for the use of the Better Homes and Gardens® Real Estate brand name equal to 9.0% of the net royalties earned by our Real Estate Franchise Services Segment attributable to franchisees affiliated with the Better Homes and Gardens® Real Estate brand, subject to a minimum annual licensing fee.

Each of our brands has a consumer website that offers real estate listings, contacts and services. Century21.com, coldwellbanker.com, coldwellbankercommercial.com, sothebysrealty.com, era.com, bhgrealestate.com and corcoran.com are the official websites for the Century 21®, Coldwell Banker®, Coldwell Banker Commercial®, Sotheby's International Realty®, ERA®, Better Homes and Gardens® Real Estate and Corcoran® franchise systems, respectively. The contents of these websites are not incorporated by reference herein or otherwise a part of this Annual Report.

**Company Owned Real Estate Brokerage Services**

Through our subsidiary, NRT, we own and operate a full-service real estate brokerage business in many of the largest metropolitan areas in the U.S. Our company owned real estate brokerage business operates under the Coldwell Banker® and Sotheby's International Realty® franchised brands as well as proprietary brands that we own, but do not currently franchise, such as Corcoran®, Climb Real Estate®, ZipRealty® and Citi Habitats<sup>SM</sup> (although we launched franchise sales of Corcoran® in January 2019).

As of December 31, 2018, we had approximately 760 company owned brokerage offices, approximately 4,900 employees and approximately 50,200 independent sales agents working with these company owned offices.

Our company owned real estate brokerage business derives revenue primarily from gross commission income received serving as the broker at the closing of real estate transactions. For the year ended December 31, 2018, our average homesale broker commission rate was 2.43% which represents the average commission rate earned on either the "buy" side or the "sell" side of a homesale transaction. Gross commission income is also earned on non-sale transactions such as home rentals. NRT, as a franchisee of RFG, pays a royalty fee of 6% per transaction to RFG from the commission earned on a real estate transaction. The remainder of gross commission income is split between the broker (NRT) and the independent sales agent. The following chart illustrates the key drivers for revenue earned by NRT: In addition, as a full-service real estate brokerage company, we promote the complementary services of our relocation and title and settlement services businesses. We believe we provide integrated services that enhance the customer experience.

When we assist the seller in a real estate transaction, independent sales agents generally provide the seller with a full-service marketing program, which may include developing a direct marketing plan for the property, assisting the seller in pricing the property and preparing it for sale, listing it on multiple listing services, advertising the property (including on websites), showing the property to prospective buyers, assisting the seller in sale negotiations, and assisting the seller in preparing for closing the transaction. When we assist the buyer in a real estate transaction, independent sales agents generally help the buyer in locating specific properties that meet the buyer's personal and financial specifications, show properties to the buyer, assist the buyer in negotiating (where permissible) and preparing for closing the transaction. In addition, NRT has relationships with developers, primarily in major cities, to provide marketing and brokerage services in new developments.

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At December 31, 2018, we operated approximately 89% of our offices under the Coldwell Banker® brand name, approximately 5% of our offices under the Sotheby's International Realty® brand name and 6% of our offices under the Corcoran®, Citi Habitats<sup>SM</sup>, ZipRealty® and Climb Real Estate® brand names combined. Our offices are geographically diverse with a strong presence in the east and west coast areas, primarily around large metropolitan areas in the U.S., where home prices are generally higher. We operate our Coldwell Banker® offices and Sotheby's International Realty® offices in numerous regions throughout the U.S., Corcoran® offices in New York City, the Hamptons (New York), and Palm Beach, Florida and Climb Real Estate® offices in Northern California. We intend to grow our business organically. To grow organically, we focus on working with office managers to attract and retain independent sales agents who can successfully engage and promote transactions from new and existing clients. To complement our residential brokerage services, NRT offers home ownership services that include comprehensive single-family residential property management in many of the nation's largest rental markets. To a lesser extent, we may grow our business through strategic acquisitions focused primarily on expanding our existing markets. Following the completion of an acquisition, we tend to consolidate the newly acquired operations with our existing operations to reduce or eliminate duplicative costs and to leverage our existing infrastructure to support newly affiliated independent sales agents.

NRT has a contract with Cartus under which the brokerage business provides brokerage services to relocating employees of the clients of Cartus. When receiving a referral from Cartus, NRT seeks to assist the relocating employee in completing a homesale or home purchase. Upon completion of a homesale or home purchase, NRT receives a commission on the purchase or sale of the property and is obligated to pay Cartus a portion of such commission as a referral fee. We believe that these fees are comparable to the fees charged by other relocation companies.

### Relocation Services

Through our subsidiary, Cartus, we are the leading provider of global relocation services.

In 2018, we assisted in over 171,000 corporate and affinity relocations in 150 countries for approximately 660 active clients, including 56% of the Fortune 50 companies as well as affinity organizations. Cartus has operations in the U.S. and internationally in the United Kingdom, Canada, Hong Kong, Singapore, China, India, Brazil, Germany, France, Switzerland and the Netherlands.

### Employee Relocation Services

We primarily offer corporate clients employee relocation services, such as:

homesale assistance, including:

the valuation, inspection, purchasing and selling of a transferee's home;

the issuance of home equity advances to transferees permitting them to purchase a new home before selling their current home (these advances are generally guaranteed by the individual's employer);

certain home management services;

assistance in locating a new home; and

closing on the sale of the old home, generally at the instruction of the client;

expense processing, relocation policy counseling, relocation-related accounting, including international assignment compensation services, and other consulting services;

arranging household goods moving services, over 56,000 domestic and international shipments in 2018, and providing support for all aspects of moving a transferee's household goods, including the handling of insurance and claim assistance, invoice auditing and quality control;

coordinating visa and immigration support, intercultural and language training, and expatriation/repatriation counseling and destination services; and

group move management services providing coordination for moves involving a large number of transferees to or from a specific regional area over a short period of time.

The wide range of our services allows our Cartus clients to outsource their entire relocation programs to us.



Substantially all homesale service transactions for clients are classified as "no risk." Under "no risk" business, the client is responsible for reimbursement of all direct expenses associated with the homesale. Such expenses include, but are

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not limited to, appraisal, inspection and real estate brokerage commissions. The client also bears the risk of loss on the resale of the transferee's home. Clients are responsible for reimbursement of all other direct costs associated with the relocation including, but not limited to, costs to move household goods, mortgage origination points, temporary living and travel expenses. Generally, we fund the direct expenses associated with the homesale as well as those associated with the relocation on behalf of the client and the client then reimburses us for these costs plus interest charges on the advanced funds. This limits our exposure on "no risk" homesale services to the credit risk of our clients rather than to the potential fluctuations in the real estate market or to the creditworthiness of the individual transferring employee. Historically, due to the credit quality of our clients, we have had minimal losses with respect to these "no risk" homesale services.

The "at risk" business that we conduct is minimal. In "at risk" homesale service transactions, we acquire the home being sold by the transferring employee, incur the cost for all direct expenses (acquisition, carrying and selling costs) associated with the homesale and bear any loss on the sale of the home.

Substantially all of our contracts with our relocation clients are terminable at any time at the option of the client and are non-exclusive. If a client ceases or reduces volume under its contract, we will be compensated for all services performed up to the time that volume ceases and reimbursed for all expenses incurred.

There are a number of different revenue streams associated with relocation services. We earn referral commissions primarily from real estate brokers and household goods moving companies that provide services to the transferee. Clients may also pay transactional fees for the services performed. We also earn net interest income which represents interest earned from clients on the funds we advance on behalf of the transferring employee net of costs associated with the securitization obligations used to finance these payments. Cartus measures operating performance based on initiations, which represent the total number of transferees and affinity members we serve, and referrals, which represent the number of referrals from which we earn revenue from real estate brokers.

**Affinity Services**

About 18% of our relocation revenue in 2018 was derived from our affinity services, which provides real estate services, including home buying and selling assistance to members of organizations such as insurance companies and credit unions that have established members who are buying or selling a home. Our affinity revenues are highly concentrated and our affinity relationships are terminable at any time at the option of the client and are non-exclusive. Often these organizations offer our affinity services to their members at no cost and, where permitted, provide their members with a financial incentive for using these services. These member benefits and services help the organizations attract new members and retain current members. Where permitted by law, these members can receive cash or a gift card based on the home purchase/sale price pursuant to the applicable program.

**Cartus Broker Network**

To service the needs of our relocation and affinity clients as well as broker-to-broker referrals, we manage the Cartus Broker Network, which is a network of real estate brokers consisting of our company owned brokerage operations, select franchisees and independent real estate brokers who have been approved to become members. Cartus requires experienced brokers and independent sales agents and obtains background checks on all members of the network. Member brokers of the Cartus Broker Network receive referrals from our relocation services, affinity business and each other in exchange for a referral fee. The Cartus Broker Network is a key contributor to our lead generation strategy, with approximately 99% of the converted leads generated through the network being directed to independent sales agents affiliated with our franchisees and company-owned brokerages in 2018. The Cartus Broker Network closed approximately 81,000 real estate transactions in 2018 related to relocation, affinity, and broker-to-broker activity.

The following chart illustrates the key drivers for revenue generated by Cartus:

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Title and Settlement Services

Our title and settlement services business, TRG, provides full-service title and settlement (i.e., closing and escrow) services to real estate companies and financial institutions. We act in the capacity of a title agent and sell title insurance to property buyers and mortgage lenders. We are licensed as a title agent in 42 states and Washington, D.C., and have physical locations in 20 states and Washington, D.C. We issue title insurance policies on behalf of large national underwriters as well as through our Dallas-based subsidiary, Title Resources Guaranty Company ("Title Resources"). Title Resources is a title insurance underwriter licensed in 35 states and Washington, D.C. We operate mostly in major metropolitan areas. As of December 31, 2018, we had approximately 400 offices, approximately 200 of which are co-located within one of our company owned brokerage offices.

Virtually all lenders require their borrowers to obtain title insurance policies at the time mortgage loans are made on real property. The terms and conditions upon which the real property will be insured are determined in accordance with the standard policies and procedures of the title underwriter. When our title agencies sell title insurance, the title search and examination function is performed by the agent. The title agent and underwriter split the premium. The amount of such premium "split" is determined by agreement between the agency and underwriter, or is promulgated by state law. We derive revenue through fees charged in real estate transactions for rendering the services described above, fees charged for escrow and closing services, and a percentage of the title premium on each title insurance policy sold. We have entered into underwriting agreements with various underwriters, which state the conditions under which we may issue a title insurance policy on their behalf. For policies issued through our agency operations, assuming no negligence on our part, we are not typically liable for losses under those policies; rather the title insurer is typically liable for such losses.

Our company owned brokerage operations are the principal source of our title and settlement services business for homesale transactions. Other sources of our title and settlement services homesale business include our real estate franchise business, Cartus and unaffiliated brokerage operations. For refinance transactions, we generate title and escrow revenues from financial institutions throughout the mortgage lending industry. Many of our offices have subleased space from, and are co-located within, our company owned brokerage offices. The capture rate of our title and settlement services business from company owned brokerage operations was approximately 37% in 2018.

We coordinate a national network of escrow and closing agents (some of whom are our employees, while others are attorneys in private practice and independent title companies) to provide full-service title and settlement services to a broad-based group that includes lenders, home buyers and sellers, developers and independent real estate sales agents. Our role is generally that of an intermediary managing the completion of all the necessary documentation and services required to complete a real estate transaction.

Our title and settlement services business measures operating performance based on purchase and refinance closing units and the related title premiums and escrow fees earned on such closings. In addition, we measure net title premiums earned for title policies issued by our underwriting operation.

The following chart illustrates the key drivers for revenue generated by our title and settlement services business:

We intend to grow our title and settlement services business by attracting title and escrow sales agents in existing markets. We will also continue to seek to increase our capture rate of title business from our NRT homesale sides. In addition, we expect to continue to grow our underwriting business by increasing our agent base.

The equity earnings or losses related to Guaranteed Rate Affinity, our mortgage origination joint venture with Guaranteed Rate that began doing business on a phased-in basis in August 2017, are included in the financial results of TRG. We own 49.9% of the home mortgage joint venture and Guaranteed Rate owns the remaining 50.1%.

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### Marketing and Technology

Our ability to provide independent sales agents at company owned and franchised brokerages with compelling data and technology products and services to make them more productive and their businesses more profitable is core to our integrated business strategy.

The marketing and technology services and support provided by independent sales agents to their customers are an important element of the value offered by an agent in the home purchase and sale process. Our commitment to continuously develop and improve our marketing and technology products and service is part of our value proposition to company owned and franchised real estate brokerages, affiliated independent sales agents and their customers as well as to our relocation and title and settlement services segments. Increasingly, these products and services are desired as an integrated tool, rather than stand-alone products and services.

We have expended, and expect to continue to expend, substantial time, capital, and other resources to identify the needs of company owned brokerages, franchisees, independent sales agents and their customers and to develop marketing, technology and service offerings to meet the needs of affiliated independent sales agents. We are now building our agent- and franchisee-focused technology products with an open architecture in order to enable third-party vendors and products to access and interface with our products.

Real Estate Franchise Operations. Each of our franchise brands operates a marketing fund that is funded principally by our franchisees, although we may make discretionary contributions to any of the marketing funds and, in certain instances, are required to make contributions to certain marketing funds. The focus of each marketing fund is to build and maintain brand awareness and preference for the brand and drive leads to our franchisees and their affiliated independent sales agents, which is accomplished through a variety of media, including but not limited to social media, advertising, direct marketing and internet advertising.

Each brand manages a comprehensive system of marketing tools, systems and sales information and data that can be accessed through freestanding brand intranet sites to assist independent sales agents in becoming the best marketer of their listings. Advertising is primarily used by the brands to drive leads to our agents, increase brand awareness and perception, promote our network and offerings to the real estate industry and engage our customer base.

We provide our franchisees with technology-enabled solutions designed to help our franchisees serve their customers, attract new or retain existing independent sales agents, and support our franchisees with servicing programs, including tools using our proprietary Zap platform. Our technology offerings are designed to leverage the collective strength of each brand online and are updated frequently in order to keep up with changing needs of brokers, agents and consumers to continually strengthen our value proposition.

Our proprietary platform is designed to increase the value proposition to our franchisees, their independent sales agents and their customers by:

- aiding in lead generation and obtaining additional homesale transactions for our franchisees and their independent sales agents;
- connecting those agents and brokers to a predictive customer relationship management (CRM) tool that allows for the cultivation of productive relationships with consumers at all stages of the transaction;
- enhancing access to listing distributions through mobile applications and websites;
- informing them with valuable client insight and behavioral data to help those agents increase their productivity; and
- providing consumers with a streamlined yet comprehensive user experience to facilitate the necessary steps for researching homes, communities and independent sales agents.

Our brand websites contain listing information on a regional and national market basis, independent sales agent information, community profiles, home buying and selling advice, relocation tips and mortgage financing information and unique property and neighborhood insights from local agents. Each independent sales agent also has a personally-branded mobile application that they can customize with their own content and use to market themselves. Additionally, each brand website allows independent sales agents to market themselves to consumers.

Significant focus is placed on developing websites for each brand to create value to the real estate consumer. Each brand website focuses on streamlined, easy search processes for listing inventory and rich descriptive details, multiple

photos, full motion videos and in some cases virtual reality tours to market the real estate listing. We also place significant emphasis on distributing our real estate listings with third-party websites to expand a homebuyer's access to such listings, at

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times enhancing the presentation of the listings on third-party websites to make the listings more attractive to consumers. Consumers seeking more detailed information about a particular listing on a third-party website are generally able to click through to a brand website or a company owned brokerage website or telephone the franchisee or company owned brokerage directly.

We also provide our franchisees with proprietary technology to support many of the key back office processes necessary for their business operations including listing and transaction management, reporting, marketing, and agent profiles. The primary system provides direct interaction with business operations, allows for integration with third-party systems and offers business planning tools that enable our franchisees to track their progress against key business objectives in real time.

**Company Owned Brokerage Operations.** Our company owned brokerages sponsor a wide array of marketing programs, materials and opportunities to complement the sales work of our affiliated independent sales agents and increase brand awareness. The effectiveness and quality of marketing programs play a significant role in attracting and retaining independent sales agents.

NRT's sponsored marketing programs and initiatives primarily focus on attracting potential new home buyers and sellers to NRT's affiliated independent sales agents. These programs and initiatives also complement the awareness of our brands by increasing the local recognition of our agents and local brokerages.

Much of our marketing efforts are geared toward showcasing the inventory of our real estate listings and the affiliated independent sales agents who are the selling agents of these listings. In addition to prominently placing the listing property and related selling agent information on numerous real estate websites, we promote the selling agents and their properties on social media sites and offer tools and systems intended to enhance the home buying and home selling experiences of our customers. We also offer the independent sales agents broad-based advertising, mailings and other campaigns to generate leads, interest and recognition.

The Internet has become the primary advertising channel in our industry and we have sought to become a leader among full-service residential real estate brokerage firms in the use and application of marketing technology. We place our property listings on hundreds of real estate websites and we operate a variety of our own websites.

NRT also utilizes both proprietary and third-party technology to offer independent sales agents tools that may enhance their productivity and increase their understanding of their local markets and the impact of their marketing efforts. For example, we recently launched Listing Concierge, a full service solution for the design, creation and distribution of automated customized property listings.

Additional tools include the HomeBase Transaction Management and InTouch CRM systems, as well as e-Marketing reporting tools.

### Education

Each real estate brand provides learning and development materials and access to continuing education to its franchisees to assist them in building their real estate sales businesses. Each brand's engagement program contains different materials and delivery methods. The marketing materials include a detailed description of the services offered by our franchise systems (which will be available to the independent sales agent). Live instructors at conventions and orientation seminars deliver some engagement modules while other modules can be viewed by brokers anywhere in the world through virtual classrooms over the Internet. Most of the programs and materials are then made available in electronic form to franchisees over the respective system's private intranet site. Many of the materials are customizable to allow franchisees to achieve a personalized look and feel and make modifications to certain content as appropriate for their business and marketplace.

### Employees

At December 31, 2018, we had approximately 11,400 employees, including approximately 855 employees outside of the U.S. None of our employees are represented by a union.

### Seasonality

The residential housing market is seasonal, with a higher level of homesale transactions typically occurring in the second and third quarter of each year. As a result, historically, operating results and revenues for all of our businesses

have been strongest in the second and third quarters of the calendar year.

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Competition

Real Estate Brokerage Industry. The ability of our real estate brokerage franchisees and our company owned brokerage businesses to successfully compete is important to our prospects for growth. Their ability to compete may be affected by the recruitment, retention and performance of independent sales agents, the location of offices and target markets, the services provided to independent sales agents, the economic relationship between the broker and the agent (including the share of commission income retained by the agent and fees charged to or paid by the agent for services provided by the broker), the number and nature of competing offices in the vicinity, affiliation with a recognized brand name, community reputation, technology and other factors, including macro-economic factors such as national, regional and local economic conditions.

We and our franchisees compete for consumer business as well as for independent sales agents with national and regional independent real estate brokerages and franchisors, discount and limited service brokerages, and with franchisees of our brands. Our largest national competitors in this industry include, but are not limited to, HomeServices of America (a Berkshire Hathaway affiliate), Howard Hanna Holdings, Compass and Weichert, Realtors and several large franchisors: RE/MAX International, Inc., Keller Williams Realty, Inc. and HSF Affiliates LLC (a joint venture controlled by HomeServices of America that operates Berkshire Hathaway HomeServices and Real Living Real Estate).

Competition for Independent Sales Agents. The successful recruitment and retention of independent sales agents and independent sales agent teams are critical to the business and financial results of a brokerage—whether or not it is affiliated with a franchisor. Most of a brokerage's real estate listings are sourced through the sphere of influence of its independent sales agents, notwithstanding the growing influence of internet-generated leads. Competition for independent sales agents in our industry is high and has intensified particularly with respect to more productive independent sales agents and in the densely populated metropolitan areas in which we operate. The successful recruitment and retention of independent sales agents is influenced by many factors, including remuneration (such as sales commission percentage and other financial incentives paid to independent sales agents), other expenses borne by independent sales agents, leads or business opportunities generated for independent sales agents from the brokerage, independent sales agents' perception of the value of the broker's brand affiliation, marketing and advertising efforts by the brokerage or franchisor, the quality of the office manager, staff and fellow independent sales agents with whom they collaborate daily, as well as technology, continuing professional education, and other services provided by the brokerage or franchisor.

We believe that a variety of factors in recent years have negatively impacted the recruitment and retention of independent sales agents in the industry generally and have put upward pressure on the average share of commissions earned by affiliated independent sales agents, including increasing competition, such as from brokerages that offer a greater share of commission income to independent sales agents, changes in the spending patterns of independent sales agents (as more agents purchase services from third parties outside of their affiliated broker), and growth in independent sales agent teams. Certain of our privately-held competitors have investors that appear to be supportive of a model that pursues increases in market share over profitability, which exacerbates competition for independent sales agents and pressure on the share of commission income received by the agent, creating challenges to our and our franchisee's margins and profitability.

Commission Plan Competition Among Real Estate Brokerages. Some of the firms competing for sales agents use different commission plans, which may be appealing to certain sales agents. There are several different commission plan variations that have been historically utilized by real estate brokerages to compensate their independent sales agents. One of the most common variations has been the traditional graduated commission model where the independent sales agent receives a percentage of the brokerage commission that increases as the independent sales agent increases his or her volume of homesale transactions, and the brokerage frequently provides independent sales agents with a broad set of support offerings and promotion of properties. Other common plans include a desk rental or 100% commission plan, a fixed transaction fee commission plan, and a capped commission plan. A capped commission plan generally blends aspects of the traditional graduated commission model with the 100% commission



plan.

Although less common, some real estate brokerages employ their sales agents and, in such instances, employee agents may earn smaller brokerage commissions in exchange for other employee benefits or bonuses. Most brokerages focus primarily on one type of commission plan though some may offer one or more of commission plan variations to their sales agents.

Our company owned brokerage service has historically compensated affiliated independent sales agents using a traditional graduated commission model that emphasizes the value proposition offered to independent sales agents and independent sales agent teams, although we have utilized elements of other commission plans in certain geographic markets

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and have recently begun to expand our use of alternative commission plans at our company owned brokerages in certain territories.

Low Barriers to Entry and Influx of Traditional and Non-Traditional Competition as well as Industry Disrupters. The real estate brokerage industry has minimal barriers to entry for new participants, including participants utilizing historic real estate brokerage models and those pursuing alternative variations of those models as well as non-traditional methods of marketing real estate. The significant size of the U.S. real estate market, in particular the addressable market of commission revenues, has continued to attract outside capital investment in traditional and disruptive competitors that seek to access a portion of this market.

There are also market participants who differentiate themselves by offering consumers flat fees, rebates or lower commission rates on transactions (often coupled with fewer services). Although such competitors have yet to have a material impact on overall brokerage commission rates, this could change in the future if they use greater discounts as a means to increase their market share or improve their value proposition.

While real estate brokers using historic real estate brokerage models typically compete for business primarily on the basis of services offered, reputation, utilization of technology, personal contacts and brokerage commission, participants pursuing non-traditional methods of marketing real estate may compete in other ways, including companies that employ technologies intended to disrupt historic real estate brokerage models or minimize or eliminate the role brokers and sales agents perform in the homesale transaction process. A growing number of companies are competing in non-traditional ways for a portion of the gross commission income generated by homesale transactions. For example, listing aggregators and other web-based real estate service providers not only compete for our company owned brokerage business by establishing relationships with independent sales agents and/or buyers and sellers of homes, they also increasingly charge brokerages and independent sales agents additional fees for new and existing services. Other business models that have emerged in recent years consist of companies (including certain listing aggregators) that leverage capital to purchase homes directly from sellers, commonly referred to as iBuying.

Franchise Competition. According to NAR, approximately 42% of individual brokers and independent sales agents are affiliated with a franchisor. Competition among the national real estate brokerage brand franchisors to grow their franchise systems is intense. We believe that competition for the sale of franchises in the real estate brokerage industry is based principally upon the perceived value that the franchisor provides to enhance the franchisee's ability to grow its business and improve the recruitment, retention and productivity of its independent sales agents. The value provided by a franchisor encompasses many different aspects including the quality of the brand, tools, technology, marketing and other services, the availability of financing provided to the franchisees, and the fees the franchisees must pay. Franchisee fees can be structured in numerous ways and can include flat royalty and marketing fees, capped royalty fees, and discounted royalty and marketing fees. We recently launched a capped fee model at one of our brands as substantially all of our franchises are structured using a flat fee model and we have faced increasing competition from franchisors utilizing alternative models.

Relocation Business. Competition in our corporate relocation business is based on capabilities, price and quality. We compete primarily with global outsourced and regional relocation services providers in the corporate relocation business. The larger outsourced relocation services providers that we compete with include BGRS, SIRVA, Inc. and Weichert Relocation Resources, Inc. Competition is expected to continue to intensify as an increasingly higher percentage of relocation clients reduce their global relocation benefits and related spend.

Title and Settlement Business. The title and settlement business is highly competitive. The number and size of competing companies vary in the different areas in which we conduct business. In certain parts of the country we compete with small title agents and attorneys while in other parts of the country our competition is the larger title underwriters and national vendor management companies. In addition, we compete with the various brands of national competitors including Fidelity National Title Insurance Company, First American Title Insurance Company, Stewart Title Guaranty Company and Old Republic Title Company.

Government and Other Regulations

RESPA. RESPA, state real estate brokerage laws and similar laws in countries in which we do business restrict payments which real estate brokers, title agencies, mortgage bankers, mortgage brokers and other settlement service providers may receive or pay in connection with the sales of residences and referral of settlement services (e.g., mortgages, homeowners insurance and title insurance). Such laws may to some extent impose limitations on arrangements involving our real estate franchise, real estate brokerage, settlement services and relocation businesses or the business of our mortgage origination joint venture. In addition, with respect to our company owned real estate brokerage, relocation and title and

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settlement services businesses as well as our mortgage origination joint venture, RESPA and similar state laws generally require timely disclosure of certain relationships or financial interests with providers of real estate settlement services. Pursuant to the Dodd-Frank Act, the Consumer Financial Protection Bureau (the "CFPB") administers RESPA. Some state authorities have also asserted enforcement rights.

RESPA and related regulations do, however, contain a number of provisions that allow for payments or fee splits between providers, including fee splits between title underwriters and agents, real estate brokers and agents and market-based fees for the provision of goods or services and marketing arrangements. In addition, RESPA allows for referrals to affiliated entities, including joint ventures, when specific requirements have been met. We rely on these provisions in conducting our business activities and believe our arrangements comply with RESPA. RESPA compliance, however, has become a greater challenge under certain administrations for most industry participants offering settlement services, including mortgage companies, title companies and brokerages, because of changes in the regulatory environment and expansive interpretations of RESPA or similar state statutes by certain courts. Permissible activities under state statutes similar to RESPA may be interpreted more narrowly and enforcement proceedings of those statutes by state regulatory authorities may also be aggressively pursued. RESPA also has been invoked by plaintiffs in private litigation for various purposes.

Franchise Regulation. In the U.S., the sale of franchises is regulated by various state laws, as well as by federal law under the jurisdiction of the Federal Trade Commission (the "FTC"). The FTC requires that franchisors make extensive disclosure to prospective franchisees but does not require registration. A number of states require registration and/or disclosure in connection with franchise offers and sales. In addition, several states have "franchise relationship laws" or "business opportunity laws" that limit the ability of the franchisor to terminate franchise agreements or to withhold consent to the renewal or transfer of these agreements. The states with relationship or other statutes governing the termination of franchises include Alaska, Arkansas, California, Connecticut, Delaware, Hawaii, Idaho, Illinois, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, Rhode Island, Virginia, Washington and Wisconsin. Puerto Rico and the Virgin Islands also have statutes governing termination of franchises. Some franchise relationship statutes require a mandated notice period for termination and some require a notice and cure period. In addition, some require that the franchisor demonstrate good cause for termination. These statutes do not have a substantial effect on our operations because our franchise agreements generally comport with the statutory requirements for cause for termination, and they provide notice and cure periods for most defaults. When state law grants a period longer than permitted under the franchise agreement, we extend our notice and/or cure periods to match the statutory requirements. In some states, case law requires a franchisor to renew a franchise agreement unless a franchisee has given cause for non-renewal. Failure to comply with these laws could result in civil liability to the franchisors. While our franchising operations have not been materially adversely affected by such existing regulation, we cannot predict the effect of any future federal or state legislation or regulation. Internationally, many countries have similar laws affecting franchising.

State Brokerage Laws. Our company owned real estate brokerage business is also subject to numerous federal, state and local laws and regulations that contain general standards for and limitations on the conduct of real estate brokers and sales agents, including those relating to the licensing of brokers and sales agents, fiduciary and agency duties, consumer disclosure obligations, administration of trust funds, collection of commissions, restrictions on information sharing with affiliates, fair housing standards and advertising and consumer disclosures. Under state law, our company owned real estate brokers have certain duties to supervise and are responsible for the conduct of their brokerage businesses.

Worker Classification. Although the legal relationship between residential real estate brokers and licensed sales agents throughout the real estate industry historically has been that of independent contractor, newer rules and interpretations of state and federal employment laws and regulations, including those governing employee classification and wage and hour regulations, may impact industry practices, our company owned brokerage operations and our affiliated franchisees.

Real estate laws generally permit brokers to engage sales agents as independent contractors. Federal and state agencies have their own rules and tests for classification of independent contractors as well as to determine whether employees meet exemptions from minimum wages and overtime laws. These tests consider many factors that also vary from state to state. The tests continue to evolve based on state case law decisions, regulations and legislative changes.

There is active worker classification litigation in numerous jurisdictions against a variety of industries—now including residential real estate brokerages—where the plaintiffs seek to reclassify independent contractors as employees or to challenge the use of federal and state minimum wage and overtime exemptions.

For a summary of legal proceedings initiated against a wholly-owned subsidiary franchisor of the Company and an affiliated franchisee alleging worker misclassification, see "Part I - Item 3. Legal Proceedings" in this Annual Report.

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**Multiple Listing Services Rules.** We participate in many multiple listing services ("MLS") and are subject to each MLS' rules, policies, data licenses, and terms of service, which specify, among other things, how we may access and use MLS data and listings and how MLS data and listings must be displayed on our and our franchisees' websites and mobile applications. The rules of each MLS to which we belong can vary widely and are complex.

**Regulation of Title Insurance and Settlement Services.** Nearly all states license and regulate title agencies/settlement service providers or certain employees and underwriters through their Departments of Insurance or other regulatory body. In many states, title insurance rates are either promulgated by the state or are required to be filed with each state by the agent or underwriter, and some states promulgate the split of title insurance premiums between the agent and underwriter. States sometimes unilaterally lower the insurance rates relative to loss experience and other relevant factors. States also require title agencies and title underwriters to meet certain minimum financial requirements for net worth and working capital. In addition, the insurance laws and regulations of Texas, the jurisdiction in which our title insurance underwriter subsidiary, Title Resources, is domiciled, generally provide that no person may acquire control, directly or indirectly, of a Texas domiciled insurer, unless the person has provided required information to, and the acquisition is approved or not disapproved by, the Texas Department of Insurance. Generally, any person acquiring beneficial ownership of 10% or more of our voting securities would be presumed to have acquired indirect control of our title insurance underwriter subsidiary unless the Texas Department of Insurance, upon application, determines otherwise. Our insurance underwriter is also subject to a holding company act in its state of domicile, which regulates, among other matters, investment policies and the ability to pay dividends.

Certain states in which we operate have "controlled business" statutes which impose limitations on affiliations between providers of title and settlement services, on the one hand, and real estate brokers, mortgage lenders and other real estate service providers, on the other hand. We are aware of the states imposing such limits and monitor the others to ensure that if they implement such a limit that we will be prepared to comply with any such rule. "Controlled business" typically is defined as sources controlled by, or which control, directly or indirectly, the title insurer or agent. Pursuant to legislation enacted in the State of New York in late 2014 requiring the licensing of title agents, the New York Department of Insurance has issued regulations that provide that title agents with affiliated businesses must make a good faith effort to obtain, and be open for, title insurance business from all sources and not business only from affiliated persons, including actively competing in the marketplace. A company's failure to comply with such statutes could result in the payment of fines and penalties or the non-renewal of the Company's license to provide title and settlement services. We provide our services not only to our affiliates but also to third-party businesses in the geographic areas in which we operate. Accordingly, we manage our business in a manner to comply with any applicable "controlled business" statutes by ensuring that we generate sufficient business from sources we do not control. We have never been cited for failing to comply with a "controlled business" statute.

**Regulation of the Mortgage Industry.** We participate in the mortgage origination business through our 49.9% ownership of Guaranteed Rate Affinity. Private mortgage lenders operating in the U.S. are subject to comprehensive state and federal regulation and to significant oversight by government sponsored entities. Dodd-Frank endows the CFPB with rule making, examination and enforcement authority involving consumer financial products and services, including mortgage finance. The CFPB has issued a myriad of proposed and final rules, including TILA-RESPA Integrated Disclosure rules, which could materially and adversely affect the mortgage and housing industries.

Dodd-Frank established new standards and practices for mortgage originators, including determining a prospective borrower's ability to repay its mortgage and restricting the fees that mortgage originators may collect and could establish new standards in the future which could be costly to comply with and present material operating risks.

**Cybersecurity and Data Privacy Regulations.** To run our business, it is essential for us to store and transmit sensitive personal information about our customers, prospects, employees, independent agents, and relocation transferees (Cartus) in our systems and networks. At the same time, we are subject to numerous laws, regulations, and other requirements around the world that require businesses like ours to protect the security of personal information, notify customers and other individuals about our privacy practices, and limit the use, disclosure, or transfer of personal data across country borders. Regulators in the U.S. and abroad continue to enact comprehensive new laws or legislative

reforms imposing significant privacy and cybersecurity restrictions. The result is that we are subject to increased regulatory scrutiny, additional contractual requirements from corporate customers, and heightened compliance costs. For example, the European Union's General Data Protection Regulation ("GDPR"), which became effective in May 2018, conferred new and significant privacy rights on individuals (including employees and independent agents), and materially increased penalties for violations. In the U.S., California enacted the California Consumer Privacy Act—which is expected to go into full effect in 2020—imposing new and comprehensive requirements on organizations that collect and disclose personal information about California residents. In March 2017, the New York Department of Financial Services' new cybersecurity regulation went into effect.

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That regulation required regulated financial institutions, including Realogy's Title Resource Group ("TRG"), to establish a detailed cybersecurity program. Program requirements included corporate governance, incident planning, data management, system testing, vendor oversight, and regulator notification rules. Now, other state regulatory agencies are expected to enact similar requirements following the adoption of the Insurance Data Security Model Law by the National Association of Insurance Commissioners that is consistent with the New York regulation. For example, the South Carolina Insurance Data Security Act, effective January 1, 2019, is based on the Insurance Data Security Model Law and imposes new breach notification and information security requirements on insurers, agents, and other licensed entities authorized to operate under the state's insurance laws, including TRG. Finally, our security systems and IT infrastructure may not adequately protect against all potential security breaches, cyber-attacks, or other unauthorized access to personal information. Third parties, including vendors or suppliers that provide essential services for our global operations, could also be a source of security risk to us if they experience a failure of their own security systems and infrastructure. Any significant violations of privacy and cybersecurity could result in the loss of new or existing business, litigation, regulatory investigations, the payment of fines, damages, and penalties and damage to our reputation, which could have a material adverse effect on our business, financial condition, and results of operations.



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Item 1A. Risk Factors.

You should carefully consider each of the following risk factors and all of the other information set forth in this Annual Report. The risk factors generally have been separated into three primary groups: (1) risks relating to our business; (2) risks relating to our indebtedness; and (3) risks relating to an investment in our common stock. Based on the information currently known to us, we believe that the following information identifies the most significant risk factors affecting our Company and our common stock. However, the risks and uncertainties are not limited to those set forth in the risk factors described below. In addition, past financial performance may not be a reliable indicator of future performance and historical trends should not be used to anticipate results or trends in future periods.

Risks Related to Our Business

Macroeconomic Conditions

The residential real estate market is cyclical and we are negatively impacted by downturns and constraints in this market.

The residential real estate market tends to be cyclical and typically is affected by changes in general economic and residential real estate conditions which are beyond our control. The U.S. residential real estate industry was in a significant and lengthy downturn from the second half of 2005 through 2011. Beginning in 2012, the U.S. residential real estate industry began a recovery. However, based upon data published by NAR, the housing market showed no volume growth in 2018 compared to 6% growth in 2017. In addition, the last quarter of 2018 was significantly worse than the rest of the year, with homesale transaction volume declining 4% during the fourth quarter of 2018 as compared to 2017. We cannot predict whether the housing market will continue to weaken. If the residential real estate market or the economy as a whole does not improve or worsens, our business, financial condition and liquidity may be materially adversely affected, including our ability to access capital and grow our business.

Any of the following could negatively impact the housing market and have a material adverse effect on our business by causing a lack of improvement or a decline in the number of homesales and/or stagnant or declining home prices which in turn, could adversely affect our revenues and profitability:

- high levels of unemployment and/or continued slow wage growth;
- a period of slow economic growth or recessionary conditions;
- increasing mortgage rates and down payment requirements and/or constraints on the availability of mortgage financing;
- insufficient or excessive regional home inventory levels;
- a decrease in the affordability of homes;
- deceleration in the building of new housing and/or irregular timing or volume of new development closings;
- a low level of consumer confidence in the economy and/or the residential real estate market due to macroeconomic events domestically or internationally;
- instability of financial institutions;
- legislative or regulatory changes (including changes in regulatory interpretations or regulatory practices) that would adversely impact the residential real estate market;
- federal and/or state income tax changes and other tax reform affecting real estate and/or real estate transactions, including, in particular, the impact of the Tax Cuts and Jobs Act of 2017 (the "2017 Tax Act");
- other legislative, tax or regulatory changes (including changes in regulatory interpretations or enforcement practices) that would adversely impact the residential real estate market, including changes relating to the Real Estate Settlement Procedures Act ("RESPA"), potential reforms of Fannie Mae and Freddie Mac, immigration reform, and further potential tax code reform;
- renewed high levels of foreclosure activity;
- the inability or unwillingness of homeowners to enter into homesale transactions such as first-time homebuyer concerns about investing in a home and move-up buyers having limited or negative equity in their existing homes or other factors, including difficult mortgage underwriting standards, attractive rates on existing mortgages and the lack of availability in their market;

homeowners retaining their homes for longer periods of time;

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decreasing home ownership rates, declining demand for real estate and changing social attitudes toward home ownership including as compared to renting, such as among potential first-time homebuyers who may delay, or decide not to, purchase a home, as well as existing homeowners who may decide to sell their home and rent their next home;

- a deterioration in other economic factors that particularly impact the residential real estate market and the business segments in which we operate whether broadly or by geography and price segments; and/or

natural disasters, such as hurricanes, earthquakes, wildfires, mudslides and other events that disrupt local or regional real estate markets.

In addition, homesale inventory levels for the existing home market have been declining over the past several years due to strong demand, in particular in certain highly sought-after geographies and at lower price points. According to NAR, the inventory of existing homes for sale in the U.S. was 1.52 million as of January 2018 and has increased to 1.53 million at the end of December 2018. As a result, the inventory has increased from 3.4 months of supply in January 2018 to 3.7 months as of December 2018. However, these levels continue to be significantly below the 10-year average of 5.8 months, the 15-year average of 6.1 months and the 25-year average of 5.8 months. If interest rates were to rise, homebuilders may determine to discontinue or delay new projects, which could further contribute to inventory constraints. While a continuation of low inventory levels may contribute to favorable demand conditions and improved homesale price growth, insufficient inventory levels have had a negative impact on homesale volume growth and, combined with rising mortgage rates, has led to a reduction in housing affordability, which we believe has contributed to some potential home buyers deferring entry into the residential real estate market. Ongoing constraints on home inventory levels, along with reduced affordability due to higher average homesale prices and rising mortgage rates, may continue to have an adverse impact on the number of homesale transactions for our company owned brokerage business and the businesses of our franchisees, which may limit our ability to grow revenue.

Adverse developments in general business and economic conditions could have a material adverse effect on our financial condition and our results of operations.

Our business and operations and those of our franchisees are sensitive to general business and economic conditions in the U.S. and worldwide. These conditions include short-term and long-term interest rates, inflation, fluctuations in debt and equity capital markets, levels of unemployment, consumer confidence and the general condition of the U.S. and the world economy.

The residential real estate market also depends upon the strength of financial institutions, which are sensitive to changes in the general macroeconomic environment. Lack of available credit or lack of confidence in the financial sector could materially and adversely affect our business, financial condition and results of operations.

A host of factors beyond our control could cause fluctuations in these conditions, including the political environment, disruptions in a major geoeconomic region, or equity or commodity markets and acts or threats of war or terrorism which could have a material adverse effect on our financial condition and our results of operations.

Monetary policies of the federal government and its agencies may have a material impact on our operations.

Our business is significantly affected by the monetary policies of the federal government and its agencies. We are particularly affected by the policies of the Federal Reserve Board, which regulates the supply of money and credit in the U.S. The Federal Reserve Board's policies impact the real estate market through their effect on interest rates as well as the cost of our interest-bearing liabilities.

During 2018, the Federal Reserve Board raised the interest rate four times. Mortgage rates on commitments for a 30-year, conventional, fixed-rate first mortgage increased nearly 100 basis points, rising as high as 4.87% in November 2018, and year-over-year, increased approximately 60 basis points to 4.54% as of December 31, 2018 from 3.99% as of December 31, 2017, according to Freddie Mac. This increase in mortgage rates adversely impacts housing affordability and we have been and could continue to be negatively impacted by a rising interest rate environment. As mortgage rates rise, the number of homesale transactions may decrease as potential home sellers choose to stay with their lower mortgage rate rather than sell their home and pay a higher mortgage rate with the purchase of another home, and potential home buyers choose to rent rather than pay higher mortgage rates. Further increases in mortgage rates would also be expected to reduce the number of homesale refinancing transactions, which could materially

adversely impact our earnings from our mortgage origination joint venture as well as the revenue stream of our title and settlement services segment. Changes in the Federal

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Reserve Board's policies, the interest rate environment and mortgage market are beyond our control, are difficult to predict and could have a material adverse effect on our business, results of operations and financial condition. The passage of the 2017 Tax Act may have a negative impact on homeownership rates and homesale transaction activity, which could adversely affect our profitability.

The 2017 Tax Act, which became law on December 22, 2017, includes provisions that, among other things: cap the aggregate amount of property, sales and state and local income tax deductions at \$10,000; and reduce the principal amount to which the home mortgage interest deduction will be available to potentially impacted U.S. taxpayers who enter into a mortgage on or after December 15, 2017 from \$1,000,000 to \$750,000, while entirely suspending interest deductibility of home equity loans.

These changes affecting individual taxpayers will cease to apply after December 31, 2025 unless further extended by future legislation. Certain of these provisions of the 2017 Tax Act, alone or in combination, directly impact traditional incentives associated with home ownership and may reduce the financial distinction between renting and owning a home for many households who are U.S. residents for federal income tax purposes at certain income levels, which may have a negative impact on the national homeownership rate. In addition, certain existing homeowners may be less likely to purchase a larger or more expensive home or refinance a mortgage given the reduced mortgage interest deductibility opportunities (from \$1,000,000 to \$750,000 on mortgages that are not grandfathered) and lessened property tax deductibility. The reduction in state and local tax deductibility impacts all households, particularly in states with higher taxes. It is unclear what impact, if any, this will have on the mobility of such state residents, or on home values in such geographies, although it may result in some shift in the value of homes from high tax states (where the deductibility of such taxes may be limited beyond previous levels) to those states with low or no state income tax. The effects of the 2017 Tax Act on average homesale prices may be more impactful in states where average home prices, state and local incomes taxes, and/or property taxes are high, including California and the New York tri-state area, where our company owned brokerage and our franchisee businesses maintain a material presence. Reductions in the number of homesale transactions or average homesale price could have a material adverse effect on our revenues and profitability.

### Strategic and Operational

Our ability to grow earnings is significantly dependent upon our and our franchisees' ability to attract and retain independent sales agents.

The core of our integrated business strategy is aimed at significantly growing the base of productive independent sales agents at our company owned and franchisee brokerages and providing them with compelling data and technology products and services to make them more productive and their businesses more profitable. If we are unable to successfully grow the base of productive independent sales agents at our company owned and franchisee brokerages, we may be unable to maintain or grow revenues or earnings and our results of operations may be materially adversely affected.

A variety of factors could impact our ability to execute on this strategy and grow revenue and earnings, including, but not limited to:

- intense competition from other brokerages as well as companies employing technologies or alternative models intended to disrupt historic real estate brokerage models, which, among other things, could continue to put upward pressure on our commission expense;
- our ability to react quickly to changing market dynamics;
- our ability to develop and deliver compelling data and technology products and services to independent sales agents and adopt and implement commission plans that are attractive to such agents;
- worsening macroeconomic conditions, including a further slowdown in the residential real estate market; and
- our ability to attract and retain talent to drive our strategy.

Execution of our strategy may also take longer or cost more than we currently anticipate and, even if we are successful in our recruitment and retention efforts, any additional revenue generated may not offset the related expenses we incur.



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Market competition, the influence of independent sales agents (in particular, top performing independent sales agents and independent sales agent teams) and the continued execution of our strategic initiatives may continue to shift a higher proportion of homesale commissions to affiliated independent sales agents or otherwise erode our share of the commission income generated by homesale transactions, which could negatively affect our profitability.

As noted in the prior risk factor, our integrated business strategy is focused on the attraction and retention of independent sales agents to our company owned and franchised brokerage operations. Intense industry competition for agents combined with our strategic emphasis on the recruitment and retention of independent sales agents has put, and is expected to continue to put, upward pressure on our commission expense, which has and could continue to negatively impact our profitability.

If independent sales agents affiliated with our company owned brokerages are paid a higher proportion of the commissions earned on a homesale transaction or the level of commission income we receive from a homesale transaction is otherwise reduced, the operating margins of our company owned residential brokerages could be adversely affected. Our franchisees face similar risks and continued downward pressure on the commission income recognized by our franchisees could negatively impact their view of our value proposition and we may fail to attract new franchisees, expiring franchisees may not renew their agreements with us, or we may be required to offer reduced royalty fee arrangements to new and existing franchisees, any of which would result in a reduction in royalty fees paid to us.

Our company owned brokerage operations are subject to geographic and high-end real estate market risks, which could adversely affect our revenues and profitability.

Our subsidiary, NRT, owns real estate brokerage offices located in and around large metropolitan areas in the U.S. Competition for independent sales agents and independent sales agent teams is particularly intense in these areas. Local and regional economic conditions in these locations could differ materially from prevailing conditions in other parts of the country. For the year ended December 31, 2018, NRT realized approximately 27% of its revenues from California, 20% from the New York metropolitan area and 9% from Florida, which, in the aggregate, totals approximately 56% of its revenues. A downturn in the residential real estate market or economic conditions that is concentrated in these regions could result in a decline in NRT's total gross commission income and profitability disproportionate to the downturn experienced throughout the U.S. and could have a material adverse effect on us. The effects of the 2017 Tax Act on average homesale prices may be more impactful in states where average home prices, state and local incomes taxes, and/or property taxes are high, including California and the New York tri-state area. In addition, given the significant geographic overlap of our title and settlement services business with our company owned brokerage offices, such regional declines affecting our company owned brokerage operations could have a disproportionate adverse effect on our title and settlement services business as well. During 2018, both California and New York City experienced negative homesale transaction growth in their respective housing markets, which negatively impacted both our company owned brokerage operations and our title and settlement services segments' operating results in 2018. A further downturn in the residential real estate market or economic conditions in California and New York (or market or general economic weakness in Florida) could result in a decline in our overall revenues and have a material adverse effect on us.

NRT has a significant concentration of transactions at the higher end of the U.S. real estate market. A shift in NRT's mix of property transactions from the high range to lower and middle range homes would adversely affect the average price of NRT's closed homesales. Such a shift, absent an increase in transactions, would have an adverse effect on our operating results. Due to NRT's concentration in high-end real estate, its business may also be adversely impacted by capital controls imposed by foreign governments that restrict the amount of capital individual citizens may legally transfer out of their countries. In addition, NRT continues to face heightened competition for both homesale transactions and high performing independent sales agents because of its prominent position in the higher end housing markets.

Moreover, NRT also has relationships with developers, primarily in major cities, to provide marketing and brokerage services in new developments. During 2018, there was a decrease in revenue related to our new development business

in New York City as a result of lower closing volume due to long cycle times with irregular project completion timing. Deceleration in the building of new housing and/or timing of closings of new developments has led, and may continue to lead, to lower unit sales in the new development market, which has had, and could continue to have, a material adverse effect on the revenue generated by NRT and our profitability.



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We may not successfully develop or procure technology, including Zap® product enhancements, that supports our strategy to grow the base of productive independent sales agents at our company owned and franchisee real estate brokerages or assist those agents in competing effectively and efficiently, which could adversely affect our results of operations.

Our future success depends in part on our ability to continuously develop and improve our technology products and services or procure such technology, in particular for our company owned and franchisee real estate brokerages, affiliated independent sales agents and their customers as well as for our relocation and title and settlement services segments. We have expended, and expect to continue to expend, substantial time, capital, and other resources to identify the needs of our company owned brokerages, franchisees, independent sales agents and their customers and to develop technology and service offerings to meet those needs. In addition, we have made and may continue to make strategic investments in companies developing technologies that support our strategy and we may not realize the anticipated benefits from these investments and such technologies may not become available to us or may become available to our competitors.

We may incur unforeseen expenses in the development of enhancements to technology products (including Zap®), or may experience competitive delays in introducing new technologies as quickly as we would like. In addition, the increasingly competitive industry for technology talent may impact our ability to attract and retain employees involved in developing our technology and systems. Furthermore, the investment and pace of technology development continues to increase across the industry, creating risk in the relative timing and attractiveness of our technology products and there can be no assurance that independent sales agents in our franchise system, including those affiliated with our company owned brokerages, or customers will choose to use the technology products we may develop. In addition, we are now building our agent- and franchisee-focused technology products with an open architecture in order to enable third-party vendors and products to access and interface with our products. We may not be able to accomplish this transition on a timely basis and there can be no assurance that third parties will integrate with our solutions in a timely or effective manner. Any of the foregoing could adversely affect our value proposition and the productivity of independent sales agents, which in turn could adversely affect our results of operations. Competition in the residential real estate and relocation business is intense and may adversely affect our financial performance.

We generally face intense competition in the residential real estate services business.

Some competitive risks are shared among our business units, while others are specific to a business unit. For example, both the Company and our franchisees compete for consumer business as well as for independent sales agents with national and regional independent real estate brokerages and franchisors and discount and limited service brokerages as well as with franchisees of our brands. We are faced with the following related risks:

Our ability to succeed both through our company-owned brokerages and as a franchisor is largely dependent on our and our franchisees' ability to attract and retain independent sales agents.

The successful recruitment and retention of independent sales agents and independent sales agent teams are critical to the business and financial results of a brokerage—whether or not it is affiliated with a franchisor. Most of a brokerage's real estate listings are sourced through the sphere of influence of its independent sales agents, notwithstanding the growing influence of internet-generated leads. Competition for independent sales agents in our industry is high and has intensified particularly with respect to more productive independent sales agents and in the densely populated metropolitan areas in which we operate.

The successful recruitment and retention of independent sales agents is influenced by many factors, including remuneration (such as sales commission percentage and other financial incentives paid to independent sales agents), other expenses borne by independent sales agents, leads or business opportunities generated for independent sales agents from the brokerage, independent sales agents' perception of the value of the broker's brand affiliation, marketing and advertising efforts by the brokerage or franchisor, the quality of the office manager, staff and fellow independent sales agents with whom they collaborate daily, as well as technology, continuing professional education, and other services provided by the brokerage or franchisor.

We believe that a variety of factors in recent years have negatively impacted the recruitment and retention of independent sales agents in the industry generally and have put upward pressure on the average share of commissions earned by affiliated independent sales agents, including increasing competition, such as from brokerages that offer a greater share of commission income to independent sales agents, changes in the spending patterns of independent sales agents (as

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more agents purchase services from third parties outside of their affiliated broker), and growth in independent sales agent teams. Certain of our privately-held competitors have investors that appear to be supportive of a model that pursues increases in market share over profitability, which exacerbates competition for independent sales agents and pressure on the share of commission income received by the agent, creating challenges to our and our franchisee's margins and profitability.

If we or our franchisees fail to attract and retain successful independent sales agents or we or they fail to replace departing successful independent sales agents with similarly productive independent sales agents, the gross commission income generated by our company owned brokerages and franchises may decrease, resulting in a reduction in our profitability. In addition, competition for sales agents could further reduce the commission amounts retained by the Company and our affiliated franchisees after giving effect to the split with independent sales agents, and possibly increase the amounts that we spend on marketing and the development of products and services that we believe will appeal to such agents.

Some of the firms competing for sales agents use different commission plans, which may be appealing to certain sales agents, and we and our franchisees may be unable to adopt and implement alternative commission plans in a profitable and effective manner, which may hinder our ability to attract and retain those agents.

Our company owned brokerage service has historically compensated affiliated independent sales agents using a traditional graduated commission model that emphasizes the value proposition offered to independent sales agents and independent sales agent teams, although we have utilized elements of other commission plan styles in certain geographic markets. The traditional graduated commission model has experienced declines in market share over the past several years. Increasingly, independent sales agents have affiliated with brokerages that offer a different mix of services to the agent, allowing the independent sales agent to select the services that they believe allow them to retain a greater percentage of the commission and purchase services from other vendors as needed. If this trend continues and we and our franchisees are unable to adopt and implement alternative commission plans that appeal to a broad base of independent sales agents in a profitable and effective manner, we and our franchisees may fail to attract and retain independent sales agents, which may have a material adverse impact on our ability to grow earnings.

The real estate brokerage industry has minimal barriers to entry for new participants, including participants utilizing historic real estate brokerage models and those pursuing alternative variations of those models, as well as non-traditional methods of marketing real estate.

The significant size of the U.S. real estate market, in particular the addressable market of commission revenues, has continued to attract outside capital investment in traditional and disruptive competitors that seek to access a portion of this market.

There are also market participants who differentiate themselves by offering consumers flat fees, rebates or lower commission rates on transactions (often coupled with fewer services). Although such competitors have yet to have a material impact on overall brokerage commission rates, this could change in the future if they use greater discounts as a means to increase their market share or improve their value proposition. Since 2014, we have experienced approximately a one basis point decline in the average broker commission rate each year. A decrease in the average brokerage commission rate may adversely affect our revenues.

While real estate brokers using historic real estate brokerage models typically compete for business primarily on the basis of services offered, reputation, utilization of technology, personal contacts and brokerage commission, participants pursuing non-traditional methods of marketing real estate may compete in other ways, including companies that employ technologies intended to disrupt historic real estate brokerage models or minimize or eliminate the role brokers and sales agents perform in the homesale transaction process.

A growing number of companies are competing in non-traditional ways for a portion of the gross commission income generated by homesale transactions. For example, listing aggregators and other web-based real estate service providers not only compete for our company owned brokerage business by establishing relationships with independent sales agents and/or buyers and sellers of homes, they also increasingly charge brokerages and independent sales agents additional fees for new and existing services. These services put pressure on the profitability of other industry

participants, including agents and brokers, compete for part of our franchisor service revenue through referral or other fees and could dilute our relationships with our franchisees and our franchisees' relationships with their independent sales agents and buyers and sellers of homes. Other business models that have emerged in recent years consist of companies (including certain listing aggregators) that leverage capital to purchase homes directly from sellers, commonly referred to as iBuying. If iBuying gains market share in the residential real estate industry, it could disintermediate real estate brokers and independent sales agents from buyers and

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sellers of homes either entirely or by reducing brokerage commissions that may be earned on those transactions. In 2018, in collaboration with Home Partners of America, we launched the cataLIST program, a quick-cash sale program that shares some traits with the iBuying model. Although the cataLIST program is intended to keep the independent sales agent at the center of the transaction, there can be no assurance that the program will be successful or that it will operate as intended.

As a real estate brokerage franchisor, we are also subject to risks unique to franchising, including:

To remain competitive in the sale of franchises and to retain our existing franchisees, we may have to reduce the fees we charge our franchisees, increase the amount of non-standard incentives we issue or take other actions or employ other models to be competitive with fees charged by competitors.

Competition among the national real estate brokerage brand franchisors to grow their franchise systems is intense. Our products are our brand names and the support services we provide to our franchisees and our ability to grow our franchisor business is dependent on the operational and financial success of our franchisees, including the ability of our franchisees to successfully navigate the challenges noted above.

The value provided by a franchisor encompasses many different aspects including the quality of the brand, tools, technology, marketing and other services, the availability of financing provided to the franchisees, and the fees the franchisees must pay. Franchisee fees can be structured in numerous ways and can include flat royalty and marketing fees, capped royalty fees and discounted royalty and marketing fees. We recently launched a capped fee model at one of our brands as substantially all of our franchises are structured using a flat fee model and we have faced increasing competition from franchisors utilizing alternative models. In addition, we launched Corcoran® as a new franchise brand. There can be no assurance that the capped fee model or the new franchise brand will succeed and we may not realize benefits from these investments. If we fail to successfully offer franchisees compelling value propositions, including through compelling products and services, as well as through appealing franchise models and brands, we may fail to attract new franchisees and expiring franchisees may not renew their agreements with us, resulting in a reduction in royalty fees paid to us.

Upon the expiration of a franchise agreement, a franchisee may choose to franchise with one of our competitors or operate as an independent broker. Competitors may offer franchisees whose franchise agreements are expiring or prospective franchisees products and services similar to ours at rates that are lower than we charge. We also face the risk that currently unaffiliated brokers may not enter into franchise agreements with us because they believe they can compete effectively in the market without the need to license a brand of a franchisor and receive services offered by a franchisor or because they may believe that their business will be more attractive to a prospective purchaser without the existence of a franchise relationship. Regional and local franchisors as well as franchisors offering different franchise models or services provide additional competitive pressure. To effectively compete with competitor franchisors and to recruit new franchisees, we may have to take actions that would result in increased costs to us (such as increased non-standard incentives to franchisees) or decreased royalty payments to us (such as a reduction in the fees we charge our franchisees), which may have a material adverse effect on our ability to grow earnings. In addition, our continued implementation of strategic initiatives intended to add new franchisees and grow our agent base through the introduction of new franchisee fee models and brands, while intended to capture additional market share with brokers unaffiliated with our brands, could result in greater intra-brand competition among our brands.

Our Relocation Services business unit, Cartus, and our Title and Settlement Services business unit, TRG, also face competitive risks:

In our relocation services business, we compete primarily with global and regional outsourced relocation service providers.

We have faced greater competition from firms that provide services on a global basis. Competition is expected to continue to intensify as an increasingly higher percentage of relocation clients reduce their global relocation benefits and related spend.

The title and settlement services business is highly competitive and fragmented.

The number and size of competing companies vary in the different areas in which we conduct business. In certain parts of the country we compete with small title agents and attorneys while in other parts of the country our competition is the larger title underwriters and national vendor management companies. In addition, we compete with the various brands of national competitors.

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If a significant affinity client or multiple significant relocation clients cease or reduce volume under their contracts with us, our revenues and profitability could be materially adversely affected.

Substantially all of our contracts with our affinity and relocation clients are terminable at any time at the option of the client, do not require such client to maintain any level of business with us and are non-exclusive. Our affinity revenues are highly concentrated. If a significant affinity client or multiple significant relocation clients cease or reduce volume under their contracts with us, our revenues (including revenue to Cartus, NRT and RFG derived from referrals via the Cartus Broker Network) and profitability could be materially adversely affected.

Our financial results are affected by the operating results of our franchisees.

Our real estate franchise services segment receives revenue in the form of royalties, which are based on a percentage of gross commission income earned by our franchisees. Accordingly, the financial results of our real estate franchise services segment are dependent upon the operational and financial success of our franchisees. If industry trends or economic conditions worsen or do not improve or if one or more of our top performing franchisees become less competitive, our franchisees' financial results may worsen and our royalty revenues may decline, which could have a material adverse effect on our revenues and profitability. In addition, we may have to increase our bad debt and note reserves. We may also have to terminate franchisees due to non-payment.

Consolidation among our top 250 franchisees may cause our royalty revenue to grow at a slower pace than homesale transaction volume.

Although during 2018, none of our franchisees (other than NRT) generated more than 1% of the total revenue of our real estate franchise business, a significant majority of this segment's revenue is generated from our top 250 franchisees, which have grown faster than our other franchisees through organic growth and market consolidation in recent years. If the amount of gross commission income generated by our top 250 franchisees continue to grow at a quicker pace relative to our other franchisees, we would expect our royalty revenue to continue to increase, but at a slower pace than homesale transaction volume due to increased volume and non-standard sales incentives earned by such franchisees, both of which directly impact our royalty revenue.

In addition, our franchisees face the same market pressures generally facing the industry (such as margin compression) and may seek lower royalty rates or higher incentives from us. If franchisees, in particular multiple top 250 franchisees, fail to renew their franchise agreements, or if we induce franchisees to renew these agreements through lower royalty rates or higher incentives, then our royalty revenues may decrease, and profitability may be lower than in the past. These risks are pronounced in years when a significant number of franchise agreements, which typically have a ten year term, are expiring

Negligence or intentional actions of our franchisees and their independent sales agents could harm our business.

Our franchisees are independent business operators and we do not exercise control over their day-to-day operations.

Our franchisees may not successfully operate a real estate brokerage business in a manner consistent with industry standards or may not affiliate with effective independent sales agents or employees. If our franchisees or their independent sales agents were to engage in negligent or intentional misconduct or provide diminished quality of service to customers, our image and reputation may suffer materially and adversely affect our results of operations.

Negligent or improper actions involving our franchisees, including regarding their relationships with independent sales agents, clients and employees, may also lead to direct claims against us based on theories of vicarious liability, negligence, joint operations and joint employer liability which, if determined adversely, could increase costs, negatively impact the business prospects of our franchisees and subject us to incremental liability for their actions.

Additionally, franchisees and their independent sales agents, including those handling properties for our relocation business, may engage or be accused of engaging in unlawful or tortious acts, such as violating the anti-discrimination requirements of the Fair Housing Act or failing to make necessary disclosures under federal and state law. Such acts or the accusation of such acts could harm our brands' image, reputation and goodwill or compromise our relocation business relationships with clients.

Franchisees, as independent business operators, may from time to time disagree with us and our strategies regarding the business or our interpretation of our respective rights and obligations under the franchise agreement. To the extent

we have such disputes, the attention of our management and our franchisees will be diverted, which could have a material adverse effect on our business, financial condition, results of operations or cash flows.



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Negligence or intentional actions of independent sales agents engaged by our company owned brokerages could materially and adversely affect our reputation and subject us to liability.

Our company owned brokerage operations rely on the performance of independent sales agents. If the independent sales agents were to provide lower quality services to our customers or engage in negligent or intentional misconduct, our image and reputation could be materially adversely affected. In addition, we could also be subject to litigation and regulatory claims arising out of their performance of brokerage services, which if adversely determined, could materially and adversely affect us.

We do not own two of our brands and significant difficulties in the business of the brand owners could negatively reflect on the brand and the brand value.

The Sotheby's International Realty® and Better Homes and Gardens® Real Estate brands are owned by the companies that founded these brands. We are the exclusive party licensed to run brokerage services in residential real estate under those brands, whether through our franchisees or our company owned operations. Our future operations and performance with respect to these brands requires the successful protection of those brands. Any significant difficulties in the business of the brand owners could negatively reflect on the brand and the brand value.

If recent trends in corporate relocation practices continue, there could be fewer employee relocations, which may have a material adverse impact on the operating results of our relocation business.

Many of the general residential housing trends impacting our businesses that derive revenue from homesales also impact our relocation services business. Additionally, key performance drivers of our relocation business include global corporate spending on relocation services, which continue to shift to lower cost relocation benefits as corporate clients engage in cost reduction initiatives and/or restructuring programs, as well as changes in employment relocation trends. As a result of a shift in the mix of services and number of services being delivered per move, our relocation business has been increasingly subject to a competitive pricing environment and lower average revenue per relocation. Lower volume growth, in particular with respect to global relocation activity, has also impacted the operating results of our relocation business. These factors may continue to put pressure on the growth and profitability of this segment. In addition, the suspension of the deduction for certain moving expenses under the 2017 Tax Act could potentially contribute to fewer businesses offering these benefits and could result in fewer instances of these services.

We are reliant on third-party vendors to perform services on our behalf as well as key components of our business, which could have a material adverse effect on our business and results of operations.

Aspects of our business, including our relocation segment, are performed on our behalf by third-party vendors and cover a wide variety of services and such vendors may be in possession of personal information of our customers. In many instances these suppliers are in direct contact with our customers in order to deliver services on our behalf. If our third-party suppliers were to provide diminished services to our customers or face cybersecurity breaches of their information technology systems, our image and reputation could be materially adversely affected. In addition, we could also be subject to litigation and regulatory claims arising out of the performance of our third-party suppliers based on theories of breach of contract, vicarious liability, negligence or failure to comply with laws and regulations including those related to anti-bribery and anti-corruption, such as the Foreign Corrupt Practices Act and U.K. Bribery Act, and those related to data protection and privacy, such as the General Data Protection Regulation, which became effective in May 2018.

In addition, many components of our business, including information technology, key operational processes (such as accounts payable, payroll, and travel and expense) and critical client systems, are provided by third parties. Moreover, we are now building our agent- and franchisee-focused technology products with an open architecture in order to enable third-party vendors and products to access and interface with our products. The actions of our third-party vendors and third-party developers are beyond our control. If our vendors or third-party applications fail to perform as we expect, or if we fail to adequately monitor their performance, our operations and reputation could suffer.

Depending on the function involved, vendor or third-party application failure or error may lead to increased costs, business disruption, processing inefficiencies, the loss of or damage to intellectual property or sensitive data through security breaches or otherwise, effects on financial reporting, loss of customers, litigation or remediation costs, or

damage to our reputation. In addition, although we have instituted a Vendor Code of Conduct, we may be subject to the consequences of fraud, bribery, or misconduct by employees of our vendors, which can result in significant financial or reputational harm.

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We are reliant upon information technology to operate our business and maintain our competitiveness. Our ability to leverage our technology and data scale is critical to our long-term strategy. Our business, including our ability to attract employees and independent sales agents, increasingly depends upon the use of sophisticated information technologies and systems, including technology and systems (cloud solutions, mobile and otherwise) utilized for communications, marketing, productivity tools, training, lead generation, records of transactions, business records (employment, accounting, tax, etc.), procurement, call center operations and administrative systems. The operation of these technologies and systems is dependent upon third-party technologies, systems and services, for which there are no assurances of continued or uninterrupted availability and support by the applicable third-party vendors on commercially reasonable terms. We also cannot assure that we will be able to continue to effectively operate and maintain our information technologies and systems. In addition, our information technologies and systems are expected to require refinements and enhancements on an ongoing basis, and we expect that advanced new technologies and systems will continue to be introduced. We may not be able to obtain such new technologies and systems, or to replace or introduce new technologies and systems as quickly as our competitors or in a cost-effective manner. Also, we may not achieve the benefits anticipated or required from any new technology or system, and we may not be able to devote financial resources to new technologies and systems in the future.

Tightened mortgage underwriting standards could continue to reduce homebuyers' ability to access the credit markets on reasonable terms.

More stringent mortgage underwriting standards or a reduction in the availability of alternative mortgage products could adversely affect the ability and willingness of prospective buyers to finance home purchases or to sell their existing homes. In addition, the combination of tightened mortgage underwriting standards with first-time homebuyers who have heavy debt and may be unable to satisfy down payment requirements may intensify first-time homebuyer concerns about investing in a home and impact their ability or willingness to enter into a homesale transaction. A decline in the number of homesale transactions due to the foregoing would adversely affect our operating results. We may not realize the expected benefits from our mortgage origination joint venture or from other existing or future joint ventures.

Guaranteed Rate Affinity, our joint venture with Guaranteed Rate began doing business in August 2017 on a phased-in basis. We may not realize the expected benefits (including anticipated earnings and dividends) from the mortgage origination joint venture, which operated at a loss in 2018. For example, operational challenges at Guaranteed Rate Affinity, in particular, and trends affecting the mortgage industry in general, including but not limited to high levels of competition, decreases in operating margins and increases in mortgage interest rates, have had an adverse impact, and may have a material adverse impact in the future, on earnings and dividends from the joint venture. Regulatory changes in the mortgage industry could also have an adverse impact, which may be material, on earnings and dividends from Guaranteed Rate Affinity. Likewise, operational or liquidity risks that may be faced by Guaranteed Rate Affinity or our partner, such as litigation or regulatory investigations that may arise, could have a material adverse impact on the benefits we expect to realize from the venture. Operational, liquidity, regulatory, macroeconomic and competitive risks also apply to our other existing joint ventures and would likely apply to any joint venture we may enter into in the future.

In addition, when we hold a minority stake in a joint venture, we generally do not exercise control over day-to-day operations of the joint venture. For example, under the Operating Agreement governing Guaranteed Rate Affinity, we own a 49.9% equity interest and have certain governance rights related to the joint venture, but do not have control of the day-to-day operations of the joint venture. Rather, our joint venture partner, Guaranteed Rate, is the managing partner of the venture and may make decisions with respect to the day-to-day operation of the venture. Our current or future joint venture partners may make decisions that which may harm the joint venture or be contrary to our best interests. Additionally, even if we hold a minority interest in any joint venture, improper actions by our joint venture partners may also lead to direct claims against us based on theories of vicarious liability, negligence, joint operations and joint employer liability, which, if determined adversely, could increase costs, negatively impact our reputation and subject us to liability for their actions. Any of the foregoing may have a material adverse effect on our results of

operations or equity interest in the applicable joint venture.

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### Regulatory and Legal

There may be adverse financial and operational consequences to us and our franchisees if independent sales agents are reclassified as employees.

The legal relationship between residential real estate brokers and licensed sales agents throughout the real estate industry historically has been that of independent contractor. Although we believe our classification practices are proper and consistent with the legal framework for such classification, our company owned brokerage operations could face substantial litigation or disputes in direct claims or regulatory procedures, including the risk of court or regulatory determinations that certain groups of real estate agents should be reclassified as employees and entitled to unpaid minimum wage, overtime, benefits, expense reimbursement and other employment obligations. Franchisees affiliated with one of the Company's brands face the same risks with respect to their affiliated independent sales agents. In addition, our franchise business may face similar claims as an alleged joint employer of an affiliated franchisee's independent sales agents.

Real estate laws generally permit brokers to engage sales agents as independent contractors. Federal and state agencies have their own rules and tests for classification of independent contractors as well as to determine whether employees meet exemptions from minimum wages and overtime laws. These tests consider many factors that also vary from state to state. The tests continue to evolve based on state case law decisions, regulations and legislative changes. There is active worker classification litigation in numerous jurisdictions against a variety of industries—now including residential real estate brokerages—where the plaintiffs seek to reclassify independent contractors as employees or to challenge the use of federal and state minimum wage and overtime exemptions.

Certain jurisdictions, including California where NRT generated approximately 27% of its revenue in 2018, have adopted standards that are significantly more restrictive than those historically used in wage and hour cases. Under the newer test, an individual is considered an employee unless the hiring entity satisfies three specific criteria that focus on control of the performance of the work and whether the nature of the work involves a separate trade that is outside the usual course of the hiring entity's business.

Notwithstanding the newer test, California and a number of other states have separate statutory structures and existing case law that articulate different, less stringent standards for real estate agents operating as independent contractors. How these differing tests will be reconciled is presently unclear, and given the evolving nature of this issue, we are currently unable to estimate, what impact, if any, this would have on our operations or financial results. For a summary of legal proceedings initiated against a wholly-owned subsidiary franchisor of the Company and an affiliated franchisee alleging worker misclassification, see "Part I - Item 3. Legal Proceedings" in this Annual Report. Significant sales agent reclassification determinations in the absence of available exemptions from minimum wage or overtime laws, including damages and penalties for prior periods (if assessed), could be disruptive to our business, constrain our operations in certain jurisdictions and could have a material adverse effect on the operational and financial performance of the Company.

Cybersecurity incidents could disrupt business operations and result in the loss of critical and confidential information or litigation or claims arising from such incidents, any of which may adversely impact our reputation and results of operations.

We face growing risks and costs related to cybersecurity threats to our data and customer, franchisee, employee and independent sales agent data, including but not limited to:

- the failure or significant disruption of our operations from various causes, including human error, computer malware, ransomware, insecure software, zero-day threats, threats to or disruption of third-party vendors who provide critical services, or other events related to our critical information technologies and systems;
- the increasing level and sophistication of cybersecurity attacks, including distributed denial of service attacks, data theft, fraud or malicious acts on the part of trusted insiders, social engineering, or other unlawful tactics aimed at compromising the systems and data of our officers, employees and franchisee and company owned brokerage sales agents and their customers (including via systems not directly controlled by us, such as those maintained by our franchisees, affiliated independent sales agents, joint venture partners and third party service providers, including our

third-party relocation service providers); and  
• the reputational and financial risks associated with a loss of data or material data breach (including unauthorized access to our proprietary business information or personal information of our customers, employees and

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independent sales agents), the transmission of computer malware, or the diversion of homesale transaction closing funds.

Global cybersecurity threats can range from uncoordinated individual attempts to gain unauthorized access to information technology systems via viruses, worms, and other malicious software, to phishing, or to advanced and targeted hacking launched by individuals, organizations or nation states. These attacks may be directed at the Company, its employees, franchisees, third-party service providers, joint venture partners, and/or the independent sales agents of our franchisee and company owned brokerages and their customers.

In the ordinary course of our business, we and our third-party service providers, our franchisee and company owned brokerage sales agents and our relocation business collect, store and transmit sensitive data, including our proprietary business information and intellectual property and that of our clients as well as personal information, sensitive financial information and other confidential information of our employees, customers and the customers of our franchisee and company owned brokerage sales agents.

Additionally, we increasingly rely on third-party data processing, storage providers, and critical infrastructure services, including cloud solution providers. The secure processing, maintenance and transmission of this information are critical to our operations and with respect to information collected and stored by our third-party service providers, we are reliant upon their security procedures. A breach or attack affecting one of our third-party service providers or partners could harm our business even if we do not control the service that is attacked.

Moreover, the real estate industry is actively targeted by cyber-attacker attempts to conduct electronic fraudulent activity (such as phishing), security breaches and similar attacks directed at participants in real estate services transactions. These attacks, when successful, can result in fraud, including wire fraud related to the diversion of homesale transaction funds, or other harm, which could result in significant claims and reputational damage to us, our brands, our franchisees, and our independent sales agents and could also result in material increases in our operational costs. Further, these threats to our business may be wholly or partially beyond our control as our franchisees as well as our customers, franchisee and company owned brokerage independent sales agents and their customers and third-party service providers may use e-mail, computers, smartphones and other devices and systems that are outside of our security control environment. In addition, real estate transactions involve the transmission of funds by the buyers and sellers of real estate and consumers or other service providers selected by the consumer may be the subject of direct cyber-attacks that result in the fraudulent diversion of funds, notwithstanding efforts we have taken to educate consumers with respect to these risks.

In addition, the increasing prevalence and sophistication of cyber-attacks as well as the evolution of cyber-attacks and other efforts to breach or disrupt our systems or those of our employees, customers, third-party service providers, joint venture partners, and/or franchisee and company owned brokerage sales agents and their customers, has led, and will likely continue to lead, to increased costs to us with respect to preventing, investigating, mitigating, insuring against and remediating these risks, as well as any related attempted or actual fraud.

Moreover, we are required to comply with growing regulations both in the United States and in other countries where we do business that regulate cybersecurity, privacy and related matters.

While we, our third-party service providers and our franchisees and franchisee and company owned brokerage sales agents, our joint venture partners and our relocation business have experienced, and expect to continue to experience, these types of threats and incidents, none of them to date has been material to the Company. Although we employ measures to prevent, detect, address and mitigate these threats (including access controls, data encryption, penetration testing, vulnerability assessments and maintenance of backup and protective systems), and conduct diligence on the security measures employed by key third-party service providers, cybersecurity incidents, depending on their nature and scope, could potentially result in the misappropriation, destruction, corruption or unavailability of critical data and confidential or proprietary information (our own or that of third parties, including personal information and financial information) and the disruption of business operations.

Our corporate errors and omissions and cybersecurity breach insurance may be insufficient to compensate us for losses that may occur. The potential consequences of a material cybersecurity incident include regulatory violations of

applicable U.S. and international privacy and other laws, reputational damage, loss of market value, litigation with third parties (which could result in our exposure to material civil or criminal liability), diminution in the value of the services we provide to our customers, and increased cybersecurity protection and remediation costs (that may include liability for stolen assets or information), which in turn could have a material adverse effect on our competitiveness and results of operations.



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If we fail to protect the privacy and personal information of our customers or employees, we may be subject to legal claims, government action and damage to our reputation.

To run our business, it is essential for us to store and transmit sensitive personal information about our customers, prospects, employees, independent agents, and relocation transferees (Cartus) in our systems and networks. At the same time, we are subject to numerous laws, regulations, and other requirements around the world that require businesses like ours to protect the security of personal information, notify customers and other individuals about our privacy practices, and limit the use, disclosure, or transfer of personal data across country borders. Regulators in the U.S. and abroad continue to enact comprehensive new laws or legislative reforms imposing significant privacy and cybersecurity restrictions. The result is that we are subject to increased regulatory scrutiny, additional contractual requirements from corporate customers, and heightened compliance costs. These ongoing changes to privacy and cybersecurity laws also may make it more difficult for us to operate our business and may have a material adverse effect on our operations. For example, the European Union's GDPR, which became effective in May 2018, conferred new and significant privacy rights on individuals (including employees and independent agents), and materially increased penalties for violations. In the U.S., California enacted the California Consumer Privacy Act—which is expected to go into full effect in 2020—imposing new and comprehensive requirements on organizations that collect and disclose personal information about California residents. In March 2017, the New York Department of Financial Services' new cybersecurity regulation went into effect. That regulation required regulated financial institutions, including TRG, to establish a detailed cybersecurity program. Program requirements included corporate governance, incident planning, data management, system testing, vendor oversight, and regulator notification rules. Now, other state regulatory agencies are expected to enact similar requirements following the adoption of the Insurance Data Security Model Law by the National Association of Insurance Commissioners that is consistent with the New York regulation. For example, the South Carolina Insurance Data Security Act, effective January 1, 2019, is based on the Insurance Data Security Model Law and imposes new breach notification and information security requirements on insurers, agents, and other licensed entities authorized to operate under the state's insurance laws, including TRG. Any significant violations of privacy and cybersecurity could result in the loss of new or existing business, litigation, regulatory investigations, the payment of fines, damages, and penalties and damage to our reputation, which could have a material adverse effect on our business, financial condition, and results of operations.

We could also be adversely affected if legislation or regulations are expanded to require changes in our business practices or if governing jurisdictions interpret or implement their legislation or regulations in ways that negatively affect our business, results of operations or financial condition.

In addition, while we disclose our information collection and dissemination practices in a published privacy statement on our websites, which we may modify from time to time, we may be subject to legal claims, government action and damage to our reputation if we act or are perceived to be acting inconsistently with the terms of our privacy statement, customer expectations or state, national and international regulations.

The occurrence of a significant claim in excess of our insurance coverage in any given period could have a material adverse effect on our financial condition and results of operations during the period. In the event we or the vendors with which we contract to provide services on behalf of our customers were to suffer a breach of personal information, our customers, such as our Cartus corporate or affinity clients, their employees or members, respectively, franchisees, independent sales agents and lender channel clients, could terminate their business with us. Further, we may be subject to claims to the extent individual employees or independent contractors breach or fail to adhere to Company policies and practices and such actions jeopardize any personal information.

In addition, concern among potential home buyers or sellers about our privacy practices could result in regulatory investigations, especially in the European Union as related to its Data Privacy Directive or GDPR. Additionally, concern among potential home buyers or sellers could keep them from using our services or require us to incur significant expense to alter our business practices or educate them about how we use personal information.



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We are subject to certain risks related to litigation filed by or against us, and adverse results may harm our business and financial condition.

We cannot predict with certainty the cost of defense, the cost of prosecution, insurance coverage or the ultimate outcome of litigation and other proceedings filed by or against us, including remedies or damage awards, and adverse results in such litigation and other proceedings, including treble damages and penalties. Adverse outcomes may harm our business and financial condition. Such litigation and other proceedings may include, but are not limited to:

actions relating to claims alleging violations of RESPA or state consumer fraud statutes, intellectual property rights, commercial arrangements, franchising arrangements, negligence and fiduciary duty claims arising from franchising arrangements or company owned brokerage operations or violations of similar laws in countries we operate in around the world;

employment law claims, including claims challenging the classification of sales agents as independent contractors as well as wage and hour and joint employer claims (for a summary of legal proceedings initiated against a wholly-owned subsidiary franchisor of the Company franchisor and an affiliated franchisee alleging worker misclassification, see "Part I - Item 3. Legal Proceedings" in this Annual Report);

cybersecurity incidents, theft and data breach claims;

antitrust and anti-competition claims;

brokerage disputes like the failure to disclose hidden defects in the property as well as other brokerage claims associated with listing information and property history, including disputes involving buyers of relocation property; vicarious or joint liability based upon the conduct of individuals or entities traditionally outside of our control, including franchisees and independent sales agents;

copyright infringement actions, including those alleging improper use of copyrighted photographs on websites or in marketing materials without consent of the copyright holder;

actions against our title company for defalcations on closing payments or alleging it knew or should have known others were committing mortgage fraud; and

general fraud claims.

In addition, class action lawsuits can often be particularly burdensome litigation given the breadth of claims, the large potential damages claimed and the significant costs of defense. The risks of litigation become magnified and the costs of settlement increase in class actions in which the courts grant partial or full certification of a large class. In the case of intellectual property litigation and proceedings, adverse outcomes could include the cancellation, invalidation or other loss of material intellectual property rights used in our business and injunctions prohibiting our use of business processes or technology that is subject to third-party patents or other third-party intellectual property rights. We may be required to enter into licensing agreements (if available on acceptable terms or at all) and pay royalties. Insurance coverage may be unavailable for certain types of claims and even where available, insurance carriers may dispute coverage for various reasons, including the cost of defense, and such insurance may not be sufficient to cover the losses we incur.

Adverse decisions in litigation against companies unrelated to us could impact our business practices and those of our franchisees in a manner that adversely impacts our financial condition and results of operations.

Litigation, claims and regulatory proceedings against other participants in the residential real estate or relocation industry may impact the Company when the rulings in those cases cover practices common to the broader industry.

Examples may include claims associated with RESPA compliance, broker fiduciary duties, and sales agent classification. Similarly, the Company may be impacted by litigation and other claims against companies in other industries. To the extent plaintiffs are successful in these types of litigation matters, and we or our franchisees cannot distinguish our or their practices (or our industry's practices), we and our franchisees could face significant liability and could be required to modify certain business relationships, either of which could materially and adversely impact our financial condition and results of operations.

We may experience significant claims relating to our operations, and losses resulting from fraud, defalcation or misconduct.

We issue title insurance policies which provide coverage for real property to mortgage lenders and buyers of real property. When acting as a title agent issuing a policy on behalf of an underwriter, our insurance risk is typically limited to the first five thousand dollars for claims on any one policy, though our insurance risk is not limited if we are negligent. Our title underwriter typically underwrites title insurance policies of up to \$1.5 million. For policies in excess of \$1.5 million,

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we typically obtain a reinsurance policy from a national underwriter to reinsure the excess amount. To date, our title underwriter has experienced claims losses that are significantly below the industry average; however, our claims experience could increase in the future, which could negatively impact the profitability of that business. We may also be subject to legal claims or additional claims losses arising from the handling of escrow transactions and closings by our owned title agencies or our underwriter's independent title agents. We carry errors and omissions insurance for errors made by our company owned brokerage business during the real estate settlement process as well as errors by us related to real estate services. Our franchise agreements also require our franchisees to name us as an additional insured on their errors and omissions and general liability insurance policies. The occurrence of a significant claim in excess of our insurance coverage (including any coverage under franchisee insurance policies) in any given period could have a material adverse effect on our financial condition and results of operations during the period. In addition, insurance carriers may dispute coverage for various reasons and there can be no assurance that all claims will be covered by insurance.

Fraud, defalcation and misconduct by employees are also risks inherent in our business, particularly given the high transactional volumes in our company owned brokerage, title and settlement services and our relocation businesses. We may also from time to time be subject to liability claims based upon the fraud or misconduct of our franchisees. To the extent that any loss or theft of funds substantially exceeds our insurance coverage, our business could be materially adversely affected.

The weakening or unavailability of our intellectual property rights could adversely impact our business.

Our trademarks, trade names, domain names and other intellectual property rights are fundamental to our brands and our franchising business. The steps we take to obtain, maintain and protect our intellectual property rights may not be adequate and, in particular, we may not own all necessary registrations for our intellectual property. Applications we have filed to register our intellectual property may not be approved by the appropriate regulatory authorities. Our intellectual property rights may not be successfully asserted in the future or may be invalidated, circumvented or challenged. We may be unable to prevent third parties from using our intellectual property rights without our authorization or independently developing technology that is similar to ours. Also, third parties may own rights in similar trademarks. Any unauthorized use of our intellectual property by third parties could reduce our competitive advantages or otherwise harm our business and brands. If we had to litigate to protect these rights, any proceedings could be costly, and we may not prevail. Our intellectual property rights, including our trademarks, may fail to provide us with significant competitive advantages in the U.S. and in foreign jurisdictions that do not have or do not enforce strong intellectual property rights.

We cannot be certain that our intellectual property does not and will not infringe issued intellectual property rights of others. We may be subject to legal proceedings and claims in the ordinary course of our business, including claims of alleged infringement of the patents, trademarks and other intellectual property rights of third parties. Any such claims, whether or not meritorious, could result in costly litigation. Depending on the success of these proceedings, we may be required to enter into licensing or consent agreements (if available on acceptable terms or at all), or to pay damages or cease using certain service marks or trademarks.

We franchise our brands to franchisees. While we try to ensure that the quality of our brands is maintained by all of our franchisees, we cannot assure that these franchisees will not take actions that hurt the value of our intellectual property or our reputation.

Our license agreement with Sotheby's for the use of the Sotheby's International Realty® brand is terminable by Sotheby's prior to the end of the license term if certain conditions occur, including but not limited to the following: (1) we attempt to assign any of our rights under the license agreement in any manner not permitted under the license agreement, (2) we become bankrupt or insolvent, (3) a court issues a non-appealable, final judgment that we have committed certain breaches of the license agreement and we fail to cure such breaches within 60 days of the issuance of such judgment, or (4) we discontinue the use of all of the trademarks licensed under the license agreement for a period of twelve consecutive months.

Our license agreement with Meredith Corporation ("Meredith") for the use of the Better Homes and Gardens® Real Estate brand is terminable by Meredith prior to the end of the license term if certain conditions occur, including but not limited to the following: (1) we attempt to assign any of our rights under the license agreement in any manner not permitted under the license agreement, (2) we become bankrupt or insolvent, or (3) a trial court issues a final judgment that we are in material breach of the license agreement or any representation or warranty we made was false or materially misleading when made.

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Several of our businesses are highly regulated and any failure to comply with such regulations or any changes in such regulations could adversely affect our business.

Our company owned real estate brokerage business, our relocation business, our mortgage origination joint venture, our title and settlement service business and the businesses of our franchisees (excluding commercial brokerage transactions) must comply with the Real Estate Settlement Procedures Act ("RESPA"). RESPA and comparable state statutes prohibit providing or receiving payments, or other things of value, for the referral of business to settlement service providers in connection with the closing of real estate transactions involving federally-backed mortgages. RESPA and related regulations do, however, contain a number of provisions that allow for payments or fee splits between providers, including fee splits between title underwriters and agents, brokers and agents, and market-based fees for the provision of goods or services and marketing arrangements. In addition, RESPA allows for referrals to affiliated entities, including joint ventures, when specific requirements have been met. We rely on these provisions in conducting our business activities and believe our arrangements comply with RESPA. RESPA compliance, however, has become a greater challenge under certain administrations for most industry participants offering settlement services, including mortgage companies, title companies and brokerages, because of changes in the regulatory environment and expansive interpretations of RESPA or similar state statutes by certain courts. Permissible activities under state statutes similar to RESPA may be interpreted more narrowly and enforcement proceedings of those statutes by state regulatory authorities may also be aggressively pursued. RESPA also has been invoked by plaintiffs in private litigation for various purposes and some state authorities have also asserted enforcement rights. Similar laws exist in other countries where we do business.

The sale of franchises is regulated by various state laws as well as by the Federal Trade Commission (the "FTC"). The FTC requires that franchisors make extensive disclosure to prospective franchisees but does not require registration. A number of states require registration and/or disclosure in connection with franchise offers and sales. In addition, several states have "franchise relationship laws" or "business opportunity laws" that limit the ability of franchisors to terminate franchise agreements or to withhold consent to the renewal or transfer of these agreements. Internationally, many countries have similar laws affecting franchising.

Our company owned real estate brokerage business must comply with the requirements governing the licensing and conduct of real estate brokerage and brokerage-related businesses in the jurisdictions in which we do business. These laws and regulations contain general standards for and limitations on the conduct of real estate brokers and sales agents, including those relating to licensing of brokers and sales agents, fiduciary, agency and statutory duties, administration of trust funds, collection of commissions, advertising and consumer disclosures. Under state law, our real estate brokers have certain duties and are responsible for the conduct of their brokerage business.

Title and settlement services are highly regulated. Our title insurance business also is subject to regulation by insurance and other regulatory authorities in each state in which we provide title insurance. Additionally, our relocation business operates certain insurance programs that are subject to certain regulations. State regulations may impede or impose burdensome conditions on our ability to take actions that we may want to take to enhance our operating results.

We are also, to a lesser extent, subject to various other rules and regulations such as "controlled business" statutes, which impose limitations on affiliations between providers of title and settlement services, on the one hand, and real estate brokers, mortgage lenders and other real estate providers, on the other hand, or similar laws or regulations that would limit or restrict transactions among affiliates in a manner that would limit or restrict collaboration among our businesses.

We participate in the mortgage origination business through our 49.9% ownership of Guaranteed Rate Affinity. Private mortgage lenders operating in the U.S. are subject to comprehensive state and federal regulation and to significant oversight by government sponsored entities. Dodd-Frank endows the CFPB with rule making, examination and enforcement authority involving consumer financial products and services, including mortgage finance. The CFPB has issued a myriad of proposed and final rules, including TILA-RESPA Integrated Disclosure rules, which could materially and adversely affect the mortgage and housing industries. Dodd-Frank established new standards

and practices for mortgage originators, including determining a prospective borrower's ability to repay its mortgage and restricting the fees that mortgage originators may collect and could establish new standards in the future which could be costly to comply with and present material operating risks.

General. In all of our business units there is a risk that we could be adversely affected by current laws, regulations or interpretations or that more restrictive laws, regulations or interpretations could increase responsibilities and duties to customers and franchisees and other parties, the adoption of which could make compliance more difficult or expensive. There is also a risk that a change in current laws could adversely affect our business. In addition, any adverse changes in regulatory interpretations, rules and laws that would place additional limitations or restrictions on affiliated transactions



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could have the effect of limiting or restricting collaboration among our business units. Additionally, all of our businesses are subject to federal and state law related to numerous topics, including contract, fair trade and competition, consumer protection and employment matters. We cannot assure you that future changes in legislation, regulations or interpretations will not adversely affect our business operations.

For example, in 2008, the Justice Department and the FTC entered into a settlement agreement with NAR related, in part, to the cooperative sharing of entries in traditional multiple listing services with online-only brokers, which expired in November 2018. In June 2018, the Justice Department and the FTC held a joint public workshop to explore competition issues in the residential real estate brokerage industry since the publication of the FTC and DOJ's 2007 Report on Competition in the Real Estate Brokerage Industry, including the impact of Internet-enabled technologies on the industry and potential barriers to competition. There can be no assurances as to whether the Justice Department and the FTC will determine that certain industry practices or developments have an anti-competitive effect on the industry. Any such determination by the Justice Department and the FTC could result in industry investigations, legislative or regulatory action or other actions, any of which could have the potential to disrupt our business.

Regulatory authorities also have relatively broad discretion to grant, renew and revoke licenses and approvals and to implement regulations. Accordingly, such regulatory authorities could prevent or temporarily suspend us from carrying on some or all of our activities or otherwise penalize us if our financial condition or our practices were found not to comply with the then current regulatory or licensing requirements or any interpretation of such requirements by the regulatory authority. Our failure to comply with any of these requirements or interpretations could limit our ability to renew current franchisees or sign new franchisees or otherwise have a material adverse effect on our operations.

Our international business activities, and in particular our relocation business, must comply with applicable laws and regulations that impose sanctions on improper payments, including the Foreign Corrupt Practices Act, U.K. Bribery Act and similar laws of other countries.

Our failure to comply with any of the foregoing laws and regulations may subject us to fines, penalties, injunctions and/or potential criminal violations. Any changes to these laws or regulations or any new laws or regulations may make it more difficult for us to operate our business and may have a material adverse effect on our operations.

**Other Business Risks**

We could be subject to significant losses if banks do not honor our escrow and trust deposits.

Our company owned brokerage business and our title and settlement services business act as escrow agents for numerous customers. As an escrow agent, we receive money from customers to hold until certain conditions are satisfied. Upon the satisfaction of those conditions, we release the money to the appropriate party. We deposit this money with various banks and while these deposits are not assets of the Company (and therefore excluded from our consolidated balance sheet), we remain contingently liable for the disposition of these deposits. These escrow and trust deposits totaled \$426 million at December 31, 2018. The banks may hold a significant amount of these deposits in excess of the federal deposit insurance limit. If any of our depository banks were to become unable to honor any portion of our deposits, customers could seek to hold us responsible for such amounts and, if the customers prevailed in their claims, we could be subject to significant losses.

We may be unable to achieve or maintain cost savings and other benefits from our restructuring activities.

We continue to engage in business optimization initiatives that focus on maximizing the efficiency and effectiveness of the cost structure of each of the Company's business units. The action is designed to improve client service levels across each of the business units while enhancing the Company's profitability and incremental margins. We may not be able to achieve these improvements in the efficiency and effectiveness of our operations. We also may incur greater costs than currently anticipated to achieve these savings and we may not be able to maintain these cost savings and other benefits in the future.

Failure to successfully complete or integrate acquisitions and joint ventures into our existing operations, or to complete or effectively manage divestitures or refranchisings, could adversely affect our business, financial condition or results of operations.

We regularly review our portfolio of businesses and evaluate potential acquisitions, joint ventures, divestitures, refranchisings and other strategic transactions. Potential issues associated with these activities could include, among other things: our ability to complete or effectively manage such transactions on terms commercially favorable to us or at all; our

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ability to realize the full extent of the expected returns, benefits, cost savings or synergies as a result of a transaction, within the anticipated time frame, or at all; and diversion of management's attention from day-to-day operations. In addition, the success of any future acquisition strategy we may pursue will depend upon our ability to fund such acquisitions given our total outstanding indebtedness, find suitable acquisition candidates on favorable terms and for target companies to find our acquisition proposals more favorable than those made by other competitors. If an acquisition or joint venture is not successfully completed or integrated into our existing operations, or if a divestiture or refranchising is not successfully completed or managed or does not result in the benefits or cost savings we expect, our business, financial condition or results of operations may be adversely affected.

Potential reform of Fannie Mae or Freddie Mac or certain federal agencies or a reduction in U.S. government support for the housing market could have a material impact on our operations.

Numerous pieces of legislation seeking various types of changes for government sponsored entities or GSEs have been introduced in Congress to reform the U.S. housing finance market including, among other things, changes designed to reduce government support for housing finance and the winding down of Fannie Mae or Freddie Mac over a period of years. Legislation, if enacted, or additional regulation which curtails Fannie Mae's and/or Freddie Mac's activities and/or results in the wind down of these entities could increase mortgage costs and could result in more stringent underwriting guidelines imposed by lenders or cause other disruptions in the mortgage industry. Other legislation or regulation limiting participation of the Federal Housing Administration and Department of Veterans Affairs could increase mortgage costs or limit availability of mortgages for consumers. Any of the foregoing could have a material adverse effect on the housing market in general and our operations in particular.

Changes in accounting standards, subjective assumptions and estimates used by management related to complex accounting matters could have an adverse effect on results of operations.

Generally accepted accounting principles in the United States and related accounting pronouncements, implementation guidance and interpretations with regard to a wide range of matters, such as revenue recognition, lease accounting, stock-based compensation, asset impairments, valuation reserves, income taxes and fair value accounting, are highly complex and involve many subjective assumptions, estimates and judgments made by management.

Changes in these rules or their interpretations or changes in underlying assumptions, estimates or judgments made by management could significantly change our reported results.

Our international operations are subject to risks not generally experienced by our U.S. operations.

Our relocation services business operates worldwide, and to a lesser extent, our real estate franchise services segment has international franchisees and master franchisees. For the year ended December 31, 2018, revenues from these operations represented approximately 2% of our total revenues. Our international operations are subject to risks not generally experienced by our U.S. operations. The risks involved in our international operations and relationships that could result in losses against which we are not insured and therefore affect our profitability include:

- fluctuations in foreign currency exchange rates;
- exposure to local economic conditions and local laws and regulations, including those relating to our employees;
- potential adverse changes in the political stability of foreign countries or in their diplomatic relations with the U.S.;
- restrictions on the withdrawal of foreign investment and earnings;
- government policies against businesses owned by foreigners;
- onerous employment laws;
- diminished ability to legally enforce our contractual rights and use of our trademarks in foreign countries;
- difficulties in registering, protecting or preserving trade names and trademarks in foreign countries;
- difficulties in complying with franchise disclosure and registration requirements in foreign countries;
- restrictions on the ability to obtain or retain licenses required for operations;
- withholding and other taxes on third party cross-border transactions as well as remittances and other payments by subsidiaries;
- onerous requirements, subject to broad interpretation, for indirect taxes and income taxes that can result in audits with potentially significant financial outcomes;

•changes in foreign taxation structures;

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compliance with the Foreign Corrupt Practices Act, the U.K. Bribery Act or similar laws of other countries; uncertainties and effects of the implementation of the United Kingdom's referendum to withdraw membership from the European Union (referred to as Brexit), including financial, legal and tax implications; and regional and country specific data protection and privacy laws including, effective May 2018, the General Data Protection Regulation.

In addition, activities of franchisees and master franchisees outside of the U.S. are more difficult and more expensive to monitor and improper activities or mismanagement may be more difficult to detect. Negligent or improper activities involving our franchisees and master franchisees, including regarding their relationships with independent sales agents, clients and employees, may result in reputational damage to us and may lead to direct claims against us based on theories of vicarious liability, negligence, joint operations and joint employer liability which, if determined adversely, could increase costs, negatively impact the business prospects of our franchisees and subject us to incremental liability for their actions.

Loss or attrition among our senior executives or other key employees and our inability to develop our existing workforce and to recruit top talent could adversely affect our financial performance.

Our success is largely dependent on the efforts and abilities of our executive officers and other key employees, our ability to develop the skills and talent of our workforce and our ability to recruit, retain and motivate top talent. Talent management has been and continues to be a strategic priority and our ability to recruit and retain our executive officers and key employees, including those with significant experience in the residential real estate market, is generally subject to numerous factors, including the compensation and benefits we pay. If we are unable to internally develop or hire skilled executives and other critical positions or if we encounter challenges associated with change management, our ability to continue to execute or evolve our strategy may be impaired and our business may be adversely affected.

Severe weather events or natural disasters may disrupt our business and have an unfavorable impact on homesale activity.

The occurrence of a severe weather event or natural disaster can reduce home inventory levels and negatively impact the demand for homes in affected areas, which can delay the closing of homesale transactions and have an unfavorable impact on homesale transaction volume, relocation transactions, title closing units and broker-to-broker referral fees. In addition, we could incur damage, which may be significant, to our office locations as a result of severe weather events or natural disasters and our insurance may not be adequate to cover such losses. Certain areas in which our businesses operate, such as California and Florida, are particularly subject to severe weather events and natural disasters.

We may incur substantial and unexpected liabilities arising out of our legacy pension plan.

We have a defined benefit pension plan for which participation was frozen as of July 1, 1997; however, the plan is subject to minimum funding requirements. Although the Company to date has met its minimum funding requirements, the pension plan represents a liability on our balance sheet and will continue to require cash contributions from us, which may increase beyond our expectations in future years based on changing market conditions. In addition, changes in interest rates, mortality rates, health care costs, early retirement rates, investment returns and the market value of plan assets can affect the funded status of our pension plan and cause volatility in the future funding requirements of the plan.

Our ability to use our net operating losses ("NOLs") and other tax attributes may be limited.

Our ability to utilize NOLs and other tax attributes could be limited by the "ownership change" we underwent within the meaning of Section 382 of the Internal Revenue Code of 1986, as amended (the "Code"), as a result of the sale of our common stock in our initial public offering and the related transactions. An ownership change is generally defined as a greater than 50 percentage point increase in equity ownership by 5% stockholders in any three-year period. Pursuant to rules under Section 382 of the Code and a published Internal Revenue Service (the "IRS") notice, a company's "net unrealized built-in gain" within the meaning of Section 382 of the Code may reduce the limitation on such company's ability to utilize NOLs resulting from an ownership change. Although there can be no assurance in

this regard, we believe that the limitation on our ability to utilize our NOLs resulting from our ownership change should be significantly reduced as a result of our net unrealized built-in gain. Even assuming we are able to use our unrealized built-in gain, the cash tax benefit from our NOLs is dependent upon our ability to generate sufficient taxable income. Although we believe that we will be able to generate sufficient taxable income to fully utilize our NOLs, we may be unable to earn enough taxable income prior to the expiration of our NOLs.

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We are responsible for certain of Cendant's contingent and other corporate liabilities.

Although we have resolved various Cendant contingent and other corporate liabilities and have established reserves for most of the remaining unresolved claims of which we have knowledge, adverse outcomes from the unresolved Cendant liabilities for which Realogy Group has assumed partial liability under the Separation and Distribution Agreement could be material with respect to our earnings or cash flows in any given reporting period.

**Risks Related to Our Indebtedness**

Our significant indebtedness and interest obligations could prevent us from meeting our obligations under our debt instruments and could adversely affect our ability to fund our operations, react to changes in the economy or our industry, or incur additional borrowings under our existing facilities.

We are significantly encumbered by our debt obligations. As of December 31, 2018, our total debt, excluding our securitization obligations, was \$3,548 million (without giving effect to outstanding letters of credit). Our liquidity position has been, and is expected to continue to be, negatively impacted by the substantial interest expense on our debt obligations.

Our leverage could have important consequences, including the following:

it causes a substantial portion of our cash flows from operations to be dedicated to the payment of interest and required amortization on our indebtedness and not be available for other purposes, including our operations, capital expenditures, technology, share repurchases, dividends and future business opportunities or principal repayment; it could cause us to be unable to comply with the senior secured leverage ratio covenant under our Senior Secured Credit Facility and Term Loan A Facility;

it could cause us to be unable to meet our debt service requirements under our Senior Secured Credit Facility, the Term Loan A Facility or the indentures governing the Unsecured Notes or meet our other financial obligations; it may limit our ability to incur additional borrowings under our existing facilities, including our Revolving Credit Facility, or securitizations, to obtain additional debt or equity financing for working capital, capital expenditures, business development, debt service requirements, acquisitions or general corporate or other purposes, or to refinance our indebtedness;

it exposes us to the risk of increased interest rates because a portion of our borrowings, including borrowings under our Senior Secured Credit Facility and Term Loan A Facility, are at variable rates of interest;

it may limit our ability to adjust to changing market conditions and place us at a competitive disadvantage compared to our competitors that have less debt;

it may cause a downgrade of our debt and long-term corporate ratings;

it may limit our ability to repurchase shares or declare dividends;

it may limit our ability to attract acquisition candidates or to complete future acquisitions;

it may cause us to be more vulnerable to periods of negative or slow growth in the general economy or in our business, or may cause us to be unable to carry out capital spending that is important to our growth; and

it may limit our ability to attract and retain key personnel.

The Senior Secured Credit Facility (including the Revolving Credit Facility) and Term Loan A Facility contain restrictive covenants, including a requirement that we maintain a specified senior secured leverage ratio of 4.75 to 1.00, which is defined as the ratio of our total senior secured debt (net of unrestricted cash and permitted investments) to trailing four quarter EBITDA calculated on a Pro Forma Basis, as those terms are defined in the credit agreement governing the Senior Secured Credit Facility. Total senior secured net debt does not include unsecured indebtedness, including the Unsecured Notes, or the securitization obligations.

For the trailing four quarters ended December 31, 2018, we were in compliance with the senior secured leverage ratio covenant with a ratio of 2.76 to 1.0 with total senior secured debt (net of unrestricted cash and permitted investments) of \$1,987 million and trailing four quarter EBITDA calculated on a Pro Forma Basis of \$721 million. After giving effect to the redemption of the 4.50% Senior Notes on February 15, 2019 using borrowings under the Revolving Credit Facility, the senior secured leverage ratio would have been 3.40 to 1.00 as of December 31, 2018. If our EBITDA calculated on a Pro Forma Basis were to decline and/or we were to incur additional senior secured debt

(including additional borrowings under the Revolving Credit Facility), our ability to borrow incremental amounts under the Revolving Credit Facility (without refinancing secured debt into unsecured debt) could be limited as we must maintain compliance with the senior secured



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leverage ratio described above of 4.75 to 1.00. Our need to borrow under the Revolving Credit Facility is generally at its highest at or around the end of the first quarter every year. Any inability to borrow sufficient funds to operate our business, in the first quarter or otherwise, could have a material adverse impact on our business, results of operations and liquidity.

An event of default under our Senior Secured Credit Facility, the Term Loan A Facility or the indentures governing our other material indebtedness would adversely affect our operations and our ability to satisfy obligations under our indebtedness.

If we are unable to comply with the senior secured leverage ratio covenant described in the prior risk factor or other restrictive covenants under Senior Secured Credit Facility and Term Loan A Facility and we fail to remedy or avoid a default as permitted under the Senior Secured Credit Facility and Term Loan A Facility, there would be an "event of default" under the Senior Secured Credit Facility and Term Loan A Facility.

Other events of default include, without limitation, nonpayment of principal or interest, material misrepresentations, insolvency, bankruptcy, certain material judgments, change of control, and cross-events of default on material indebtedness as well as failure to obtain an unqualified audit opinion by 90 days after the end of any fiscal year. Upon the occurrence of any event of default under the Senior Secured Credit Facility and Term Loan A Facility, the lenders:

• will not be required to lend any additional amounts to us;

• could elect to declare all borrowings outstanding, together with accrued and unpaid interest and fees, to be immediately due and payable;

• could require us to apply all of our available cash to repay these borrowings; or

• could prevent us from making payments on the Unsecured Notes, any of which could result in an event of default under the indentures governing the Unsecured Notes or our Apple Ridge Funding LLC securitization program.

If we were unable to repay the amounts outstanding under our Senior Secured Credit Facility and Term Loan A Facility, the lenders and holders of such debt under our Senior Secured Credit Facility and Term Loan A Facility could proceed against the collateral granted to secure the Senior Secured Credit Facility and Term Loan A Facility.

We have pledged a significant portion of our assets as collateral to secure such indebtedness. If the lenders under our Senior Secured Credit Facility or Term Loan A Facility accelerate the repayment of borrowings, we may not have sufficient assets to repay the Senior Secured Credit Facility and Term Loan A Facility and our other indebtedness or be able to borrow sufficient funds to refinance such indebtedness. In the future, we may need to seek new financing or explore the possibility of amending the terms of our Senior Secured Credit Facility and Term Loan A Facility, and we may not be able to do so on commercially reasonable terms or terms that are acceptable to us, if at all.

In addition, if an event of default is continuing under our Senior Secured Credit Facility, Term Loan A Facility, the indentures governing the Unsecured Notes or our other material indebtedness, such event could cause a termination of our ability to obtain future advances under, and amortization of, our Apple Ridge Funding LLC securitization program.

Variable rate indebtedness subjects us to interest rate risk, which could cause our debt service obligations to increase significantly.

At December 31, 2018, \$2,075 million of our borrowings under our Senior Secured Credit Facility and Term Loan A Facility was at variable rates of interest thereby exposing us to interest rate risk. If interest rates continue to increase, our debt service obligations on the variable rate indebtedness would increase even if the amount borrowed remained the same, and our net income would decrease. Although we have entered into interest rate swaps involving the exchange of floating for fixed rate interest payments to reduce interest rate volatility for a significant portion of our variable rate borrowings, such interest rate swaps do not eliminate interest rate volatility for all of our variable rate indebtedness at December 31, 2018.

In addition, our variable rate indebtedness may use LIBOR as a benchmark for establishing the rate. LIBOR is the subject of recent national, international and other regulatory guidance and proposals for reform. These reforms and other pressures may cause LIBOR to disappear entirely or to perform differently than in the past. The consequences of these developments cannot be entirely predicted, but could include an increase in the cost of our variable rate

indebtedness.

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Restrictive covenants under our Senior Secured Credit Facility, Term Loan A Facility, Unsecured Letter of Credit Facility and indentures may limit the manner in which we operate.

Our Senior Secured Credit Facility, Term Loan A Facility, Unsecured Letter of Credit Facility and the indentures governing the Unsecured Notes contain, and any future indebtedness we may incur may contain, various negative covenants that restrict our ability to, among other things:

incur or guarantee additional indebtedness, or issue disqualified stock or preferred stock;

pay dividends or make distributions to our stockholders;

repurchase or redeem capital stock;

make investments or acquisitions;

incur restrictions on the ability of certain of our subsidiaries to pay dividends or to make other payments to us;

enter into transactions with affiliates;

create liens;

merge or consolidate with other companies or transfer all or substantially all of our assets;

transfer or sell assets, including capital stock of subsidiaries; and

prepay, redeem or repurchase certain indebtedness.

As a result of these covenants, we are limited in the manner in which we conduct our business and we may be unable to engage in favorable business activities, repurchase shares of our common stock or finance future operations or capital needs.

We may be unable to continue to securitize certain of our relocation assets, which may adversely impact our liquidity. At December 31, 2018, \$231 million of securitization obligations were outstanding through special purpose entities monetizing certain assets of our relocation services business under two lending facilities. We have provided a performance guaranty which guarantees the obligations of our Cartus subsidiary and its subsidiaries, as originator and servicer under the Apple Ridge securitization program. The securitization markets have experienced, and may again experience, significant disruptions which may have the effect of increasing our cost of funding or reducing our access to these markets in the future.

In addition, the Apple Ridge securitization facility contains terms which if triggered may result in a termination or limitation of new or existing funding under the facility and/or may result in a requirement that all collections on the assets be used to pay down the amounts outstanding under such facility. The triggering events include but are not limited to: (1) those tied to the age and quality of the underlying assets; (2) a change of control; (3) a breach of our senior secured leverage ratio covenant under our Senior Secured Credit Facility if uncured; and (4) the acceleration of indebtedness under our Senior Secured Credit Facility, Unsecured Notes or other material indebtedness. The occurrence of a trigger event under the Apple Ridge securitization facility could restrict our ability to access new or existing funding under this facility or result in termination of the facility. If securitization financing is not available to us for any reason, we could be required to borrow under the Revolving Credit Facility, which would adversely impact our liquidity, or we may be required to find additional sources of funding which may be on less favorable terms or may not be available at all.

### Risks Related to an Investment in Our Common Stock

The price of our common stock may fluctuate significantly.

The market price for our common stock could fluctuate significantly for various reasons, many of which are outside our control, including those described above and the following:

our operating and financial performance and prospects;

future sales of substantial amounts of our common stock in the public market, including but not limited to shares we may issue from time to time as consideration for future acquisitions or investments as well as significant sales by one or more of our top investors, in particular in light of the substantial concentration of ownership of our common stock;

housing and mortgage finance markets;

the incurrence of additional indebtedness or other adverse changes relating to our debt;

our quarterly or annual earnings or those of other companies in our industry;

future announcements concerning our business or our competitors' businesses;

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the public's reaction to our press releases, other public announcements and filings with the SEC;

changes in earnings estimates, recommendations or commentary by sell-side securities analysts who track our common stock or other companies within our industry or ratings changes or commentary by rating agencies on our debt;

press releases or other commentary by industry forecasters or other housing market participants;

changes in, or the elimination of, our stock repurchase program or cash dividend;

the timing and amount of share repurchases, if any;

market and industry perception of our success, or lack thereof, in pursuing our growth strategy;

strategic actions by us or our competitors, such as acquisitions or restructurings;

actual or potential changes in laws, regulations and regulatory interpretations, including as a result of the 2017 Tax Act;

changes in housing fundamentals, including:

changes in interest rates,

changes in demographics relating to housing such as household formation, and changing consumer attitudes concerning home ownership;

changes in accounting standards, policies, guidance, interpretations or principles;

arrival and departure of key personnel;

adverse resolution of new or pending litigation, arbitration or regulatory proceedings against us;

actions of current or prospective stockholders (including activists or several top stockholders acting alone or together) that may cause temporary or speculative market perceptions, including short selling activity in our stock and market rumors; and

changes in general market, economic and political conditions in the United States and global economies or financial markets, including those resulting from natural disasters, terrorist attacks, acts of war and responses to such events. These broad market and industry factors may materially reduce the market price of our common stock, regardless of our operating performance. In addition, price volatility may be greater if the public float and trading volume of our common stock is low.

If any of the foregoing occurs, it could cause our stock price to fall and may expose us to litigation, including class action lawsuits that, even if unsuccessful, could be costly to defend and a distraction to management.

We cannot provide assurance that we will continue to pay dividends or purchase shares of our common stock under our current or future stock repurchase programs or that our capital allocation strategy will enhance stockholder value. There can be no assurance that we will have sufficient cash or surplus under Delaware law to be able to continue to pay dividends or purchase shares of our common stock under our stock repurchase program. Certain of our debt instruments contain covenants that restrict the ability of our subsidiaries to pay dividends to us and repurchase shares of our common stock. We are permitted under the terms of our debt instruments to incur additional indebtedness, which may restrict or prevent us from paying dividends on our common stock. Agreements governing any future indebtedness, in addition to those governing our current indebtedness, may not permit us to pay dividends on our common stock or repurchase shares of our common stock. Because Realogy Holdings is a holding company and has no direct operations, we will only be able to pay dividends or repurchase shares of our common stock from our available cash on hand and any funds we receive from our subsidiaries. Our title insurance underwriter is subject to regulations that limit its ability to pay dividends or make loans or advances to us, principally to protect policyholders. Under Delaware law, dividends may be payable only out of surplus, which is our assets minus our liabilities and our capital or, if we have no surplus, out of our net profits for the fiscal year in which the dividend is declared and/or the preceding fiscal year. As a result, we may not pay dividends according to our policy or at all if, among other things, we do not have sufficient cash to pay the intended dividends, our financial performance does not achieve expected results or the terms of our indebtedness prohibit it.

Our Board may also decrease or suspend the payment of dividends or our stock repurchase program if the Board deems such action to be in our best interests or those of our stockholders. A reduction or elimination of our cash

dividend or stock repurchase program could adversely affect the market price of our common stock. If we do not pay dividends, the price of

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our common stock must appreciate in order to realize a gain on an investment in Realogy. This appreciation may not occur and our stock may in fact depreciate in value.

In addition, our stock repurchase program and any future dividends will utilize a portion of our cash, which may impact our ability to finance future growth and to pursue possible future strategic opportunities and acquisitions. Moreover, stock repurchases may not enhance stockholder value because the market price of our common stock may decline below the levels at which we repurchased shares of stock. There can be no assurance that our capital allocation strategy, including our cash dividend and stock repurchase program, will enhance short or long-term stockholder value.

Delaware law and our organizational documents may impede or discourage a takeover, which could deprive our investors of the opportunity to receive a premium for their shares.

We are a Delaware corporation, and the anti-takeover provisions of Delaware law impose various impediments to the ability of a third party to acquire control of us, even if a change of control would be beneficial to our existing stockholders. In addition, provisions of our amended and restated certificate of incorporation and amended and restated bylaws may make it more difficult for, or prevent a third party from, acquiring control of us without the approval of our Board of Directors. Among other things, these provisions:

- do not permit cumulative voting in the election of directors, which would otherwise allow less than a majority of stockholders to elect director candidates;
- delegate the sole power to a majority of the Board of Directors to fix the number of directors;
- provide the power to our Board of Directors to fill any vacancy on our Board of Directors, whether such vacancy occurs as a result of an increase in the number of directors or otherwise;
- authorize the issuance of "blank check" preferred stock without any need for action by stockholders;
- eliminate the ability of stockholders to call special meetings of stockholders;
- prohibit stockholders from acting by written consent; and
- establish advance notice requirements for nominations for election to our Board of Directors or for proposing matters that can be acted on by stockholders at stockholder meetings.

The foregoing factors could impede a merger, takeover or other business combination or discourage a potential investor from making a tender offer for our common stock which, under certain circumstances, could reduce the market value of our common stock and our investors' ability to realize any potential change-in-control premium.

We may issue shares of preferred stock in the future, which could make it difficult for another company to acquire us or could otherwise adversely affect holders of our common stock, which could depress the price of our common stock. Our amended and restated certificate of incorporation authorizes us to issue one or more series of preferred stock. Our Board of Directors will have the authority to determine the preferences, limitations and relative rights of shares of preferred stock and to fix the number of shares constituting any series and the designation of such series, without any further vote or action by our stockholders. Our preferred stock could be issued with voting, liquidation, dividend and other rights superior to the rights of our common stock. The potential issuance of preferred stock may delay or prevent a change in control of us, discouraging bids for our common stock at a premium to the market price, and materially and adversely affect the market price and the voting and other rights of the holders of our common stock.

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Item 2. Properties.

Corporate headquarters. Our corporate headquarters is located at 175 Park Avenue in Madison, New Jersey with a lease term expiring in December 2029 and consists of approximately 270,000 square feet of space.

Real estate franchise services. Our real estate franchise business conducts its main operations at our leased office at 175 Park Avenue in Madison, New Jersey.

Company owned real estate brokerage services. As of December 31, 2018, our company owned real estate brokerage segment leased approximately 4.7 million square feet of domestic office space under approximately 1,000 leases. Its corporate headquarters and one regional headquarters facility are located in leased offices at 175 Park Avenue, Madison, New Jersey. As of December 31, 2018, NRT leased 5 facilities serving as regional headquarters, 37 facilities serving as local administration, training facilities or storage, and approximately 760 brokerage sales offices under 957 leases. These offices are generally located in shopping centers and small office parks, typically with lease terms of one to five years. Included in the 4.7 million square feet is approximately 292,000 square feet of vacant and/or subleased space, principally relating to brokerage sales office consolidations.

Relocation services. Our relocation business has its main corporate operations in a leased building in Danbury, Connecticut with a lease term expiring in November 2030. There are leased offices in the U.S., located in Phoenix, Arizona; Lisle, Illinois; Irving, Texas; Omaha, Nebraska; Folsom and San Diego, California; Herndon, Virginia; Pensacola and Tampa, Florida; and Bellevue, Washington. International offices include leased facilities in the United Kingdom, Hong Kong, India, Singapore, China, Brazil, Germany, France, Switzerland, Canada and the Netherlands.

Title and settlement services. Our title and settlement services business conducts its main operations at a leased facility in Mount Laurel, New Jersey, pursuant to a lease expiring in December 2021. As of December 31, 2018, this business also has leased regional and branch offices in 20 states and Washington, D.C.

We believe that all of our properties and facilities are well maintained.

Item 3. Legal Proceedings.

Worker Classification Litigation. On December 20, 2018, plaintiff James Whitlach filed a putative class action complaint in California Superior Court for the County of Alameda, against Premier Valley Inc., a Century 21 Real Estate independently-owned franchisee doing business as Century 21 M&M ("Century 21 M&M"), captioned Whitlach v. Premier Valley, Inc. d/b/a Century 21 M&M and Century 21 Real Estate LLC.

The Whitlach complaint also names Century 21 Real Estate LLC, a wholly-owned subsidiary of the Company and the franchisor of Century 21 Real Estate ("Century 21"), as an alleged joint employer of the franchisee's independent sales agents and seeks to certify a class that could potentially include all agents of both Century 21 M&M and Century 21 in California. The plaintiff alleges that Century 21 M&M misclassified all of its independent real estate agents, salespeople, sales professionals, broker associates and other similar positions as independent contractors, failed to pay minimum wages, failed to provide meal and rest breaks, failed to pay timely wages, failed to keep proper records, failed to provide appropriate wage statements, made unlawful deductions from wages, and failed to reimburse plaintiff and the putative class for business related expenses, resulting in violations of the California Labor Code. The complaint also asserts an unfair business practice claim based on the alleged violations described above.

On February 15, 2019, the plaintiff amended his complaint to assert a claim pursuant to the California Private Attorneys Generals Act ("PAGA"). The PAGA claim included in the amended complaint are substantively similar to those asserted in the original complaint. Under California law, PAGA claims are generally not subject to arbitration and may result in exposure in the form of additional penalties.

The case raises significant and various previously unlitigated claims and the PAGA claim adds additional financial risks and uncertainties. Given the early stage of this case, we cannot estimate a range of reasonably potential losses for this litigation. The Company will vigorously defend this action.

Other Litigation. See Note 13, "Commitments and Contingencies—Litigation", to our consolidated financial statements included elsewhere in this Annual Report for additional information on the Company's legal proceedings, including a description of: the Dodge, et al. v. PHH Corporation, et al. litigation, formerly captioned Strader, et al. and Hall v. PHH Corporation, et al. and which we refer to as the Strader legal matter.





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The Company believes that it has adequately accrued for legal matters as appropriate. The Company records litigation accruals for legal matters which are both probable and estimable.

Litigation and other disputes are inherently unpredictable and subject to substantial uncertainties and unfavorable resolutions could occur. In addition, class action lawsuits or regulatory proceedings challenging practices that have broad impact can be costly to defend and, depending on the class size and claims, could be costly to settle. As such, the Company could incur judgments or enter into settlements of claims with liability that are materially in excess of amounts accrued and these settlements could have a material adverse effect on the Company's financial condition, results of operations or cash flows in any particular period.

\* \* \*

Litigation and claims against other participants in the residential real estate industry may impact the Company and its affiliated franchisees when the rulings in those cases cover practices common to the broader industry. Examples may include claims associated with RESPA compliance, broker fiduciary duties, and sales agent classification. The Company also may be impacted by litigation and other claims against companies in other industries.

Changes in current legislation, regulations or interpretations that are applicable to the residential real estate service industry may also impact the Company. In June 2018, the Federal Trade Commission ("FTC") and Department of Justice ("DOJ") held a joint public workshop to explore competition issues in the residential real estate brokerage industry since the publication of the FTC and DOJ's 2007 Report on Competition in the Real Estate Brokerage Industry, including the impact of Internet-enabled technologies on the industry and potential barriers to competition. The Company submitted comments and participated in the workshop.

Item 4. Mine Safety Disclosures.

None.

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## PART II

## Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Our common stock is listed on the New York Stock Exchange ("NYSE") under the symbol "RLGY". As of February 22, 2019, the number of stockholders of record was 22.

## Dividend Policy

In August 2016, the Company's Board of Directors approved the initiation of a quarterly cash dividend policy of \$0.09 per share on its common stock and have declared and paid the quarterly cash dividend in each quarter since, returning a total of \$45 million, \$49 million and \$26 million to stockholders in cash dividends during the years ended December 31, 2018, 2017 and 2016, respectively.

Pursuant to the Company's policy, the dividends payable in cash are treated as a reduction of additional paid-in capital since the Company is currently in a retained deficit position.

The Company expects to continue to pay quarterly dividends, although the declaration and payment of any future dividend will be subject to the discretion of the Board of Directors and will depend on a variety of factors, including the Company's financial condition and results of operations, contractual restrictions, including restrictive covenants contained in the Company's credit agreements, and the indentures governing the Company's outstanding debt securities, capital requirements and other factors that the Board of Directors deems relevant.

## Share Repurchase Program

The Company may repurchase shares of its common stock pursuant to authorizations made from its Board of Directors. Shares repurchased are retired and not displayed separately as treasury stock on the consolidated financial statements. The par value of the shares repurchased and retired is deducted from common stock and the excess of the purchase price over par value is first charged against any available additional paid-in-capital with the balance charged to retained earnings. Direct costs incurred to repurchase the shares are included in the total cost of the shares.

In February 2016, February 2017 and February 2018, the Company's Board of Directors authorized a share repurchase program of up to \$275 million, \$300 million and \$350 million, respectively, of the Company's common stock. In February 2019, the Board authorized a new share repurchase program of up to \$175 million of the Company's common stock, which is in addition to the \$29 million of remaining authorization available under the February 2018 share repurchase program. Repurchases under each program may be made at management's discretion from time to time on the open market, pursuant to Rule 10b5-1 trading plans or through privately negotiated transactions. The size and timing of these repurchases will depend on price, market and economic conditions, legal and contractual requirements and other factors, and each share repurchase program has no time limit and may be suspended or discontinued at any time. All of the repurchased common stock has been retired.

The following table sets forth information relating to repurchase of shares of our common stock during the quarter ended December 31, 2018:

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Programs
October 2018	2,330,478	\$19.15	2,330,478	\$104,137,018
November 2018	2,228,647	\$18.34	2,228,647	\$63,263,632
December 2018	780,838	\$18.57	780,838	\$48,763,470

During the period January 1, 2019 through February 22, 2019, we repurchased an additional 1.2 million shares at a weighted average market price of \$17.21. Giving effect to these repurchases, we had approximately \$29 million of

remaining capacity authorized under the February 2018 share repurchase program as of February 22, 2019.

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## Stock Performance Graph

The stock performance graph set forth below is not deemed filed with the Securities and Exchange Commission and shall not be deemed incorporated by reference into any of our prior or future filings made with the Securities and Exchange Commission.

The following graph compares Realogy's cumulative total shareholder return with the cumulative total return of the S&P 500 index and the S&P MidCap 400 index, which are broad equity market indices as well as the S&P Home Builders Select Industry Index or XHB Index, as a published industry index. The Company was added to the S&P MidCap 400 Index in September 2018 and, based on the size of the companies included, we believe that this index provides a more relevant and useful comparison for the Company. Accordingly, we intend to discontinue presentation of the S&P 500 index in future stock performance graphs. We have included the XHB Index because it provides a diversified group of holdings representing home building, building products, home furnishings and home appliances, which we believe correlate with the housing industry as a whole. A portion of our 2016, 2017 and 2018 long-term incentive compensation awards are also tied to the relative performance of our total stockholder return to that index over the three-year period ending December 31, 2018, December 31, 2019 and December 31, 2020, respectively. The cumulative total shareholder return for the broader equity market indices as well as the XHB Index includes the reinvestment of dividends. The graph assumes that the value of the investment in the Company's common shares, the index and the peer group was \$100 on December 31, 2013 and updates the value through December 31, 2018.

## Cumulative Total Return

	December 31,					
	2013	2014	2015	2016	2017	2018
Realogy Holdings Corp.	\$100.00	\$89.93	\$74.13	\$52.38	\$54.61	\$30.76
SPDR S&P Homebuilders ETF (XHB) index	\$100.00	\$111.43	\$120.95	\$110.32	\$191.24	\$129.56
S&P MidCap 400 index	\$100.00	\$109.77	\$107.38	\$129.65	\$150.71	\$134.01
S&P 500 index	\$100.00	\$113.69	\$115.26	\$129.05	\$157.22	\$150.33

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## Item 6. Selected Financial Data.

The following table presents our selected historical consolidated financial data and operating statistics. The consolidated statement of operations data for the years ended December 31, 2018, 2017, and 2016 and the consolidated balance sheet data as of December 31, 2018 and 2017 have been derived from our audited consolidated financial statements included elsewhere herein. The statement of operations data for the year ended December 31, 2015 and 2014 and the consolidated balance sheet data as of December 31, 2016, 2015 and 2014 have been derived from our consolidated financial statements not included elsewhere herein.

Neither Realogy Holdings, the indirect parent of Realogy Group, nor Realogy Intermediate, the direct parent company of Realogy Group, conducts any operations other than with respect to its respective direct or indirect ownership of Realogy Group. As a result, the consolidated financial positions and results of operations of Realogy Holdings, Realogy Intermediate and Realogy Group are the same.

The selected historical consolidated financial data and operating statistics presented below should be read in conjunction with our annual consolidated financial statements and accompanying notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere herein. Our annual consolidated financial information may not be indicative of our future performance.

	As of or for the Year Ended December 31,				
	2018	2017	2016	2015	2014
	(In millions, except per share data and operating statistics)				
Statement of Operations Data:					
Net revenue	\$6,079	\$6,114	\$5,810	\$5,706	\$5,328
Total expenses	5,870	5,763	5,461	5,424	5,103
Income before income taxes, equity in losses (earnings) and noncontrolling interests	209	351	349	282	225
Income tax expense (benefit) (a)	65	(65)	144	110	87
Equity in losses (earnings) of unconsolidated entities	4	(18)	(12)	(16)	(9)
Net income	140	434	217	188	147
Less: Net income attributable to noncontrolling interests	(3)	(3)	(4)	(4)	(4)
Net income attributable to Realogy Holdings and Realogy Group	\$137	\$431	\$213	\$184	\$143
Earnings per share attributable to Realogy Holdings:					
Basic earnings per share	\$1.10	\$3.15	\$1.47	\$1.26	\$0.98
Diluted earnings per share	\$1.09	\$3.11	\$1.46	\$1.24	\$0.97
Weighted average common and common equivalent shares used in:					
Basic	124.0	136.7	144.5	146.5	146.0
Diluted	125.3	138.4	145.8	148.1	147.2
Cash dividends declared per share (beginning in August 2016)	\$0.36	\$0.36	\$0.18	\$—	\$—
Balance Sheet Data:					
Cash and cash equivalents	\$225	\$227	\$274	\$415	\$313
Securitization assets (b)	238	218	238	281	286
Total assets	7,290	7,337	7,421	7,531	7,304
Securitization obligations	231	194	205	247	269
Long-term debt, including short-term portion	3,548	3,348	3,507	3,702	3,855
Equity	2,315	2,622	2,469	2,422	2,183
Statement of Cash Flows Data:					
Net cash provided by operating activities	\$394	\$667	\$586	\$588	\$452

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Net cash used in investing activities	(91 )	(146 )	(191 )	(211 )	(302 )
Net cash used in financing activities	(297 )	(570 )	(534 )	(275 )	(75 )

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	For the Year Ended December 31,				
	2018	2017	2016	2015	2014
Operating Statistics:					
Real Estate Franchise Services (c) (d)					
Closed homesale sides (e)	1,103,857	1,144,217	1,135,344	1,101,333	1,065,339
Average homesale price (f)	\$303,750	\$288,929	\$272,206	\$263,894	\$250,214
Average homesale brokerage commission rate (g)	2.48 %	2.50 %	2.50 %	2.51 %	2.52 %
Net royalty per side (h)	\$323	\$313	\$299	\$294	\$282
Company Owned Real Estate Brokerage Services (d) (i)					
Closed homesale sides (e)	336,806	344,446	335,699	336,744	308,332
Average homesale price (f)	\$523,426	\$514,685	\$489,504	\$489,673	\$500,589
Average homesale brokerage commission rate (g)	2.43 %	2.44 %	2.46 %	2.46 %	2.47 %
Gross commission income per side (j)	\$13,458	\$13,309	\$12,752	\$12,730	\$13,072
Relocation Services					
Initiations (k)	171,442	161,755	163,063	167,749	171,210
Referrals (l)	88,445	83,678	87,277	99,531	96,755
Title and Settlement Services					
Purchasing title and closing units (m)	157,228	159,113	152,997	130,541	113,074
Refinance title and closing units (n)	18,495	28,564	50,919	38,544	27,529
Average fee per closing unit (o)	\$2,230	\$2,092	\$1,875	\$1,861	\$1,780

(a) The income tax benefit for the year ended December 31, 2017 reflects the impact of the 2017 Tax Act.

Represents the portion of relocation receivables and advances and other related assets that collateralize our securitization obligations. Refer to Note 8, "Short and Long-Term Debt" in the consolidated financial statements for further information.

(c) These amounts include only those relating to third-party franchisees and do not include amounts relating to the Company Owned Real Estate Brokerage Services segment.

In April 2015, the Company Owned Real Estate Brokerage Services segment acquired Coldwell Banker United, a large franchisee of the Real Estate Franchise Services segment. As a result of the acquisition, the drivers of the

(d) acquired entity shifted from the Real Estate Franchise Services segment to the Company Owned Real Estate Brokerage Services segment. Closed homesale sides for the Company Owned Real Estate Brokerage segment included 16,746 sides related to the acquisition of Coldwell Banker United in 2015.

(e) A closed homesale side represents either the "buy" side or the "sell" side of a homesale transaction.

(f) Represents the average selling price of closed homesale transactions.

(g) Represents the average commission rate earned on either the "buy" side or "sell" side of a homesale transaction.

(h) Represents domestic royalties earned from our franchisees net of volume incentives achieved and non-standard incentives divided by the total number of our franchisees' closed homesale sides.

Our real estate brokerage business has a significant concentration of offices and transactions in geographic regions where home prices are at the higher end of the U.S. real estate market, particularly the east and west coasts. The real estate franchise business has franchised offices that are more widely dispersed across the United States than our real estate brokerage operations. Accordingly, operating results and homesale statistics may differ between our brokerage and franchise businesses based upon geographic presence and the corresponding homesale activity in each geographic region.

(j) Represents gross commission income divided by closed homesale sides. Gross commission income includes commissions earned in homesale transactions and certain other activities, primarily leasing and property



management transactions.

- (k) Represents the total number of new transferees and the total number of real estate closings for affinity members.
- (l) Represents the number of referrals from which we earned revenue from real estate brokers.
- (m) Represents the number of title and closing units processed as a result of home purchases. The amounts presented include 8,351, 18,930 and 13,304 purchase units as a result of acquisitions for 2017, 2016 and 2015, respectively.  
Represents the number of title and closing units processed as a result of homeowners refinancing their home loans.
- (n) The amounts presented include 1,858, 4,469 and 3,403 refinance units as a result of acquisitions for 2017, 2016 and 2015, respectively.
- (o) Represents the average fee we earn on purchase title and refinancing title units.

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In presenting the financial data above in conformity with general accepted accounting principles, we are required to make estimates and assumptions that affect the amounts reported. See "Item 7.—Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies" for a detailed discussion of the accounting policies that we believe require subjective and complex judgments that could potentially affect reported results.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following discussion and analysis should be read in conjunction with our consolidated financial statements and accompanying notes thereto included elsewhere herein. Unless otherwise noted, all dollar amounts in tables are in millions. This Management's Discussion and Analysis of Financial Condition and Results of Operations contain forward-looking statements. See "Forward-Looking Statements" and "Item 1A.—Risk Factors" for a discussion of the uncertainties, risks and assumptions associated with these statements. Actual results may differ materially from those contained in any forward-looking statements.

RECENT DEVELOPMENTS

2018 Housing Performance and 2019 Housing Forecasts

Based upon data published by NAR, the housing market showed no volume growth in 2018 compared to 6% growth in 2017. In addition, the last quarter of 2018 was significantly worse than the rest of the year, with homesale transaction volume declining 4% during the fourth quarter of 2018 as compared to 2017. For additional information on existing homesales and existing homesale price (on both a year-over-year basis as well as by quarter for 2018 as compared to 2017) see the information presented under the captions "Current Industry Trends—Existing Homesales" and "—Existing Homesale Price" in this Management's Discussion and Analysis.

As of their most recent release, NAR is forecasting existing homesale transaction volume to again remain flat for the full year 2019 compared to 2018. NAR's full year 2019 forecast includes homesale transaction volume decreases in the first half of 2019 offset by expected volume growth in the second half of 2019. The quarterly year-over-year forecasts for homesale transaction volume for 2019 compared to 2018 are as follows:

Key Strategic Imperatives

The core of our integrated business strategy is aimed at significantly growing the base of productive independent sales agents at our company owned and franchisee brokerages and providing them with compelling data and technology products and services to make them more productive and their businesses more profitable.

We anticipate that our recruiting and retention efforts at NRT will be strengthened by our increasing utilization of advanced data analytics. We believe our adoption of a more data-driven strategy, together with strong product and services offerings, will further sharpen our productivity, recruitment and retention objectives. This initiative is intended to allow us to provide more competitive and consistent products, services and pricing to existing and newly recruited independent sales agents, including through the expanded use of commission plans other than the traditional graduated commission model. In 2018, we began to expand our use of alternative commission plans at our company owned brokerages in certain territories for new independent sales agents (and existing independent sales agents who elect to adopt a new alternative commission plan). These plans offer certain brokerage services on an à la carte basis. In addition, we recently launched Listing Concierge, a full service solution for the design, creation and distribution of automated customized property listings. We intend to further advance these initiatives throughout 2019.

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RFG is implementing strategic initiatives intended to add new franchisees and expanding the base of independent sales agents, including through the expansion of RFG's historical scope of potential franchisee candidates as well as through new pricing model structures and new franchise brands. These initiatives are expected to build on our current technology offerings and will include greater differentiation of RFG's brands.

As part of the strategy to expand and enhance our existing portfolio of brands, we launched Corcoran® as a new franchise brand in January 2019 by filing the Franchise Disclosure Document, or FDD, which allows us to engage in discussions with prospective franchisees in most states. We continue to build the value proposition to support future franchising of the Climb Real Estate® brand. To date, both brands have been operated solely as part of our company owned brokerage segment.

We believe that the successful execution of these strategies at NRT and RFG, and the associated increase in productive independent sales agents, will generate Operating EBITDA growth over time, subject to macroeconomic risks, including a slowdown in the residential real estate market, as well as other risks that may impact the housing market, including increasing pressure on the share of commissions earned by independent sales agents.

### Redemption of \$450 million of 4.50% Senior Notes

On February 15, 2019, we redeemed all of our outstanding \$450 million 4.50% Senior Notes due in April 2019. We utilized borrowings under our Revolving Credit Facility to redeem the 4.50% Senior Notes and plan to refinance on a long-term basis all or a portion of the funds used to redeem the 4.50% Senior Notes, subject to market conditions.

### 2019 Restructuring Program

During 2019 we plan to accelerate our office consolidation to reduce our storefront costs, as well as institute other operational efficiencies to drive profitability. In addition, beginning in the first quarter of 2019, we commenced a plan to transform certain aspects of our operational support and drive changes in how we support our agents from a marketing and technology perspective to help our agents be more productive and their businesses more profitable.

### Leadership Realignment and Other Restructuring Activities

Beginning in the first quarter of 2018, the Company commenced the implementation of a plan to drive our business forward and enhance stockholder value. The key aspects of this plan included senior leadership realignment, an enhanced focus on technology and talent, as well as further attention on office footprint and other operational efficiencies. The expected costs of activities undertaken in connection with this restructuring plan are largely complete. As of December 31, 2018, cost savings related to the restructuring activities were estimated to be approximately \$50 million on an annual run rate basis.

### CURRENT INDUSTRY TRENDS

According to the National Association of Realtors ("NAR"), during 2018, homesale transaction volume remained flat due to a 3% decrease in the number of homesale transactions offset by a 3% increase in the average homesale price. We believe that the main reasons for the decline in homesale transactions during 2018 compared to 2017 was constrained inventory, as well as reduced affordability due to higher average homesale prices and rising mortgage rates. We believe that the slowdown of homesale transactions during the second half of 2018 signals that affordability concerns due to rising home prices and mortgage rates contributed to some potential home buyers deferring entry into the market, notwithstanding that demand continued to outpace supply. A number of other factors may have also contributed to the decline, including personal income tax reform, the modest pace of new home construction and stock market volatility. We are unable to extrapolate the relative impact that each of these factors may have had on regional and local markets in the United States.

Inventory. Although inventory levels have recently shown some signs of improvement, low housing inventory levels continue to be an industry-wide concern, in particular in certain highly sought-after geographies and at lower price points. According to NAR, the inventory of existing homes for sale in the U.S. was 1.52 million as of January 2018 and has increased to 1.53 million at the end of December 2018. As a result, inventory has increased from 3.4 months of supply in January 2018 to 3.7 months as of December 2018. However, these levels continue to be significantly below the 10-year average of 5.8 months, the 15-year average of 6.1 months and the 25-year average of 5.8 months.



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**Mortgage Rates.** According to Freddie Mac, mortgage rates on commitments for a 30-year, conventional, fixed-rate first mortgage averaged 4.54% for 2018 and 3.99% for 2017 and reached a high 4.87% in November 2018. This increase in mortgage rates adversely impacted housing affordability, particularly on the fourth quarter where the average mortgage rates on commitments for a 30-year, conventional, fixed-rate first mortgage increased 86 basis points compared to the fourth quarter of 2017. We have been and could continue to be negatively impacted by a rising interest rate environment. For example, a rise in mortgage rates could result in decreased homesale transaction volume if potential home sellers choose to stay with their lower mortgage rate rather than sell their home and pay a higher mortgage rate with the purchase of another home or, similarly, if potential home buyers choose to rent rather than pay higher mortgage rates. However, we believe that over the medium to long-term, rising wages, the availability of alternative mortgage arrangements and increasing rent prices for the mainstream housing market may help offset the impact of rising mortgage rates to some degree.

**Affordability.** The composite housing affordability index, as reported by NAR, decreased from 158 for 2017 to 146 for 2018, which puts it slightly above the 25-year average of 143. The affordability index hit 138 in June 2018, which was its lowest point since 2008. As noted above, we believe the year-over-year decline is a result of lower inventory levels, which have continued to put upward pressure on home prices with additional pressure from higher mortgage rates along with other factors. A housing affordability index above 100 signifies that a family earning the median income has sufficient income to purchase a median-priced home, assuming a 20 percent down payment and ability to qualify for a mortgage.

RFG and NRT homesale transaction volume on a combined basis increased 1% for the year ended December 31, 2018 compared to 2017. RFG's transaction volume increased 1% as a result of a 5% increase in the average homesale price, mostly offset by a 4% decrease in existing homesale transactions. NRT's transaction volume decreased 1% as a result of a 2% decrease in existing homesale transactions, offset by a 2% increase in the average homesale price.

**Recruitment and Retention of Independent Sales Agents; Commission Income.** Recruitment and retention of independent sales agents and independent sales agent teams are critical to the business and financial results of a brokerage, including our company owned brokerages and those operated by our affiliated franchisees. Competition for independent sales agents in our industry, including within our franchise system, is high, in particular with respect to more productive sales agents. Most of a brokerage's real estate listings are sourced through the sphere of influence of their independent sales agents, notwithstanding the growing influence of internet-generated leads.

We believe that a variety of factors in recent years have negatively impacted the recruitment and retention of independent sales agents in the industry generally and put upward pressure on the average share of commissions earned by affiliated independent sales agents, including increasing competition, changes in the spending patterns of independent sales agents (as more agents purchase services from third-parties outside of their affiliated broker) and growth in independent sales agent teams.

In addition, the significant size of the U.S. real estate market, in particular the addressable market of commission revenues, has continued to attract outside capital investment in traditional and disruptive competitors that seek to access a portion of this market. Certain of our privately-held competitors have investors that appear to be supportive of a model that pursues increases in market share over profitability, which exacerbates competition for independent sales agents and pressure on the share of commission income received by the agent.

Our company owned brokerage service has historically compensated its independent sales agents using a traditional graduated commission model. As discussed under the caption "Key Strategic Imperatives" above, NRT and RFG have launched strategic initiatives intended to address current market dynamics by expanding our base of affiliated independent sales agents and affiliated franchisees. This includes initiatives at NRT to expand the use of commission plans other than the traditional graduated commission model and initiatives at RFG that are expected to build on our current technology offerings and include greater differentiation of RFG's brands.

**New Development.** NRT has relationships with developers, primarily in major cities, in particular New York City, to provide marketing and brokerage services in new developments. New development closings generally have a development period of between 18 and 24 months from contracted date to closing and the timing of closings can

fluctuate significantly from year to year. For example, in 2017, NRT experienced stronger growth in its new development business with a significant increase in the number of closed transactions from 2016. This growth was largely due to the timing of closings of several major developments during the year. During 2018, there was a decrease in revenue related to our new development business in New York City as a result of lower closing volume due to long cycle times with irregular project completion timing.

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Existing Homesales

For the year ended December 31, 2018, NAR existing homesale transactions decreased to 5.3 million homes or down 3% compared to 2017. For the year ended December 31, 2018, RFG and NRT homesale transactions on a combined basis decreased 3% compared to 2017. The annual and quarterly year-over-year trends in homesale transactions are as follows:

- 
- (a) Historical existing homesale data is as of the most recent NAR press release, which is subject to sampling error.
  - (b) Existing homesale data, on a seasonally adjusted basis, is as of the most recent Fannie Mae press release. As of their most recent releases, NAR is forecasting existing homesale transactions to decrease 2% for 2019 and increase 4% for 2020 while Fannie Mae is forecasting existing homesale transactions to remain flat for 2019 and increase 2% for 2020.

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Existing Homesale Price

In 2018, NAR existing homesale average price increased 3% compared to 2017. In 2018, RFG and NRT's average homesale price on a combined basis increased 4% compared to 2017 and consisted of RFG's average homesale price increase of 5% and NRT's average homesale price increase of 2%. The difference between the average homesale price increase for RFG compared to NRT is due to lower closing volume in NRT's new development business which is typically at a higher price point as well as lower transaction volume in the New York metropolitan market. The annual and quarterly year-over-year trends in the price of homes are as follows:

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(a) Historical homesale price data is for existing homesale average price and is as of the most recent NAR press release.

(b) Existing homesale price data is for median price and is as of the most recent Fannie Mae press release.

As of their most recent releases, NAR is forecasting an increase in median existing homesale price of 2% for 2019 and 3% for 2020 while Fannie Mae is forecasting an increase of 3% for both 2019 and 2020.

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We believe that long-term demand for housing and the growth of our industry are primarily driven by the affordability of housing, the economic health of the U.S. economy, demographic trends such as generational transitions, increases in U.S. household formation, mortgage rate levels and mortgage availability, certain tax benefits, job growth, increases in renters that qualify as homebuyers, the inherent attributes of homeownership versus renting and the influence of local housing dynamics of supply versus demand. At this time, certain of these factors are trending favorably, such as household formation and job growth. Factors that may negatively affect growth in the housing industry include:

- continued insufficient inventory levels or stagnant and/or declining home prices;
- higher mortgage rates due to increases in long-term interest rates and increasing down payment requirements as well as reduced availability of mortgage financing;
- further reduction in the affordability of homes;
- certain provisions of the 2017 Tax Act that directly impact traditional incentives associated with home ownership and may reduce the financial distinction between renting and owning a home, including those that reduce the amount that certain taxpayers would be allowed to deduct for home mortgage interest or state, local and property taxes;
- lack of building of new housing or irregular timing of new development closings leading to lower unit sales at NRT, which has relationships with developers, primarily in major cities, to provide marketing and brokerage services in new developments;
- homeowners retaining their homes for longer periods of time;
- changing attitudes towards home ownership;
- decreasing consumer confidence in the economy and/or the residential real estate market;
- an increase in potential homebuyers with low credit ratings or inability to afford down payments;
- the impact of limited or negative equity of current homeowners, as well as the lack of available inventory may limit their proclivity to purchase an alternative home;
- economic stagnation or contraction in the U.S. economy;
- weak credit markets and/or instability of financial institutions;
- increased levels of unemployment and/or stagnant wage growth in the U.S.;
- a decline in home ownership levels in the U.S.;
- other legislative or regulatory reforms, including but not limited to reform that adversely impacts the financing of the U.S. housing market, changes relating to RESPA, potential reform of Fannie Mae and Freddie Mac, immigration reform, and further potential tax code reform;
- renewed high levels of foreclosure activity;
- natural disasters, such as hurricanes, earthquakes, wildfires, mudslides and other events that disrupt local or regional real estate markets; and
- geopolitical and economic instability.

Many of the trends impacting our businesses that derive revenue from homesales also impact Cartus, which is the leading provider of global relocation services. In addition to general residential housing trends, key drivers of Cartus are global corporate spending on relocation services, which continue to shift to lower cost relocation benefits as corporate clients engage in cost reduction initiatives and/or restructuring programs as well as changes in employment relocation trends. Cartus is subject to a competitive pricing environment and lower average revenue per relocation as a result of a shift in the mix of services and number of services being delivered per move. These factors have and may continue to put pressure on the growth and profitability of this segment.

**KEY DRIVERS OF OUR BUSINESSES**

Within RFG and NRT, we measure operating performance using the following key operating metrics: (i) closed homesale sides, which represents either the "buy" side or the "sell" side of a homesale transaction, (ii) average homesale price, which represents the average selling price of closed homesale transactions, and (iii) average homesale broker commission rate, which represents the average commission rate earned on either the "buy" side or "sell" side of a homesale transaction. For RFG, we also use net royalty per side, which represents the royalty payment to RFG for

each homesale transaction side taking into account royalty rates, volume incentives achieved and non-standard incentives. We utilize net royalty revenue per transaction as it reflects the impact of changes in average homesale price and represents the royalty revenue impact of each incremental side.

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Within Cartus, we measure operating performance using the following key operating statistics: (i) initiations, which represent the total number of new transferees and the total number of real estate closings for affinity members and (ii) referrals, which represent the number of referrals from which we earn revenue from real estate brokers. In TRG, operating performance is evaluated using the following key metrics: (i) purchase title and closing units, which represent the number of title and closing units we process as a result of home purchases, (ii) refinance title and closing units, which represent the number of title and closing units we process as a result of homeowners refinancing their home loans, and (iii) average fee per closing unit, which represents the average fee we earn on purchase title and refinancing title sides. An increase or decrease in homesale transactions will impact the financial results of TRG; however, the financial results are not significantly impacted by a change in homesale price. We believe that further increases in mortgage rates in the future will most likely have a negative impact on refinancing title and closing units. The following table presents our drivers for the years ended December 31, 2018, 2017 and 2016. See "Results of Operations" below for a discussion as to how these drivers affected our business for the periods presented.

	Year Ended December 31,			% Change	Year Ended December 31,		
	2018	2017			2017	2016	% Change
<b>RFG (a)</b>							
Closed homesale sides	1,103,857	1,144,217	(4 %)	1,144,217	1,135,344	1 %	
Average homesale price	\$303,750	\$288,929	5 %	\$288,929	\$272,206	6 %	
Average homesale broker commission rate	2.48 %	2.50 %	(2 ) bps	2.50 %	2.50 %	—	
Net royalty per side (b)	\$323	\$313	3 %	\$313	\$299	5 %	
<b>NRT</b>							
Closed homesale sides	336,806	344,446	(2 %)	344,446	335,699	3 %	
Average homesale price	\$523,426	\$514,685	2 %	\$514,685	\$489,504	5 %	
Average homesale broker commission rate	2.43 %	2.44 %	(1 ) bps	2.44 %	2.46 %	(2 ) bps	
Gross commission income per side	\$13,458	\$13,309	1 %	\$13,309	\$12,752	4 %	
<b>Cartus</b>							
Initiations	171,442	161,755	6 %	161,755	163,063	(1 %)	
Referrals	88,445	83,678	6 %	83,678	87,277	(4 %)	
<b>TRG</b>							
Purchase title and closing units (c)	157,228	159,113	(1 %)	159,113	152,997	4 %	
Refinance title and closing units (d)	18,495	28,564	(35 %)	28,564	50,919	(44 %)	
Average fee per closing unit	\$2,230	\$2,092	7 %	\$2,092	\$1,875	12 %	

(a) Includes all franchisees except for NRT.

Net royalty per side amounts include the effect of volume incentives and non-standard incentives granted to franchisees. For the years ended December 31, 2018 and 2017, the net royalty per side increased 3% and

(b) 5%, respectively, while average homesale price increased 5% and 6%, respectively. The differential between growth in net royalty per side and average homesale price was due to an increase in sales incentives, a decrease in the average broker commission rate and a shift in mix to our top 250 franchisees.

(c) The amounts presented for 2017 and 2016 include 8,351 and 18,930 purchase units as a result of acquisitions, respectively.

(d) The amounts presented for 2017 and 2016 include 1,858 and 4,469 refinance units as a result of acquisitions, respectively.

A decline in the number of homesale transactions and decline in homesale prices could adversely affect our results of operations by: (i) reducing the royalties we receive from our franchisees, (ii) reducing the commissions our company owned brokerage operations earn, (iii) reducing the demand for our title and settlement services, (iv) reducing the referral fees we earn in our relocation services business, and (v) increasing the risk of franchisee default due to lower

homesale volume. Our results could also be negatively affected by a decline in commission rates charged by brokers or greater commission payments to sales agents.

Since 2014, we have experienced approximately a one basis point decline in the average broker commission rate each year, which we believe has been largely attributable to increases in average homesale prices (as higher priced homes tend to have a lower broker commission) and, to a lesser extent, competitors providing fewer or similar services for a reduced fee.

Royalty fees are charged to all franchisees pursuant to the terms of the relevant franchise agreements and are included in each of the real estate brands' franchise disclosure documents. Most of our third-party franchisees are subject to a 6% royalty rate and entitled to volume incentives, although a royalty fee generally equal to 5% of franchisee commission

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(capped at a set amount per independent sales agent per year) is applicable to franchisees operating under the "capped fee model" that was launched for our Better Homes and Gardens® Real Estate franchise business in January 2019.

Volume incentives are calculated as a progressive percentage of the applicable franchisee's eligible annual gross commission income and generally result in a net or effective royalty rate ranging from 6% to 3% for the franchisee.

Volume incentives increase or decrease as the franchisee's gross commission income generated increases or decreases, respectively. We have the right to adjust the annual volume incentive tables on an annual basis in response to changing market conditions. In addition, some of our larger franchisees have a flat royalty rate of less than 6% and are not eligible for volume incentives.

Non-standard incentives may also be used as consideration to attract, retain and help grow certain franchisees. Most of our franchisees do not receive these non-standard incentives and in contrast to volume incentives, the majority are not homesale transaction based. We expect that the trend of increasing non-standard incentives will continue in the future in order to attract, retain, and help grow certain franchisees.

Transaction volume growth has exceeded royalty revenue growth due primarily to the growth in gross commission income generated by our top 250 franchisees and our increased use of non-standard sales incentives, both of which directly impact royalty revenue. Over the past several years, our top 250 franchisees have grown faster than our other franchisees through organic growth and market consolidation. If the amount of gross commission income generated by our top 250 franchisees continue to grow at a quicker pace relative to our other franchisees, we would expect our royalty revenue to continue to increase, but at a slower pace than homesale transaction volume. Likewise, our royalty revenue would continue to increase, but at a slower pace than homesale transaction volume, if the gross commission income generated by all of our franchisees grows faster than the applicable annual volume incentive table increase or if we increase our use of standard volume or non-standard incentives. However, we expect that any such increases in gross commission income will result in increased overall royalty payments to us.

NRT has a significant concentration of real estate brokerage offices and transactions in geographic regions where home prices are at the higher end of the U.S. real estate market, particularly the east and west coasts, while RFG has franchised offices that are more widely dispersed across the United States. Accordingly, operating results and homesale statistics may differ between NRT and RFG based upon geographic presence and the corresponding homesale activity in each geographic region. In addition, the share of commissions earned by independent sales agents directly impacts the margin earned by NRT. Such share of commissions earned by independent sales agents varies by region and commission schedules are generally progressive to incentivize sales agents to achieve higher levels of production. We expect that commission share will continue to be subject to upward pressure in favor of the independent sales agent because of the increased bargaining power of independent sales agents and independent sales teams as well as more aggressive recruitment and retention activities taken by us and our competitors.

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## RESULTS OF OPERATIONS

Discussed below are our consolidated results of operations and the results of operations for each of our reportable segments. The reportable segments presented below represent our operating segments for which separate financial information is available and which is utilized on a regular basis by our chief operating decision maker to assess performance and to allocate resources. In identifying our reportable segments, we also consider the nature of services provided by our operating segments. Management evaluates the operating results of each of our reportable segments based upon revenue and Operating EBITDA. Operating EBITDA is defined by us as net income (loss) before depreciation and amortization, interest expense, net (other than relocation services interest for securitization assets and securitization obligations), income taxes, and other items that are not core to the operating activities of the Company such as restructuring charges, former parent legacy items, losses on the early extinguishment of debt, asset impairments, gains or losses on discontinued operations and gains or losses on the sale of investments or other assets. Our presentation of Operating EBITDA may not be comparable to similarly titled measures used by other companies. Year Ended December 31, 2018 vs. Year Ended December 31, 2017

Our consolidated results were comprised of the following:

	Year Ended December		
	31,		
	2018	2017	Change
Net revenues	\$6,079	\$6,114	\$(35 )
Total expenses	5,870	5,763	107
Income before income taxes, equity in losses (earnings) and noncontrolling interests	209	351	(142 )
Income tax expense (benefit) (1)	65	(65 )	130
Equity in losses (earnings) of unconsolidated entities	4	(18 )	22
Net income	140	434	(294 )
Less: Net income attributable to noncontrolling interests	(3 )	(3 )	—
Net income attributable to Realogy Holdings and Realogy Group	\$137	\$431	\$(294 )

(1) Income tax benefit for the year ended December 31, 2017 reflects the impact of the 2017 Tax Act.

Net revenues decreased \$35 million or 1% for the year ended December 31, 2018 compared with the year ended December 31, 2017, principally due to a decrease in gross commission income as a result of lower homesale transaction volume at NRT.

Total expenses increased \$107 million or 2% primarily due to:

a \$52 million increase in commission and other sales agent-related costs due to the impact of initiatives focused on growing and retaining our productive independent sales agent base and a shift in mix in 2018 to lower closing volume in the new development business which typically has lower commission expense compared to traditional brokerage operations, partially offset by lower homesale transaction volume;

\$58 million of restructuring costs for the year ended December 31, 2018 primarily for the Company's restructuring program related to leadership realignment and other restructuring activities compared to \$12 million of restructuring costs incurred in 2017 related to the Company's business optimization plan;

a \$32 million net increase in interest expense to \$190 million for the year ended December 31, 2018 compared to \$158 million for the year ended December 31, 2017 primarily due to an increase in interest expense due to LIBOR rates increases, as well as mark-to-market adjustments for our interest rate swaps that resulted in losses of \$4 million for the year ended December 31, 2018 compared to gains of \$4 million for the year ended December 31, 2017, and a \$2 million write off of financing costs to interest expense as a result of the refinancing transactions in February 2018; and

a net cost of \$4 million for former parent legacy items in 2018 compared to a net benefit of \$10 million for former parent legacy items related to the settlement of a Cendant legacy tax matter in 2017.

The expense increases were partially offset by a \$32 million decrease in operating and general and administrative expenses primarily driven by:

- \$43 million decrease in employee related costs primarily due to lower incentive accruals and cost savings initiatives;

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the absence in 2018 of an \$8 million expense related to the transition of the Company's CEO which occurred in 2017; and

the absence in 2018 of an \$8 million expense related to the settlement of the Strader legal matter which occurred in 2017;

partially offset by:

a \$10 million increase in costs at NRT including a \$4 million increase in outsourcing costs and a \$3 million increase in occupancy costs; and

a \$22 million increase in costs at TRG primarily due to an increase in underwriter revenue with unaffiliated agents where the revenue and expense is recorded on a gross basis and other operating costs.

Losses from equity investments were \$4 million during the year ended December 31, 2018 primarily related to losses from the operations of Guaranteed Rate Affinity. Guaranteed Rate Affinity, which began doing business in August 2017 on a phased-in basis, has experienced operational challenges at the joint venture in addition to tight industry margins in a highly competitive industry as well as rising mortgage rates. During the year ended December 31, 2017, the Company recorded earnings from equity investments of \$18 million, which related to \$35 million in earnings from the sale of PHH Home Loans' assets to Guaranteed Rate Affinity, partially offset by the recognition of \$7 million exit costs at PHH Home Loans, losses of \$6 million from the continuing operations of PHH Home Loans and \$4 million of costs associated with the start up of operations of Guaranteed Rate Affinity.

The provision for income taxes was an expense of \$65 million for the year ended December 31, 2018 compared to a benefit of \$65 million for the year ended December 31, 2017. The income tax benefit for the year ended December 31, 2017 reflects the impact of the 2017 Tax Act. Our effective tax rate was 32% for the year ended December 31, 2018. See Note 10, "Income Taxes", in the Consolidated Financial Statements for additional information and a reconciliation of the Company's effective income tax rate. The Company's 2019 effective tax rate is estimated to be 32%.

The following table reflects the results of each of our reportable segments for the years ended December 31, 2018 and 2017:

	Revenues (a)		\$ Change	% Change	Operating EBITDA		\$ Change	% Change	Operating EBITDA Margin		Change
	2018	2017			2018	2017			2018	2017	
RFG	\$820	\$830	(10 )	(1 )%	\$564	\$560	4	1 %	69%	67%	2
NRT (b)	4,607	4,643	(36 )	(1 )	44	135	(91 )	(67 )	1	3	(2 )
Cartus	378	382	(4 )	(1 )	86	85	1	1	23	22	1
TRG	580	570	10	2	49	59	(10 )	(17 )	8	10	(2 )
Corporate	(306 )	(311 )	5	*	(85 )	(107 )	22	*			
Total Company	\$6,079	\$6,114	(35 )	(1 )%	\$658	\$732	(74 )	(10 )%	11%	12%	(1 )
Less: Depreciation and amortization (c)					197	201					
Interest expense, net					190	158					
Income tax expense (benefit) (d)					65	(65 )					
Restructuring costs, net (e)					58	12					
Former parent legacy cost (benefit), net (f)					4	(10 )					
Loss on the early extinguishment of debt (f)					7	5					
Net income attributable to Realogy Holdings and Realogy Group					\$137	\$431					

\* not meaningful

(a)



Includes the elimination of transactions between segments, which consists of intercompany royalties and marketing fees paid by NRT of \$306 million and \$311 million during the years ended December 31, 2018 and 2017, respectively.

(b) NRT Operating EBITDA includes \$22 million of equity earnings from PHH Home Loans for the year ended December 31, 2017.

Depreciation and amortization for the years ended December 31, 2018 and 2017 includes \$2 million and \$3 million, respectively, of amortization expense related to Guaranteed Rate Affinity's purchase accounting included in the "Equity in losses (earnings) of unconsolidated entities" line on the Consolidated Statement of Operations.

(d) Income tax benefit for the year ended December 31, 2017 reflects the impact of the 2017 Tax Act.

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- Restructuring charges incurred for the year ended December 31, 2018 include \$3 million at RFG, \$37 million at NRT, \$11 million at Cartus, \$4 million at TRG and \$3 million at Corporate and Other.
- (e) Restructuring charges incurred for the year ended December 31, 2017 include \$1 million at RFG, \$9 million at NRT, \$1 million at TRG and \$1 million at Corporate and Other.
- (f) Former parent legacy items and loss on the early extinguishment of debt are recorded in the Corporate and Other segment.

As described in the aforementioned table, Operating EBITDA margin for "Total Company" expressed as a percentage of revenues decreased 1 percentage point to 11% from 12% for the year ended December 31, 2018 compared to 2017. On a segment basis, RFG's margin increased 2 percentage points to 69% from 67% primarily due to a decrease in employee related costs as a result of lower incentive accruals. NRT's margin decreased 2 percentage points to 1% from 3% primarily due to higher sales commission percentages paid to its independent sales agents during 2018 compared to 2017 and the impact of lower closing volume in our new development business, which typically has higher margins. Cartus' margin increased 1 percentage point to 23% from 22% primarily due to a decrease in employee related costs as a result of cost savings initiatives. TRG's margin decreased 2 percentage points to 8% from 10% for the year ended December 31, 2018 compared to 2017 primarily as a result of a decrease in refinancing revenue.

Corporate and Other Operating EBITDA for the year ended December 31, 2018 improved \$22 million to negative \$85 million primarily due to the absence in 2018 of an \$8 million expense related to the settlement of the Strader legal matter which occurred in 2017, the absence in 2018 of \$8 million of costs related to the transition of the Company's CEO which occurred in 2017 and a \$2 million decrease in other employee costs primarily related to lower employee incentive accruals offset by an increase in headcount at ZapLabs.

#### RFG and NRT on a Combined Basis

The following table reflects RFG and NRT results before the intercompany royalties and marketing fees, as well as on a combined basis to show the Operating EBITDA contribution of these business units to the overall Operating EBITDA of the Company. The Operating EBITDA margin for the combined segments decreased 1% percentage point from 13% to 12% primarily due to higher sales commission percentages paid to independent sales agents affiliated with NRT and the impact of lower closing volume in NRT's new development business, which typically has higher margins:

	Revenues		Change	% Change	Operating EBITDA		Change	% Change	Operating EBITDA Margin		Change
	2018	2017			2018	2017			2018	2017	
RFG (a)	\$514	\$519	\$(5)	(1)%	\$258	\$249	\$9	4%	50%	48%	2%
NRT (a) (b)	4,607	4,643	(36)	(1)	350	446	(96)	(22)	8	10	(2)
RFG and NRT Combined	\$5,121	\$5,162	\$(41)	(1)%	\$608	\$695	\$(87)	(13)%	12%	13%	(1)

The RFG and NRT segment numbers noted above do not reflect the impact of intercompany royalties and (a) marketing fees paid by NRT to RFG of \$306 million and \$311 million for the years ended December 31, 2018 and 2017, respectively.

(b) NRT Operating EBITDA includes \$22 million of equity earnings from PHH Home Loans for the year ended December 31, 2017.

#### Real Estate Franchise Services (RFG)

Revenues decreased \$10 million to \$820 million while Operating EBITDA increased \$4 million to \$564 million for the year ended December 31, 2018 compared with 2017.

Revenues decreased \$10 million as a result of a \$4 million increase in non-standard incentives, a \$4 million decrease in intercompany royalties received from NRT and a \$2 million decrease in other revenue primarily due to the timing of brand conferences and franchisee events.

RFG revenue includes intercompany royalties received from NRT of \$295 million and \$299 million during the years ended December 31, 2018 and 2017, respectively, which are eliminated in consolidation against the expense reflected in NRT's segment results.

The \$4 million increase in Operating EBITDA was principally due to a \$9 million decrease in employee related costs primarily due to lower incentive accruals and a \$5 million decrease in expenses related to the timing of brand conferences and franchisee events, partially offset by the \$10 million decrease in revenues discussed above.

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Company Owned Real Estate Brokerage Services (NRT)

Revenues decreased \$36 million to \$4,607 million and Operating EBITDA decreased \$91 million to \$44 million for the year ended December 31, 2018 compared with 2017.

The revenue decrease of \$36 million was primarily driven by a 1% decrease in homesale transaction volume at NRT which consisted of a 2% decrease in the number of homesale transactions, mostly offset by a 2% increase in average homesale price. NRT saw lower transaction volume in the New York metropolitan area and in the west coast, as well as a lower closing volume in its new development business, which is generally at a higher price point, compared to 2017.

Operating EBITDA decreased \$91 million primarily due to:

a \$52 million increase in commission expenses paid to independent sales agents from \$3,230 million for the year ended December 31, 2017 to \$3,282 million for the year ended December 31, 2018. Commission expense increased a result of the impact of initiatives focused on growing and retaining our productive independent sales agent base and a shift in mix in 2018 to lower closing volume in the new development business, which typically has lower commission expense compared to traditional brokerage operations, partially offset by the impact of lower homesale transaction volume;

a \$36 million decrease in revenues discussed above;

the absence in 2018 of \$22 million in earnings from our equity method investment in PHH Home Loans primarily due to gains from the sale of PHH Home Loans' assets to Guaranteed Rate Affinity which occurred in 2017; and

a \$10 million increase in other costs including a \$4 million increase in outsourcing costs and a \$3 million increase in occupancy costs.

Operating EBITDA decreases were partially offset by:

a \$21 million decrease in employee related costs primarily due to lower incentive accruals;

a \$4 million decrease in royalties paid to RFG from \$299 million in 2017 to \$295 million in 2018; and

a \$3 million decrease in marketing expenses.

Relocation Services (Cartus)

Revenues decreased \$4 million to \$378 million while Operating EBITDA increased \$1 million to \$86 million for the year ended December 31, 2018 compared with 2017.

Revenues decreased \$4 million as a result of a \$7 million decrease in international revenue due to unfavorable volume mix and a \$2 million decrease in referral revenue due to lower volume, partially offset by a \$3 million increase in affinity revenue and a \$2 million increase in other revenue primarily driven by higher volume.

Operating EBITDA increased \$1 million primarily as a result of an \$8 million decrease in employee related costs primarily due to cost savings initiatives, partially offset by the \$4 million decrease in revenues discussed above and a \$2 million net negative impact from foreign currency exchange rates on expenses.

Title and Settlement Services (TRG)

Revenues increased \$10 million to \$580 million while Operating EBITDA decreased \$10 million to \$49 million for the year ended December 31, 2018 compared with 2017.

Revenues increased \$10 million as a result of a \$20 million increase in underwriter revenue due to an increase of underwriter premiums as a result of a shift in mix to unaffiliated agents, as well as a \$5 million increase in resale revenue due to an increase in average fees, partially offset by a \$13 million decrease in refinancing revenue due to an overall decrease in activity in the refinance market.

Operating EBITDA decreased \$10 million as a result of an increase of \$19 million in costs primarily due to an increase in underwriter revenue with unaffiliated agents where the revenue and expense is recorded on a gross basis and a \$3 million increase in other operating costs, partially offset by the \$10 million increase in revenues discussed above and a \$3 million decrease in employee related costs.



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Year Ended December 31, 2017 vs. Year Ended December 31, 2016

Our consolidated results were comprised of the following:

	Year Ended December 31,		
	2017	2016	Change
Net revenues	\$6,114	\$5,810	\$ 304
Total expenses	5,763	5,461	302
Income before income taxes, equity in earnings and noncontrolling interests	351	349	2
Income tax (benefit) expense (1)	(65 )	144	(209 )
Equity in earnings of unconsolidated entities	(18 )	(12 )	(6 )
Net income	434	217	217
Less: Net income attributable to noncontrolling interests	(3 )	(4 )	1
Net income attributable to Realogy Holdings and Realogy Group	\$431	\$213	\$ 218

(1) Income tax benefit for the year ended December 31, 2017 reflects the impact of the 2017 Tax Act.

Net revenues increased \$304 million or 5% for the year ended December 31, 2017 compared with the year ended December 31, 2016, principally due to increases in gross commission income and franchise fees as a result of homesale transaction volume increase of 7% on a combined basis for NRT and RFG.

Total expenses increased \$302 million or 6% primarily due to:

- a \$285 million increase in commission and other sales agent-related costs due to an increase in homesale transaction volume at NRT and higher sales commissions paid to its independent sales agents;

- a \$45 million increase in operating and general and administrative expenses primarily driven by:

- \$25 million of additional employee-related costs associated with acquisitions;

- a \$29 million increase in other expenses including professional fees and occupancy costs;

- an \$8 million expense related to the transition of the Company's CEO; and

- an \$8 million expense related to the settlement of the Strader legal matter in 2017;

partially offset by:

- a \$13 million decrease in variable operating costs at TRG primarily due to lower refinance and underwriter volume; and

- a \$16 million decrease in other employee related costs primarily due to lower incentive accruals.

- a \$20 million increase in marketing expenses comprised of \$10 million at NRT, \$5 million at RFG and \$3 million at TRG; and

- \$5 million related to the losses on the early extinguishment of debt.

The expense increases were partially offset by:

- a \$16 million net decrease in interest expense to \$158 million for the year ended December 31, 2017 compared to \$174 million for the year ended December 31, 2016. Mark-to-market adjustments for our interest rate swaps resulted in gains of \$4 million for the year ended December 31, 2017 compared to losses of \$6 million for the year ended December 31, 2016. Before the mark-to-market adjustments for our interest rate swaps, interest expense decreased \$6 million to \$162 million in 2017 from \$168 million in 2016 as a result of a reduction in total outstanding indebtedness;

- a \$27 million decrease in restructuring costs related to the Company's business optimization plan (see Note 11, "Restructuring Costs", in the Consolidated Financial Statements for additional information); and

- an \$8 million increase in the net benefit of former parent legacy items primarily as a result of a reduction in the reserve due to the settlement of a Cendant legacy tax matter.

Earnings from equity investments were \$18 million during the year ended December 31, 2017 compared to \$12 million during the year ended December 31, 2016. The \$6 million net increase in earnings is primarily due to:

- a \$14 million increase in equity earnings at NRT as a result of \$35 million of earnings from the sale of PHH Home Loans' assets to Guaranteed Rate Affinity, partially offset by \$7 million of exit costs. In addition, there was a \$14

million decrease in earnings due to lower operating results as a result of lower origination volume, compressed

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industry margins and lower results due to the level of organizational change associated with the transition of the operations to Guaranteed Rate Affinity.

The increase in equity earnings was partially offset by:

an \$8 million decrease in equity earnings at TRG primarily related to costs associated with the start up of operations of Guaranteed Rate Affinity, including \$3 million of amortization of intangible assets recorded in purchase accounting.

The provision for income taxes was a benefit of \$65 million for the year ended December 31, 2017 compared to expense of \$144 million for the year ended December 31, 2016. The benefit is due to the recognition of a significant tax benefit of approximately \$184 million as a result of the 2017 Tax Act and a \$32 million change in our reserve for uncertain tax positions, partially offset by current operating results.

The following table reflects the results of each of our reportable segments for the years ended December 31, 2017 and 2016:

	Revenues (a)		\$ Change	% Change	Operating EBITDA		\$ Change	% Change	Operating EBITDA Margin		
	2017	2016			2017	2016			2017	2016	Change
RFG	\$830	\$781	\$ 49	6 %	\$560	\$520	\$ 40	8 %	67%	67%	—
NRT (b)	4,643	4,344	299	7	135	159	(24 )	(15 )	3	4	(1 )
Cartus	382	405	(23 )	(6 )	85	100	(15 )	(15 )	22	25	(3 )
TRG	570	573	(3 )	(1 )	59	63	(4 )	(6 )	10	11	(1 )
Corporate and Other	(311 )	(293 )	(18 )	*	(107 )	(72 )	(35 )	*			
Total Company	\$6,114	\$5,810	\$ 304	5 %	\$732	\$770	\$ (38 )	(5 )%	12%	13%	(1 )
Less: Depreciation and amortization (c)					201	202					
Interest expense, net					158	174					
Income tax (benefit) expense (d)					(65 )	144					
Restructuring costs, net (e)					12	39					
Former parent legacy benefit, net (f)					(10 )	(2 )					
Loss on the early extinguishment of debt (f)					5	—					
Net income attributable to Realogy Holdings and Realogy Group					\$431	\$213					

\* not meaningful

Includes the elimination of transactions between segments, which consists of intercompany royalties and marketing (a) fees paid by NRT of \$311 million and \$293 million during the years ended December 31, 2017 and 2016, respectively.

(b) NRT Operating EBITDA includes \$22 million and \$8 million of equity earnings from PHH Home Loans for the years ended December 31, 2017 and 2016, respectively.

Depreciation and amortization for the year ended December 31, 2017 includes \$3 million of amortization expense (c) related to Guaranteed Rate Affinity's purchase accounting included in the "Equity in losses (earnings) of unconsolidated entities" line on the Consolidated Statement of Operations.

(d) Income tax benefit for the year ended December 31, 2017 reflects the impact of the 2017 Tax Act.

Restructuring charges incurred for the year ended December 31, 2017 include \$1 million at RFG, \$9 million at (e) NRT, \$1 million at TRG and \$1 million at Corporate and Other. Restructuring charges incurred for the year ended December 31, 2016 include \$4 million at RFG, \$22 million at NRT, \$4 million at Cartus, \$1 million at TRG and \$8 million at Corporate and Other.



(f) Former parent legacy items and loss on the early extinguishment of debt are recorded in the Corporate and Other segment.

As described in the aforementioned table, Operating EBITDA margin for "Total Company" expressed as a percentage of revenues decreased 1 percentage point to 12% from 13% for 2017 compared to 2016. On a segment basis, RFG's margin remained flat at 67%. NRT's margin decreased 1 percentage point to 3% from 4% primarily due to higher sales commission percentages paid to its independent sales agents, partially offset by an increase in earnings related to the wind down of its equity investment in PHH Home Loans in 2017 compared to 2016. Cartus' margin decreased 3% percentage points to 22% from 25% primarily due to lower international revenue and lower foreign currency exchange rate gains, partially offset by lower employee related costs during 2017 compared to 2016. TRG's margin decreased 1 percentage point to 10% from 11%

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for the year ended December 31, 2017 compared to 2016 due to a decrease in earnings from equity investments primarily related to costs associated with the start up of operations of Guaranteed Rate Affinity. Corporate and Other Operating EBITDA for the year ended December 31, 2017 decreased \$35 million to negative \$107 million primarily due to a \$10 million increase in other costs due to professional fees supporting strategic initiatives and occupancy costs, a \$9 million increase in employee costs primarily due to investments in technology development, \$8 million of costs related to the transition of the Company's CEO and an \$8 million expense related to the settlement of the Strader legal matter during 2017.

**RFG and NRT on a Combined Basis**

The following table reflects RFG and NRT results before the intercompany royalties and marketing fees as well as on a combined basis to show the Operating EBITDA contribution of these business units to the overall Operating EBITDA of the Company. The Operating EBITDA margin for the combined segments decreased 1 percentage point from 14% to 13% primarily due to higher sales commission percentages paid to NRT's independent sales agents:

	Revenues		Change	% Change	Operating EBITDA		Change	% Change	Operating EBITDA Margin		Change
	2017	2016			2017	2016			2017	2016	
RFG (a)	\$519	\$488	\$ 31	6 %	\$249	\$227	\$ 22	10 %	48%	47%	1
NRT (a) (b)	4,643	4,344	299	7	446	452	(6 )	(1 )	10	10	—
RFG and NRT Combined	\$5,162	\$4,832	\$ 330	7 %	\$695	\$679	\$ 16	2 %	13%	14%	(1 )

The RFG and NRT segment numbers noted above do not reflect the impact of intercompany royalties and (a) marketing fees paid by NRT to RFG of \$311 million and \$293 million for the years ended December 31, 2017 and 2016, respectively.

(b) NRT Operating EBITDA includes \$22 million and \$8 million of equity earnings from PHH Home Loans for the years ended December 31, 2017 and 2016, respectively.

**Real Estate Franchise Services (RFG)**

Revenues increased \$49 million to \$830 million and Operating EBITDA increased \$40 million to \$560 million for the year ended December 31, 2017 compared with 2016.

The increase in revenue was driven by a \$21 million increase in third-party domestic franchisee royalty revenue primarily due to a 1% increase in the number of homesale transactions and a 6% increase in the average homesale price, partially offset by a \$2 million increase in non-standard incentive amortization. The increase in revenue was also due to a \$17 million increase in royalties received from NRT as a result of volume increases at NRT, a \$4 million increase in international revenues and a \$5 million increase in other revenue primarily due to marketing-related activities and brand conferences and franchisee events. Brand marketing fund revenue increased \$4 million and related expense increased \$5 million, primarily due to the level of advertising spending during the year ended December 31, 2017 compared with 2016.

The intercompany royalties received from NRT of \$299 million and \$282 million during the years ended December 31, 2017 and 2016, respectively, are eliminated in consolidation against the same expense reflected in NRT's segment results. See "Company Owned Real Estate Brokerage Services" for a discussion of the drivers related to intercompany royalties paid to RFG.

The \$40 million increase in Operating EBITDA was principally due to the \$49 million increase in revenues discussed above, partially offset by a \$5 million increase in brand marketing fund expense discussed above and a \$3 million increase in expenses related to the brand conferences and franchisee events.

**Company Owned Real Estate Brokerage Services (NRT)**

Revenues increased \$299 million to \$4,643 million and Operating EBITDA declined \$24 million to \$135 million for the year ended December 31, 2017 compared with 2016.

The revenue increase of \$299 million was comprised of a \$229 million increase in commission income earned on homesale transactions by our existing brokerage operations and a \$70 million increase in commission income earned from acquisitions. The revenue increase was driven by a 3% increase in the number of homesale transactions and a 5% increase in the average price of homes, partially offset by a 2 basis points decrease in the average broker commission rate. We believe our positive revenue growth is attributable to the recruiting and organic growth focus by NRT management as well

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as improvement in the high end of the housing market. In addition, homesale price is continuing to increase due to continued constrained inventory levels across the lower and mid price points in the markets served by NRT.

Operating EBITDA decreased \$24 million primarily due to:

a \$285 million increase in commission expenses paid to independent sales agents from \$2,945 million for the year ended December 31, 2016 to \$3,230 million for the year ended December 31, 2017. The increase in commission expense is due to an increase of \$241 million by our existing brokerage operations as a result of the impact of initiatives focused on growing and retaining our productive independent sales agent base and higher homesale transaction volume, as well as a \$44 million increase related to acquisitions;

a \$19 million increase in other costs including occupancy costs of which \$7 million related to acquisitions;

a \$17 million increase in royalties paid to RFG from \$282 million in 2016 to \$299 million in 2017;

a \$10 million increase in marketing expenses of which \$3 million related to acquisitions; and

a \$4 million increase in employee-related costs due to a \$12 million increase attributable to acquisitions offset by an \$8 million decrease due primarily due to lower incentive accruals.

These Operating EBITDA decreases were partially offset by:

a \$299 million increase in revenues discussed above; and

a \$14 million increase in earnings for our equity method investment in PHH Home Loans for the year ended December 31, 2017 compared with 2016 as a result of \$35 million of earnings from the sale of PHH Home Loans' assets to Guaranteed Rate Affinity, partially offset by \$7 million of exit costs. In addition, there was a \$14 million decrease in earnings due to lower operating results as a result of lower origination volume, compressed industry margins and lower results due to the level of organizational change associated with the transition of the operations to Guaranteed Rate Affinity.

Relocation Services (Cartus)

Revenues decreased \$23 million to \$382 million and Operating EBITDA decreased \$15 million to \$85 million for the year ended December 31, 2017 compared with 2016.

Revenues decreased \$23 million primarily as a result of a \$13 million decrease in international revenue as an increasingly higher percentage of clients are reducing their global relocation activity, as well as an \$11 million decrease in other revenue due primarily to lower volume.

Operating EBITDA decreased \$15 million primarily as a result of the \$23 million decrease in revenues discussed above and a \$4 million net negative impact from foreign currency exchange rates, partially offset by an \$8 million decrease in employee related costs and a \$2 million net decrease in other operating expenses as a result of lower volume.

Title and Settlement Services (TRG)

Revenues decreased \$3 million to \$570 million and Operating EBITDA decreased \$4 million to \$59 million for the year ended December 31, 2017 compared with 2016.

The decrease in revenues was driven by a \$20 million decrease in refinance revenue and a \$10 million decrease in underwriter revenue due to an overall decrease in activity in the refinance market in 2017, offset by a \$27 million increase in resale revenue of which \$16 million was related to acquisitions.

Operating EBITDA decreased \$4 million as a result of a \$9 million increase in employee-related costs primarily related to acquisitions, a \$5 million decrease in earnings from equity investments primarily related to costs associated with the start up of operations of Guaranteed Rate Affinity, a \$3 million increase in other costs and the \$3 million decrease in revenues discussed above. These Operating EBITDA decreases were partially offset by a \$13 million decrease in variable operating costs primarily due to lower refinancing and underwriter volume and \$2 million related to the reversal of a legal reserve in 2017.

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## FINANCIAL CONDITION, LIQUIDITY AND CAPITAL RESOURCES

## Financial Condition

	December 31, 2018	December 31, 2017	Change
Total assets	\$ 7,290	\$ 7,337	\$(47 )
Total liabilities	4,975	4,715	260
Total equity	2,315	2,622	(307 )

For the year ended December 31, 2018, total assets decreased \$47 million primarily due to a \$97 million net decrease in franchise agreements and other amortizable intangible assets primarily due to amortization and a \$26 million decrease in other current assets, partially offset by a \$54 million increase in other non-current assets primarily due to the adjustment to prepaid expenses as a result of the adoption of the new revenue standard related to commissions paid to Realogy franchise sales employees, an increase in interest rate swaps, an increase in long-term investments and an increase in deferred financing costs related to the debt transactions that occurred during the first quarter of 2018, and a \$15 million increase in property and equipment.

Total liabilities increased \$260 million due to a \$200 million increase in corporate debt primarily due to additional borrowings under the Revolving Credit Facility, a \$62 million increase in deferred tax liabilities, a \$47 million increase in other non-current liabilities primarily due to deferred income for area development fees for international transactions as a result of the adoption of the new revenue standard and a \$37 million increase in securitization obligations. These increases were partially offset by a \$77 million decrease in accrued expenses and other current liabilities, primarily due to lower employee-related accruals and \$23 million in payments of contingent consideration. Total equity decreased \$307 million primarily due to a \$416 million decrease in additional paid in capital, related to the Company's repurchase of \$402 million of common stock and \$45 million of dividend payments, partially offset by stock-based compensation activity of \$31 million. The decrease in total equity was partially offset by a \$124 million increase which consists of net income of \$137 million for the year ended December 31, 2018, partially offset by \$13 million due to the cumulative impact of adopting new accounting standards.

## Liquidity and Capital Resources

Our primary liquidity needs have been to service our debt and finance our working capital and capital expenditures and to acquire stock under our share repurchase program and pay dividends, which we have historically satisfied with cash flows from operations and funds available under our Revolving Credit Facility and securitization facilities. In February 2018, the Company increased the borrowing capacity under its Revolving Credit Facility from \$1,050 million to \$1,400 million and extended the maturities of the Revolving Credit Facility, Term Loan A and Term Loan B.

On February 15, 2019, we redeemed all of our outstanding \$450 million 4.50% Senior Notes due in April 2019. We utilized borrowings under our Revolving Credit Facility to redeem the 4.50% Senior Notes and plan to refinance on a long-term basis all or a portion of the funds used to redeem the 4.50% Senior Notes, subject to market conditions. As of February 22, 2019, the Company had \$880 million of available capacity under the Revolving Credit Facility.

We may use future cash flow to, among other things, reduce indebtedness, acquire stock under our share repurchase program, pay dividends and enter into strategic relationships. During the first half of 2019, we expect to prioritize the reduction of indebtedness and investing in the business over other potential uses of cash.

In February 2019, the Company's Board of Directors authorized a new share repurchase program of up to \$175 million of the Company's common stock, which was incremental to the remaining capacity authorized under the February 2018 share repurchase program. Repurchases under these programs may be made at management's discretion from time to time on the open market, pursuant to Rule 10b5-1 trading plans or privately negotiated transactions. The size and timing of these repurchases will depend on price, market and economic conditions, legal and contractual requirements and other factors. The repurchase programs have no time limit and may be suspended or discontinued at any time.

As of December 31, 2018, the Company has repurchased and retired 34.4 million shares of common stock for an aggregate of \$876 million under the share repurchase programs at a weighted average market price of \$25.50 per share. As of December 31, 2018, \$49 million remained available for repurchase under the February 2018 share repurchase program.

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During the period January 1, 2019 to February 22, 2019, we repurchased an additional 1.2 million shares under the plan at a weighted average market price of \$17.21 per share. Giving effect to these repurchases, we had approximately \$29 million of remaining capacity authorized under the February 2018 share repurchase program as of February 22, 2019.

Beginning in August 2016, we initiated and paid a quarterly cash dividend of \$0.09 per share and paid \$0.09 per share cash dividends in every subsequent quarter. In 2018, we returned \$45 million to stockholders through dividend payments. The declaration and payment of any future dividend will be subject to the discretion of the Board of Directors and will depend on a variety of factors, including the Company's financial condition and results of operations, contractual restrictions (including restrictive covenants contained in the Company's credit agreements, and the indentures governing the Company's outstanding debt securities), capital requirements and other factors that the Board of Directors deems relevant.

We may also from time to time seek to repurchase our outstanding notes through tender offers, open market purchases, privately negotiated transactions or otherwise. Such repurchases, if any, will depend on prevailing market conditions, our liquidity requirements, contractual restrictions and other factors.

If the residential real estate market or the economy as a whole does not improve or continues to weaken, our business, financial condition and liquidity may be materially adversely affected, including our ability to access capital and grow our business.

Historically, operating results and revenues for all of our businesses have been strongest in the second and third quarters of the calendar year. A significant portion of the expenses we incur in our real estate brokerage operations are related to marketing activities and commissions and therefore are variable. However, many of our other expenses, such as interest payments, facilities costs and certain personnel-related costs, are fixed and cannot be reduced during the seasonal fluctuations in the business. Consequently, our debt balances are generally at their highest levels at or around the end of the first quarter of every year.

Our liquidity position continues to be impacted by our remaining interest expense and would be adversely impacted by stagnation or a downturn of the residential real estate market or a significant increase in LIBOR or ABR.

We will continue to evaluate potential refinancing and financing transactions. There can be no assurance as to which, if any, of these alternatives we may pursue as the choice of any alternative will depend upon numerous factors such as market conditions, our financial performance and the limitations applicable to such transactions under our existing financing agreements and the consents we may need to obtain under the relevant documents. There can be no assurance that financing will be available to us on acceptable terms or at all.

## Cash Flows

Year ended December 31, 2018 vs. Year ended December 31, 2017

At December 31, 2018, we had \$238 million of cash, cash equivalents and restricted cash, an increase of \$4 million compared to the balance of \$234 million at December 31, 2017. The following table summarizes our cash flows for the years ended December 31, 2018 and 2017:

	Year Ended December 31, 2018 2017 Change		
Cash provided by (used in):			
Operating activities	\$394	\$667	\$(273)
Investing activities	(91)	(146)	55
Financing activities	(297)	(570)	273
Effects of change in exchange rates on cash, cash equivalents and restricted cash	(2)	2	(4)
Net change in cash, cash equivalents and restricted cash	\$4	\$(47)	\$51

For the year ended December 31, 2018, \$273 million less cash was provided by operating activities compared to the same period in 2017. The change was principally due to \$148 million less cash provided by operations, \$80 million more cash used for accounts payable, accrued expenses and other liabilities, \$49 million less cash received as

dividends from unconsolidated entities primarily related to PHH Home Loans in 2017 and \$24 million less cash provided by the net change in relocation and trade receivables, partially offset by \$19 million less cash used for other assets and \$9 million less cash used for other operating activities.



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For the year ended December 31, 2018, we used \$55 million less cash for investing activities compared to the same period in 2017 primarily due to \$40 million less cash used for investments in unconsolidated entities primarily related to Guaranteed Rate Affinity, \$17 million less cash used for acquisition related payments and \$8 million of net cash proceeds received from the dissolution of our interest in PHH Home Loans, LLC, partially offset by \$6 million more cash used for property and equipment additions and \$4 million less cash provided by other investing activities. For the year ended December 31, 2018, \$297 million of cash was used in financing activities compared to \$570 million of cash used during the same period in 2017. For the year ended December 31, 2018, \$297 million of cash was used for:

\$402 million for the repurchase of our common stock;

\$45 million of dividend payments;

\$29 million of other financing payments primarily related to capital leases;

\$25 million of quarterly amortization payments on the term loan facilities;

\$22 million for payments of contingent consideration;

\$10 million of tax payments related to net share settlement for stock-based compensation; and

\$3 million for cash paid as a result of the refinancing transactions in February 2018 related to \$16 million of debt issuance costs and \$4 million repayment of borrowings under the Term Loan B Facility, partially offset by \$17 million of proceeds received under the Term Loan A Facility.

partially offset by,

\$200 million of additional borrowings under the Revolving Credit Facility; and

\$38 million net increase in securitization borrowings.

For the year ended December 31, 2017, \$570 million of cash was used for:

\$280 million for the repurchase of our common stock;

\$130 million net repayment of borrowings under the Revolving Credit Facility;

\$49 million of dividend payments;

\$42 million of quarterly amortization payments on the term loan facilities;

\$26 million of other financing payments partially related to capital leases and interest rate swaps;

\$22 million for payments of contingent consideration;

\$11 million net decrease in securitization borrowings;

\$11 million of tax payments related to net share settlement for stock-based compensation; and

\$6 million of debt issuance costs;

partially offset by,

\$8 million proceeds from exercise of stock options.

Year ended December 31, 2017 vs. Year ended December 31, 2016

At December 31, 2017, we had \$234 million of cash, cash equivalents and restricted cash, a decrease of \$47 million compared to the balance of \$281 million at December 31, 2016. The following table summarizes our cash flows for the years ended December 31, 2017 and 2016:

	Year Ended December			
	31,	2017	2016	Change
Cash provided by (used in):				
Operating activities	\$667	\$586	\$81	
Investing activities	(146)	(191)	45	
Financing activities	(570)	(534)	(36)	
Effects of change in exchange rates on cash, cash equivalents and restricted cash	2	(3)	5	
Net change in cash, cash equivalents and restricted cash	\$(47)	\$(142)	\$95	

For the year ended December 31, 2017, \$81 million more cash was provided by operating activities compared to the same period in 2016. The change was principally due to \$41 million more cash dividends received from PHH Home

Loans,

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\$26 million less cash used for accounts payable, accrued expenses and other liabilities and \$19 million of additional cash provided by operating results.

For the year ended December 31, 2017, we used \$45 million less cash for investing activities compared to the same period in 2016 primarily due to \$77 million less cash used for acquisition related payments, \$24 million more cash provided by other investing activities and \$11 million more cash received from PHH Home Loans, partially offset by \$40 million of cash used for our investment in Guaranteed Rate Affinity and \$12 million more cash used for property and equipment additions.

For the year ended December 31, 2017, \$570 million of cash was used in financing activities compared to \$534 million of cash used during the same period in 2016. For the year ended December 31, 2017, \$570 million of cash was used for:

\$280 million for the repurchase of our common stock;

\$130 million net repayment of borrowings under the Revolving Credit Facility;

\$49 million of dividend payments;

\$42 million of quarterly amortization payments on the term loan facilities;

\$26 million of other financing payments partially related to capital leases and interest rate swaps;

\$22 million for payments of contingent consideration;

\$11 million net decrease in securitization borrowings;

\$11 million of tax payments related to net share settlement for stock-based compensation; and

\$6 million of debt issuance costs;

partially offset by,

\$8 million proceeds from exercise of stock options.

For the year ended December 31, 2016, \$534 million of cash was used for:

the repayment of \$758 million to reduce the Term Loan B facility;

the repayment of \$500 million to retire 3.375% Senior Notes at maturity;

\$195 million for the repurchase of our common stock;

\$41 million of quarterly amortization payments on the term loan facilities;

\$40 million net decrease in securitization borrowings;

\$34 million of other financing payments partially related to capital leases and interest rate swaps;

\$26 million of dividend payments;

\$25 million for payments of contingent consideration;

\$16 million of debt issuance costs; and

\$6 million of tax payments related to net share settlement for stock-based compensation;

partially offset by,

\$750 million of proceeds from the issuance of \$250 million of 5.25% Senior Notes and \$500 million of 4.875% Senior Notes; and

\$355 million proceeds from issuance of the Term Loan A-1 facility.

Financial Obligations

Indebtedness Table

See Note 8, "Short and Long-Term Debt", to the consolidated financial statements, for information on the Company's indebtedness as of December 31, 2018.

Redemption of \$450 million of 4.50% Senior Notes

On February 15, 2019, we redeemed all of our outstanding \$450 million 4.50% Senior Notes due in April 2019. We utilized borrowings under our Revolving Credit Facility to redeem the 4.50% Senior Notes and plan to refinance on a long-term basis all or a portion of the funds used to redeem the 4.50% Senior Notes, subject to market conditions.



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LIBOR Transition

In July 2017, the Financial Conduct Authority, the UK regulator responsible for the oversight of LIBOR, announced that it would no longer require banks to participate in the LIBOR submission process and would cease oversight over the rate after the end of 2021. Various industry groups continue to discuss replacement benchmark rates, the process for amending existing LIBOR-based contracts, and the potential economic impacts of different alternatives. For example, in the U.S., a proposed replacement benchmark rate is the Secured Overnight Funding Rate (SOFR), which is an overnight rate based on secured financing.

Covenants under the Senior Secured Credit Facility, Term Loan A Facility and Indentures

The Senior Secured Credit Facility, Term Loan A Facility, the Unsecured Letter of Credit Facility and the indentures governing the Unsecured Notes contain various covenants that limit (subject to certain exceptions) Realogy Group's ability to, among other things:

- incur or guarantee additional debt or issue disqualified stock or preferred stock;
- pay dividends or make distributions to Realogy Group's stockholders, including Realogy Holdings;
- repurchase or redeem capital stock;
- make loans, investments or acquisitions;
- incur restrictions on the ability of certain of Realogy Group's subsidiaries to pay dividends or to make other payments to Realogy Group;
- enter into transactions with affiliates;
- create liens;
- merge or consolidate with other companies or transfer all or substantially all of Realogy Group's and its material subsidiaries' assets;
- transfer or sell assets, including capital stock of subsidiaries; and
- prepay, redeem or repurchase subordinated indebtedness.

As a result of the covenants to which we remain subject, we are limited in the manner in which we conduct our business and we may be unable to engage in favorable business activities or finance future operations or capital needs. In addition, the Senior Secured Credit Facility and Term Loan A Facility require us to maintain a senior secured leverage ratio.

The senior secured leverage ratio is tested quarterly and may not exceed 4.75 to 1.00. The senior secured leverage ratio is measured by dividing Realogy Group's total senior secured net debt by the trailing twelve-month EBITDA calculated on a Pro Forma Basis, as those terms are defined in the credit agreement governing the Senior Secured Credit Facility. Total senior secured net debt does not include unsecured indebtedness, including the Unsecured Notes, or the securitization obligations. EBITDA calculated on a Pro Forma Basis, as defined in the credit agreement governing the Senior Secured Credit Facility, includes adjustments to EBITDA for restructuring costs, former parent legacy cost (benefit) items, net, loss on the early extinguishment of debt, non-cash charges and incremental securitization interest costs, as well as pro forma cost savings for restructuring initiatives, the pro forma effect of business optimization initiatives and the pro forma effect of acquisitions and new franchisees, in each case calculated as of the beginning of the twelve-month period. The Company was in compliance with the senior secured leverage ratio covenant at December 31, 2018.

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A reconciliation of net income attributable to Realogy Group to Operating EBITDA and EBITDA calculated on a Pro Forma Basis, as those terms are defined in the credit agreement governing the Senior Secured Credit Facility, for the twelve months ended December 31, 2018 are set forth in the following table:

	For the Year Ended December 31, 2018
Net income attributable to Realogy Group (a)	\$ 137
Income tax expense	65
Income before income taxes	202
Depreciation and amortization (b)	197
Interest expense, net	190
Restructuring costs, net	58
Former parent legacy cost, net	4
Loss on the early extinguishment of debt	7
Operating EBITDA (c)	658
Bank covenant adjustments:	
Pro forma effect of business optimization initiatives (d)	16
Non-cash charges (e)	40
Pro forma effect of acquisitions and new franchisees (f)	4
Incremental securitization interest costs (g)	3
EBITDA calculated on a Pro Forma Basis (as defined in the credit agreement governing the Senior Secured Credit Facility)	\$ 721
Total senior secured net debt (h)	\$ 1,987
Senior secured leverage ratio (i)	2.76 x

Net income attributable to Realogy consists of: (i) loss of \$67 million for the first quarter of 2018, (ii) income of (a) \$123 million for the second quarter of 2018, (iii) income of \$103 million for the third quarter of 2018 and (iv) loss of \$22 million for the fourth quarter of 2018.

Depreciation and amortization for the year ended December 31, 2018 includes \$2 million of amortization expense (b) related to Guaranteed Rate Affinity's purchase accounting included in the "Equity in losses (earnings) of unconsolidated entities" line on the Consolidated Statement of Operations.

Operating EBITDA consists of: (i) \$34 million for the first quarter of 2018, (ii) \$276 million for the second quarter (c) of 2018, (iii) \$242 million for the third quarter of 2018 and (iv) \$106 million for the fourth quarter of 2018.

(d) Represents the twelve-month pro forma effect of business optimization initiatives.

(e) Represents the elimination of non-cash expenses including \$40 million of stock-based compensation expense for the twelve months ended December 31, 2018.

(f) Represents the estimated impact of acquisitions and franchise sales activity, net of brokerages that exited our franchise system as if these changes had occurred on January 1, 2018. Franchisee sales activity is comprised of new franchise agreements as well as growth through acquisitions and independent sales agent recruitment by existing franchisees with our assistance. We have made a number of assumptions in calculating such estimates and there can be no assurance that we would have generated the projected levels of Operating EBITDA had we owned the acquired entities or entered into the franchise contracts as of January 1, 2018.

(g) Incremental borrowing costs incurred as a result of the securitization facilities refinancing for the twelve months ended December 31, 2018.

(h)

Represents total borrowings under the senior secured credit facilities and borrowings secured by a first priority lien on our assets of \$2,075 million plus \$33 million of capital lease obligations less \$121 million of readily available cash as of December 31, 2018. Pursuant to the terms of our senior secured credit facilities, total senior secured net debt does not include our securitization obligations or unsecured indebtedness, including the Unsecured Notes.

(i) After giving effect to the redemption of the 4.50% Senior Notes on February 15, 2019 using borrowings under the Revolving Credit Facility, the senior secured leverage ratio would have been 3.40 to 1.00 as of December 31, 2018. See Note 8, "Short and Long-Term Debt—Senior Secured Credit Facility" and "Short and Long-Term Debt—Term Loan A Facility" to the Consolidated Financial Statements for additional information.

#### Non-GAAP Financial Measures

The SEC has adopted rules to regulate the use in filings with the SEC and in public disclosures of "non-GAAP financial measures," such as Operating EBITDA. These measures are derived on the basis of methodologies other than in accordance with GAAP.

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Operating EBITDA is defined by us as net income (loss) before depreciation and amortization, interest expense, net (other than relocation services interest for securitization assets and securitization obligations), income taxes and other items that are not core to the operating activities of the Company such as restructuring charges, former parent legacy items, losses on the early extinguishment of debt, asset impairments, gains or losses on discontinued operations and gains or losses on the sale of investments or other assets. Operating EBITDA is our primary non-GAAP measure. We present Operating EBITDA because we believe it is useful as a supplemental measure in evaluating the performance of our operating businesses and provides greater transparency into our results of operations. Our management, including our chief operating decision maker, uses Operating EBITDA as a factor in evaluating the performance of our business. Operating EBITDA should not be considered in isolation or as a substitute for net income or other statement of operations data prepared in accordance with GAAP.

We believe Operating EBITDA facilitates company-to-company operating performance comparisons by backing out potential differences caused by variations in capital structures (affecting net interest expense), taxation, the age and book depreciation of facilities (affecting relative depreciation expense) and the amortization of intangibles, as well as other items that are not core to the operating activities of the Company such as restructuring charges, losses on the early extinguishment of debt, former parent legacy items, asset impairments, gains or losses on discontinued operations and gains or losses on the sale of investments or other assets, which may vary for different companies for reasons unrelated to operating performance. We further believe that Operating EBITDA is frequently used by securities analysts, investors and other interested parties in their evaluation of companies, many of which present an Operating EBITDA measure when reporting their results.

Operating EBITDA has limitations as an analytical tool, and you should not consider Operating EBITDA either in isolation or as a substitute for analyzing our results as reported under GAAP. Some of these limitations are:

- this measure does not reflect changes in, or cash required for, our working capital needs;
- this measure does not reflect our interest expense (except for interest related to our securitization obligations), or the cash requirements necessary to service interest or principal payments on our debt;
- this measure does not reflect our income tax expense or the cash requirements to pay our taxes;
- this measure does not reflect historical cash expenditures or future requirements for capital expenditures or contractual commitments;
- although depreciation and amortization are non-cash charges, the assets being depreciated and amortized will often require replacement in the future, and this measure does not reflect any cash requirements for such replacements; and
- other companies may calculate this measure differently so they may not be comparable.

**Contractual Obligations**

The following table summarizes our future contractual obligations as of December 31, 2018:

	2019	2020	2021	2022	2023	Thereafter	Total
Revolving Credit Facility (a) (b)	\$—	\$—	\$—	\$—	\$270	\$—	\$270
Term Loan B (c)	11	11	11	11	11	1,014	1,069
Term Loan A (d)	18	33	51	70	564	—	736
4.50% Senior Notes (b)	450	—	—	—	—	—	450
5.25% Senior Notes	—	—	550	—	—	—	550
4.875% Senior Notes	—	—	—	—	500	—	500
Interest payments on long-term debt (e)	167	155	155	122	67	58	724
Securitized obligations (f)	231	—	—	—	—	—	231
Operating leases (g)	165	144	120	95	79	196	799
Capital leases (including imputed interest)	13	10	7	4	1	—	35
Purchase commitments (h)	71	25	20	9	9	226	360
Total (i)(j)	\$1,126	\$378	\$914	\$311	\$1,501	\$1,494	\$5,724

(a)



The Revolving Credit Facility expires in February 2023; however outstanding borrowings under this facility are classified on the balance sheet as current due to the revolving nature of the facility.

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On February 15, 2019, we redeemed all of our outstanding \$450 million 4.50% Senior Notes due in April 2019.

- (b) We utilized borrowings under our Revolving Credit Facility to redeem the 4.50% Senior Notes and plan to refinance on a long-term basis all or a portion of the funds used to redeem the 4.50% Senior Notes, subject to market conditions. See Note 19, "Subsequent Events" for further details.  
The Company's Term Loan B has quarterly amortization payments totaling 1% per annum of the \$1,080 million original principal amount of the Term Loan B issued under the Amended and Restated Credit Agreement with the balance payable in February 2025.
- (c) The Company's Term Loan A has quarterly amortization payments, which commenced June 30, 2018, totaling per annum 2.5%, 2.5%, 5.0%, 7.5% and 10.0% of the \$750 million original principal amount of the Term Loan A with the balance payable in February 2023.
- (d) Interest payments are based on applicable interest rates in effect at December 31, 2018 and include the impact of derivative instruments designed to fix the interest rate of a portion of the Company's variable rate debt.
- (e) The Apple Ridge securitization facility expires in June 2019 and the Cartus Financing Limited agreements expire in August 2019.
- (f) The operating lease amounts included in the above table are not discounted and do not include variable costs such as maintenance, insurance and real estate taxes.  
Purchase commitments include a minimum licensing fee that the Company is required to pay to Sotheby's from 2009 through 2054. The annual minimum licensing fee is approximately \$2 million. Purchase commitments also include a minimum licensing fee to be paid to Meredith from 2009 through 2058 for the licensing of the Better Homes and Gardens Real Estate brand. The annual minimum fee was \$4 million in 2018 and will generally remain the same thereafter.
- (g) The contractual obligations table does not include other non-current liabilities such as pension liabilities of \$36 million and unrecognized tax benefits of \$20 million as the Company is not able to estimate the year in which these liabilities could be paid.
- (h) The contractual obligations table does not include non-standard incentives offered to certain franchisees which are paid at certain points during the franchise agreement period provided the franchisee maintains a certain level of annual gross commission income and the franchisee is in compliance with the terms of the franchise agreement at the time of payment. If current annual gross commission income levels are maintained by our franchisees, we would pay a total of \$6 million over the next two years.

**Critical Accounting Policies**

The preparation of our consolidated financial statements in accordance with generally accepted accounting principles is based on the selection and application of accounting policies that require us to make significant estimates and assumptions about the effects of matters that are inherently uncertain. Several of the estimates and assumptions we are required to make relate to matters that are inherently uncertain as they pertain to future events. We consider the accounting policies discussed below to be critical to the understanding of our financial statements and involve subjective and complex judgments that could potentially affect reported results. Actual results could differ from our estimates and assumptions and any such differences could be material to our consolidated financial statements.

**Impairment of goodwill and other indefinite-lived intangible assets**

Goodwill represents the excess of acquisition costs over the fair value of the net tangible assets and identifiable intangible assets acquired in a business combination. Indefinite-lived intangible assets primarily consist of trademarks acquired in business combinations. Goodwill and indefinite-lived assets are not amortized, but are subject to impairment testing. The aggregate carrying values of our goodwill and other indefinite-lived intangible assets were \$3,712 million and \$767 million, respectively, at December 31, 2018 and are subject to impairment testing annually as of October 1, or whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable. This testing compares carrying values to fair values and, when appropriate, the carrying value is reduced to fair value. In testing goodwill, the fair value of our reporting units is estimated using a discounted cash flow approach utilizing long-term cash flow forecasts and our annual operating plans adjusted for terminal value

assumptions.

We determine the fair value of our reporting units utilizing our best estimate of future revenues, operating expenses including commission expense, cash flows, market and general economic conditions as well as assumptions that we believe marketplace participants would utilize including discount rates, cost of capital, trademark royalty rates, and long-term growth rates. The trademark royalty rate was determined by reviewing similar trademark agreements with third parties. Although we believe our assumptions are reasonable, actual results may vary significantly. These impairment tests involve the use of accounting estimates and assumptions, changes in which could materially impact our financial condition or operating performance if actual results differ from such estimates and assumptions. To address this uncertainty, we perform sensitivity analysis on key estimates and assumptions.

Based upon the impairment analysis performed in the fourth quarter of 2018, there was no impairment of goodwill or other indefinite-lived intangible assets for 2018. However, significant negative industry or economic trends, disruptions to our business, unexpected significant changes or planned changes in use of the assets, divestitures and market capitalization

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declines may have a negative effect on the fair values. Management evaluated the effect of lowering the estimated fair value for each of the reporting units by 10% and determined that no impairment of goodwill or other indefinite-lived intangible assets would have been recognized under this evaluation.

### Common stock valuation

On an annual basis, we grant stock-based awards to certain senior management, employees and directors. These awards are measured based on the fair value on the grant date. The fair value of restricted stock, restricted stock units and performance share units without a market condition is equal to the closing sale price of the Company's common stock on the date of grant. The fair value of options is estimated on the date of grant using the Black-Scholes option-pricing model and the fair value of performance share units with market conditions is estimated on the date of grant using the Monte Carlo Simulation method. Expense for stock-based awards is recognized over the service period based on the vesting requirements, or when requisite performance metrics or milestones are achieved, and forfeitures are recognized as they occur. Determining the fair value of stock-based awards at the grant date requires considerable judgment, including estimating expected volatility, expected term and risk-free rate.

Our expected volatility is based on the average volatility rates of the Company and similar actively traded companies since we only have trading history as a public company since October 2012. The expected term is calculated based on the simplified method and is estimated to be 6.25 years for time vesting stock options. The risk-free rate is derived from the U.S. Treasury yield curve in effect at the time of the grant using the estimated grant holding period. If factors change and we employ different assumptions, the fair value of future awards and resulting stock-based compensation expense may differ significantly from what we have estimated historically.

### Income taxes

Deferred tax assets and liabilities are determined based on the difference between the financial statements and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Our provision for income taxes is based on domestic and international statutory income tax rates in the jurisdictions in which we operate. Significant judgment is required in determining income tax provisions as well as deferred tax asset and liability balances, including the estimation of valuation allowances and the evaluation of tax positions.

Net deferred tax assets and liabilities are primarily comprised of temporary differences, net operating loss carryforwards and tax credit carryforwards that are available to reduce taxable income in future periods. The determination of the amount of valuation allowance to be provided on deferred tax assets involves estimates regarding (1) the timing and amount of the reversal of taxable temporary differences, (2) expected future taxable income, and (3) the impact of tax planning strategies.

Significant judgment is required in determining income tax provisions and in evaluating tax positions. We establish additional reserves for income taxes when, despite the belief that tax positions are fully supportable, there remain certain positions that do not meet the minimum recognition threshold. The approach for evaluating certain and uncertain tax positions is defined by the authoritative guidance and this guidance determines when a tax position is more likely than not to be sustained upon examination by the applicable taxing authority. In the normal course of business, the Company and its subsidiaries are examined by various federal, state and foreign tax authorities. We regularly assess the potential outcomes of these examinations and any future examinations for the current or prior years in determining the adequacy of our provision for income taxes. We continually assess the likelihood and amount of potential adjustments and adjust the income tax provision, the current tax liability and deferred taxes in the period in which the facts that give rise to a revision become known.

### Recently Issued Accounting Pronouncements

See Note 2 of the Notes to the Consolidated Financial Statements for a discussion of recently issued accounting pronouncements.

### Item 7A. Quantitative and Qualitative Disclosures about Market Risks.

We are exposed to market risk from changes in interest rates primarily through our senior secured debt. At December 31, 2018, our primary interest rate exposure was to interest rate fluctuations, specifically LIBOR, due to its

impact on our variable rate borrowings of our Revolving Credit Facility and Term Loan B under the Senior Secured Credit Facility and the Term Loan A Facility. Given that our borrowings under the Senior Secured Credit Facility and Term Loan A Facility are generally based upon LIBOR, this rate will be the Company's primary market risk exposure for the foreseeable

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future. We do not have significant exposure to foreign currency risk nor do we expect to have significant exposure to foreign currency risk in the foreseeable future.

We assess our market risk based on changes in interest rates utilizing a sensitivity analysis. The sensitivity analysis measures the potential impact on earnings, fair values and cash flows based on a hypothetical change (increase and decrease) in interest rates. We exclude the fair values of relocation receivables and advances and securitization borrowings from our sensitivity analysis because we believe the interest rate risk on these assets and liabilities is mitigated as the rate we earn on relocation receivables and advances and the rate we incur on our securitization borrowings are based on similar variable indices.

At December 31, 2018, we had variable interest rate long-term debt outstanding under our Senior Secured Credit Facility and Term Loan A Facility of \$2,075 million, which excludes \$231 million of securitization obligations. The weighted average interest rate on the outstanding amounts under our Senior Secured Credit Facility and Term Loan A Facility at December 31, 2018 was 4.75%. The interest rate with respect to the Term Loan B is based on adjusted LIBOR plus 2.25% (with a LIBOR floor of 0.75%). The interest rates with respect to the Revolving Credit Facility and term loans under the Term Loan A Facility are based on adjusted LIBOR plus an additional margin subject to adjustment based on the current senior secured leverage ratio. Based on the December 31, 2018 senior secured leverage ratio, the LIBOR margin was 2.25%. At December 31, 2018 the one-month LIBOR rate was 2.50%; therefore, we have estimated that a 0.25% increase in LIBOR would have a \$5 million impact on our annual interest expense.

As of December 31, 2018, we had interest rate swaps with a notional value of \$1,600 million to manage a portion of our exposure to changes in interest rates associated with our \$2,075 million of variable rate borrowings. Our interest rate swaps were as follows:

Notional Value (in millions)	Commencement Date	Expiration Date
\$600	August 2015	August 2020
\$450	November 2017	November 2022
\$400	August 2020	August 2025
\$150	November 2022	November 2027

The swaps help protect our outstanding variable rate borrowings from future interest rate volatility. The fixed interest rates on the swaps range from 2.07% to 3.11%. The Company had an asset of \$6 million and a liability of \$16 million for the fair value of the interest rate swaps at December 31, 2018, and a liability of \$13 million at December 31, 2017. The fair value of these interest rate swaps is subject to movements in LIBOR and will fluctuate in future periods. We have estimated that a 0.25% increase in the LIBOR yield curve would increase the fair value of our interest rate swaps by \$13 million and would decrease interest expense. While these results may be used as a benchmark, they should not be viewed as a forecast of future results.

Item 8. Financial Statements and Supplementary Data.

See "Index to Financial Statements" on page F-1.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

Not applicable.

Item 9A. Controls and Procedures.

Controls and Procedures for Realogy Holdings Corp.

Realogy Holdings Corp. ("Realogy Holdings") maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed in its filings under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), is recorded, processed, summarized and reported within the periods specified in the rules and forms of the Securities and Exchange Commission. Such information is accumulated and communicated (a) to its management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Realogy Holdings' management, including the Chief Executive Officer and the Chief Financial Officer, recognizes that any set of controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives.



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As of the end of the period covered by this Annual Report on Form 10-K, Realogy Holdings has carried out an evaluation, under the supervision and with the participation of its management, including its Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of its disclosure controls and procedures. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that Realogy Holdings' disclosure controls and procedures are effective at the "reasonable assurance" level.

There has not been any change in Realogy Holdings' internal control over financial reporting during the period covered by this Annual Report on Form 10-K that has materially affected, or is reasonably likely to materially affect, its internal control over financial reporting.

Management's Report on Internal Control Over Financial Reporting for Realogy Holdings Corp.

Realogy Holdings' management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Realogy Holdings' internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Realogy Holdings' internal control over financial reporting includes those policies and procedures that:

- (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of Realogy Holdings' assets;  
provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of Realogy Holdings' management and directors;
- (ii) and  
provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of Realogy Holdings' assets that could have a material effect on the financial statements.
- (iii)

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of Realogy Holdings' internal control over financial reporting as of December 31, 2018. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in its 2013 Internal Control-Integrated Framework. Based on this assessment, management determined that Realogy Holdings maintained effective internal control over financial reporting as of December 31, 2018.

Auditor Report on the Effectiveness of Realogy Holdings Corp.'s Internal Control Over Financial Reporting  
PricewaterhouseCoopers LLP, the independent registered public accounting firm that audited the financial statements included in this Annual Report, has issued an attestation report on the effectiveness of Realogy Holdings' internal control over financial reporting, which is included within their audit opinion on page F-2.

\* \* \*

Controls and Procedures for Realogy Group LLC

Realogy Group LLC ("Realogy Group") maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed in its filings under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), is recorded, processed, summarized and reported within the periods specified in the rules and forms of the Securities and Exchange Commission. Such information is accumulated and communicated to its management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Realogy Group's management, including the Chief Executive Officer and the Chief Financial Officer, recognizes that any set of controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives.

(b)



As of the end of the period covered by this Annual Report on Form 10-K, Realogy Group has carried out an evaluation, under the supervision and with the participation of its management, including its Chief Executive

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Officer and Chief Financial Officer, of the effectiveness of the design and operation of its disclosure controls and procedures. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that Realogy Group's disclosure controls and procedures are effective at the "reasonable assurance" level.

There has not been any change in Realogy Group's internal control over financial reporting during the period (c) covered by this Annual Report on Form 10-K that has materially affected, or is reasonably likely to materially affect, its internal control over financial reporting.

Management's Report on Internal Control Over Financial Reporting for Realogy Group LLC

Realogy Group's management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Realogy Group's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Realogy Group's internal control over financial reporting includes those policies and procedures that:

- (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of Realogy Group's assets;
- (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of Realogy Group's management and directors; and
- (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of Realogy Group's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of Realogy Group's internal control over financial reporting as of December 31, 2018. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in its 2013 Internal Control-Integrated Framework. Based on this assessment, management determined that Realogy Group maintained effective internal control over financial reporting as of December 31, 2018.

Auditor Report on the Effectiveness of Realogy Group LLC's Internal Control Over Financial Reporting  
PricewaterhouseCoopers LLP, the independent registered public accounting firm that audited the financial statements included in this Annual Report, has issued an attestation report on the effectiveness of Realogy Group's internal control over financial reporting, which is included within their audit opinion on page F-4.

Item 9B. Other Information.

Amendment of Bylaws to Adopt Proxy Access.

On February 25, 2019, the Board of Directors (the "Board") of the Company approved the Fifth Amended and Restated Bylaws of the Company (the "Bylaws") to implement a proxy access provision. The Bylaws include a new Section 2.12 in Article II, which permit a stockholder, or a group of up to 20 stockholders, owning 3% or more of the Company's outstanding common stock continuously for at least three years to nominate and include in the Company's proxy materials director candidates constituting up to the greater of 2 nominees or 20% of the Board, subject to the terms and conditions set forth in the Bylaws. Conforming and clean-up amendments were also made to Sections 2.7 (Notice of Stockholder Business and Nominations) and 2.8 (Submission of Questionnaire, Representation and Agreement) of the Bylaws.

Written notice of any nominations pursuant to the new Section 2.12 must be submitted to the Secretary of the Company at the principal executive offices of the Company not less than one-hundred twenty (120) days nor more than one-hundred fifty (150) days prior to the anniversary of the date that the Company first distributed its proxy statement to stockholders for the immediately preceding annual meeting of stockholders. In addition, Section 2.12

includes other requirements that

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nominating stockholders and nominees must satisfy in order for the nominees to be included in the Company's proxy materials.

The foregoing description of the amendments to the Bylaws does not purport to be complete and is qualified in its entirety by reference to the full text of the Bylaws, a copy of which is attached hereto as Exhibit 3.1 and is incorporated herein by reference.

#### Compensatory Arrangements of Certain Officers.

As previously reported by the Company in the Current Report on Form 8-K filed by the Company on November 6, 2018 (the "Form 8-K"), on October 31, 2018, the Compensation Committee of the Board approved the Realogy Holdings Corp. Severance Pay Plan for Executives (the "Severance Plan"), the Realogy Holdings Corp. Change in Control Plan for Executives (the "CIC Plan") (the Severance Plan and the CIC Plan, together, the "Plans") and the Realogy Holdings Corp. Executive Restrictive Covenant Agreement.

The Severance Plan provides for severance protections upon certain terminations of employment not related to a change in control, while the CIC Plan provides for protections for certain terminations in connection with a change in control. Pursuant to the Executive Restrictive Covenant Agreement, participants in the Plans will be subject to a non-compete period of two years and a non-solicitation period of three years following a termination of employment for any reason.

On February 23, 2019, Donald Casey, a named executive officer of the Company, executed an Executive Restrictive Covenant Agreement with the Company and joined the Plans upon the expiration of his Executive Severance Agreement with the Company. He also entered into a letter agreement with the Company memorializing the core terms of his employment which were previously included within his Executive Severance Agreement.

The material terms and conditions of the Severance Plan, CIC Plan and Executive Restrictive Covenant Agreement are summarized in the Form 8-K and are qualified in their entirety by reference to the Severance Plan, the CIC Plan and the form of Executive Restrictive Covenant Agreement, each of which are filed as exhibits to the Form 8-K. Mr. Casey's letter agreement with the Company is filed as exhibit 10.72 of this Annual Report on Form 10-K.

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PART III

Item 10. Directors, Executive Officers and Corporate Governance.

Identification of Directors

The information required by this item is included in the Proxy Statement under the caption "Proposal 1: Election of Directors" and is incorporated by reference to this report.

Identification of Executive Officers

The following provides information regarding individuals who served as executive officers of Realogy Group and Realogy Holdings at February 22, 2019. The age of each individual indicated below is as of February 22, 2019.

Ryan M. Schneider, 49, has served as our Chief Executive Officer and President since December 31, 2017 and as a director since October 20, 2017. From October 23, 2017 until his appointment as our CEO and President, Mr. Schneider served as the Company's President and Chief Operating Officer. Prior to joining the Company, Mr. Schneider served as President, Card of Capital One Financial Corporation ("Capital One"), a financial holding company, from December 2007 to November 2016 where he was responsible for all of Capital One's consumer and small business credit card lines of business in the United States, the United Kingdom and Canada. Mr. Schneider held a variety of other positions within Capital One from December 2001 to December 2007, including Executive Vice President and President, Auto Finance and Executive Vice President, U.S. Card. From November 2016 until April 2017, he served as Senior Advisor to Capital One.

Donald J. Casey, 57, has served as the President and Chief Executive Officer of TRG (formerly known as Cendant Settlement Services Group) since April 2002. From 1995 until April 2002, he served as Senior Vice President, Brands of PHH Mortgage. From 1993 to 1995, Mr. Casey served as Vice President, Government Operations of Cendant Mortgage. From 1989 to 1993, Mr. Casey served as a secondary marketing analyst for PHH Mortgage Services (prior to its acquisition by Cendant).

David L. Gordon, 57, has served as our Executive Vice President and Chief Technology Officer since January 2018. From March 2015 to January 2018, Mr. Gordon served as Executive Vice President, U.S. Chief Technology and Operations Officer for Bank of Montreal (BMO) Financial Group, a diversified financial services provider based in North America. From June 2013 to March 2015, Mr. Gordon served in multiple officer roles at Promontory Financial Group, a global financial services consulting firm and wholly-owned subsidiary of IBM, including Chief Administrative Officer and Chief Technology Officer. For 12 years prior thereto, Mr. Gordon held several leadership positions at Capital One Financial Services, a financial holding company, most recently as Senior Vice President, IT Operations from March 2012 to March 2013.

M. Ryan Gorman, 40, has served as the President and Chief Executive Officer of NRT LLC since January 2018 and as Chief Strategy & Operating Officer of NRT from September 2016 to January 2018. From May 2012 to September 2016, Mr. Gorman served at NRT's Senior Vice President, Strategic Operations and from November 2007 to May 2012 he served as the Company's Head of Strategic Development. From October 2004 to November 2007, Mr. Gorman served as the Head of Strategic Development of TRG (formerly known as Cendant Settlement Services Group). Before joining the Company, he held advisory and principal investment roles with PricewaterhouseCoopers, Credit Suisse and The Blackstone Group.

Timothy B. Gustavson, 51, has, since November 5, 2018, served as our as Interim Chief Financial Officer and Treasurer, in addition to serving as Chief Accounting Officer, Controller and Senior Vice President for Realogy, roles he has held since March 2015. From 2008 until March 2015, Mr. Gustavson served as Realogy's Assistant Corporate Controller and Vice President of Finance. Mr. Gustavson joined Realogy in 2006 as Vice President of External Reporting and prior to Realogy, Mr. Gustavson spent 16 years in public accounting with the KPMG audit practice. Mr. Gustavson is a certified public accountant.

Katrina Helmkamp, 53, has served as the President and Chief Executive Officer of Cartus Corporation since July 2018. Prior to Realogy, Ms. Helmkamp served as Chief Executive Officer of Lenox Corporation, a market leader in quality tabletop and giftware, from November 2016 to June 2018. From 2015 to 2016, she acted as a consultant, primarily working with private equity firms. From 2010 to 2014, she was Chief Executive Officer of SVP Worldwide,

the global leader in consumer sewing machines. From 2007 to 2010, she led teams at Whirlpool Corporation as Vice President, Global Refrigeration, and then Senior Vice President, North America Product. From 2005 to 2007, Ms. Helmkamp held leadership

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roles at ServiceMaster, including as President of Terminix. In addition to her executive experience, she was a partner for six years at The Boston Consulting Group, from 1998 to 2004.

Sunita Holzer, 57, has served as our Executive Vice President and Chief Human Resources Officer ("CHRO") since March 2015. Prior to Realogy, Ms. Holzer served as Executive Vice President and CHRO for Computer Sciences Corporation from 2012 to 2014, where she had oversight of global human resources for 80,000 employees across 60 countries. Ms. Holzer also was Executive Vice President and CHRO at Chubb Insurance from 2003 to 2012. Prior to her tenure at Chubb Insurance, Ms. Holzer held executive HR roles at GE Capital, American Express and American International Group.

John W. Peyton, 51, has served as the Chief Executive Officer of Realogy Franchise Group since April 2017 after serving as Chief Operating Officer and President of Realogy Franchise Group from October 2016. Previously, he served as a senior executive with Starwood Hotels & Resorts Worldwide Inc., a leading hotel and leisure company, for 17 years, most recently as its Chief Marketing Officer from 2014 to September 2016 and as its Senior Vice President of Global Initiatives from 2012 to 2014, where he directed the implementation of key strategic company priorities around the world, including supply chain and revenue management initiatives.

Marilyn J. Wasser, 63, has served as our Executive Vice President, General Counsel and Corporate Secretary since May 10, 2007. From May 2005 until May 2007, Ms. Wasser was Executive Vice President, General Counsel and Corporate Secretary for Telcordia Technologies, a provider of telecommunications software and services. From 1983 until 2005, Ms. Wasser served in several positions of increasing responsibility with AT&T Corporation and AT&T Wireless Services, ultimately serving as Executive Vice President, Associate General Counsel and Corporate Secretary of AT&T Wireless Services from September 2002 to February 2005 and immediately prior thereto, from 1995 until 2002, as EVP Law, Corporate Secretary and Chief Compliance Officer of AT&T.

Compliance with Section 16(a) of the Exchange Act

The information required by this item is included in the Proxy Statement under the caption "Section 16(a) Beneficial Ownership Reporting Compliance" and is incorporated by reference to this report.

Code of Ethics

The information required by this item is included in the Proxy Statement under the caption "Code of Business Conduct and Ethics" and is incorporated by reference to this Annual Report.

Corporate Governance

The information required by this item is included in the Proxy Statement under the caption "Governance of the Company" and is incorporated by reference to this Annual Report.

Item 11. Executive Compensation.

The information required by this item is included in the Proxy Statement under the captions "Governance of the Company—Compensation of Directors," "Governance of the Company—Committees of the Board" and "Executive Compensation" and is incorporated by reference to this Annual Report.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Securities Authorized for Issuance Under Equity Compensation Plans

The following table provides information about shares of our common stock that may be issued upon the exercise of options, that may vest pursuant to awards of restricted stock units, performance stock units or that may be issued under deferred stock units under all of our existing equity compensation plans as of December 31, 2018.

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Plan Category	Number of Securities to be Issued Upon Exercise or Vesting of Outstanding Options, Warrants and Rights	Weighted Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans
Equity compensation plans approved by stockholders	9,401,852	(1)\$30.78	(2)4,871,196 (3)
Equity compensation plan not approved by stockholders	313,032	(4)\$32.80	(5)1,645

(1) Consists of 3,563,722 outstanding options, 2,388,966 restricted stock units, 146,565 performance restricted stock units, 3,236,273 performance stock units and 66,326 deferred stock units issuable under the 2007 Stock Incentive Plan, the 2012 Plan and the 2018 Plan. The amount set forth in the table assumes maximum payout under the unvested performance share unit awards. The number of shares, if any, to be issued pursuant to unvested performance stock unit awards will be determined based upon the extent to which the performance goals are achieved.

(2) Weighted average exercise price of outstanding stock options under the 2007 Stock Incentive Plan, the 2012 Plan and the 2018 Plan. The weighted average remaining term of outstanding options is 5.1 years. The other outstanding awards do not have exercise prices and are accordingly excluded from this column.

(3) Consists of shares available for future grant under the 2018 Plan.

(4) Consists of 261,234 outstanding options and 50,814 unvested restricted stock units granted to Mr. Schneider on October 23, 2017 (the "Grant Date") as an inducement material to his entry into employment with us, as well as 984 unvested dividend equivalent units accrued on the restricted stock unit award as of December 31, 2018. Up to an additional 1,645 dividend equivalent units may be issued in connection with the restricted stock unit award. If the underlying restricted stock unit award fails to vest, such dividend equivalent units will be forfeited.

Each grant was approved by our Compensation Committee and disclosed in a press release. Under applicable NYSE Listing Rules, inducement grants are not subject to security holder approval.

The terms of each inducement grant are materially consistent with the terms of awards made under the 2012 and 2018 Plans. The stock options expire ten years from the Grant Date and vest over a four-year period, in equal annual installments on each anniversary date of the Grant Date. The restricted stock units vest over a three-year period, in equal annual installments on each anniversary date of the Grant Date and carry dividend equivalent rights related to any cash dividend paid by the Company while the restricted stock units are outstanding. Vesting of the equity awards accelerate if employment terminates due to death or disability. The equity awards contain "double trigger" provisions that provide for accelerated vesting upon a qualifying termination within 24 months of a change in control of the Company (or, if the awards are not assumed or equitably converted by the successor company, upon the change in control).

(5) Exercise price of options granted to Mr. Schneider on October 23, 2017.

See Note 12, "Stock-Based Compensation", in the consolidated financial statements for additional information on the 2007 Stock Incentive Plan, the Amended and Restated 2012 Long-Term Incentive Plan and 2018 Long-Term Incentive Plan.

The remaining information required by this item is included in the Proxy Statement under the caption "Governance of the Company—Ownership of Our Common Stock" and is incorporated by reference to this Annual Report.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this item is included in the Proxy Statement under the captions "Governance of the Company—Director Independence Criteria and —Determination of Director Independence" and "Related Person Transactions" and is incorporated by reference to this Annual Report.



Item 14. Principal Accounting Fees and Services.

The information required by this item is included in the Proxy Statement under the captions "Disclosure About Fees" and "Pre-Approval of Audit and Non-Audit Services" under the section entitled "Proposal 6: Ratification of the Appointment of the Independent Registered Public Accounting Firm" and is incorporated by reference to this Annual Report.

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## PART IV

## Item 15. Exhibits, Financial Statements and Schedules.

## (A)(1) and (2) Financial Statements

The consolidated financial statements of the registrants listed in the "Index to Financial Statements" on page F-1 together with the reports of PricewaterhouseCoopers LLP, independent auditors, are filed as part of this Annual Report.

## (A)(3) Exhibits

See Index to Exhibits.

The agreements included or incorporated by reference as exhibits to this Annual Report contain representations and warranties by each of the parties to the applicable agreement. These representations and warranties were made solely for the benefit of the other parties to the applicable agreement and (i) were not intended to be treated as categorical statements of fact, but rather as a way of allocating the risk to one of the parties if those statements prove to be inaccurate; (ii) may have been qualified in such agreement by disclosures that were made to the other party in connection with the negotiation of the applicable agreement; (iii) may apply contract standards of "materiality" that are different from "materiality" under the applicable securities laws; and (iv) were made only as of the date of the applicable agreement or such other date or dates as may be specified in the agreement. We acknowledge that, notwithstanding the inclusion of the foregoing cautionary statements, we are responsible for considering whether additional specific disclosures of material information regarding material contractual provisions are required to make the statements in this Annual Report not misleading.

## (A)(4) Consolidated Financial Statement Schedules

Schedule II—Valuation and Qualifying Accounts for the years ended December 31, 2018, 2017 and 2016:

(in millions)

Description	Balance at Beginning of Period	Additions		Deductions	Balance at End of Period
		Charged to Costs and Expenses	Charged to Other Accounts		
Allowance for doubtful accounts (a)					
Year ended December 31, 2018	\$ 11	\$ 1	\$ —	—\$ (3 )	\$ 9
Year ended December 31, 2017	13	3	—	(5 )	11
Year ended December 31, 2016	20	2	—	(9 )	13
Deferred tax asset valuation allowance					
Year ended December 31, 2018	\$ 13	\$ 5	\$ —	—\$ —	\$ 18
Year ended December 31, 2017	10	3	—	—	13
Year ended December 31, 2016	11	(1 )	—	—	10

(a) The deduction column represents uncollectible accounts written off, net of recoveries from Trade Receivables, in the Consolidated Balance Sheets.

## Item 16. Form 10-K Summary.

None.

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SIGNATURES

Pursuant to the requirements of Section 15(d) of the Securities Exchange Act of 1934, the registrants have duly caused this Annual Report on Form 10-K to be signed on their behalf by the undersigned, thereunto duly authorized, on February 26, 2019.

REALOGY HOLDINGS CORP.

and

REALOGY GROUP LLC

(Registrants)

By: /s/ RYAN M. SCHNEIDER

Name: Ryan M. Schneider

Title: Chief Executive Officer and President

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Ryan M. Schneider, Timothy B. Gustavson and Marilyn J. Wasser, and each of them severally, his or her true and lawful attorney-in-fact with power of substitution and resubstitution to sign in his or her name, place and stead, in any and all capacities, to do any and all things and execute any and all instruments that such attorney may deem necessary or advisable under the Securities Exchange Act of 1934 and any rules, regulations and requirements of the U.S. Securities and Exchange Commission in connection with this Annual Report on Form 10-K and any and all amendments hereto, as fully and for all intents and purposes as he or she might do or could do in person, and hereby ratifies and confirms all said attorneys-in-fact and agents, each acting alone, and his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report has been signed below by the following persons in the capacities and on the dates indicated below on behalf of each of the Registrants.

Name	Title	Date
/s/ RYAN M. SCHNEIDER Ryan M. Schneider	Chief Executive Officer and President (Principal Executive Officer)	February 26, 2019
/s/ TIMOTHY B. GUSTAVSON Timothy B. Gustavson	Interim Chief Financial Officer and Treasurer, Chief Accounting Officer, Controller and Senior Vice President (Principal Financial and Accounting Officer)	February 26, 2019
/s/ MICHAEL J. WILLIAMS Michael J. Williams	Chairman of the Board of Directors of Realogy Holdings Corp. and Manager of Realogy Group LLC	February 26, 2019
/s/ FIONA P. DIAS Fiona P. Dias	Director of Realogy Holdings Corp. and Manager of Realogy Group LLC	February 26, 2019
/s/ MATTHEW J. ESPE Matthew J. Espe	Director of Realogy Holdings Corp. and Manager of Realogy Group LLC	February 26, 2019
/s/ V. ANN HAILEY V. Ann Hailey	Director of Realogy Holdings Corp. and Manager of Realogy Group LLC	February 26, 2019
/s/ BRYSON KOEHLER Bryson Koehler	Director of Realogy Holdings Corp. and Manager of Realogy Group LLC	February 26, 2019
/s/ DUNCAN L. NIEDERAUER Duncan L. Niederauer	Director of Realogy Holdings Corp. and Manager of Realogy Group LLC	February 26, 2019
/s/ ENRIQUE SILVA Enrique Silva	Director of Realogy Holdings Corp. and Manager of Realogy Group LLC	February 26, 2019
/s/ SHERRY M. SMITH Sherry M. Smith	Director of Realogy Holdings Corp. and Manager of Realogy Group LLC	February 26, 2019
/s/ CHRIS TERRILL	Director of Realogy Holdings Corp. and	

Chris Terrill

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	<u>Report of Independent Registered Public Accounting Firm for Realogy Holdings Corp.</u> F-2
	<u>Report of Independent Registered Public Accounting Firm for Realogy Group LLC</u> F-4
	<u>Consolidated Statements of Operations for the years ended December 31, 2018, 2017 and 2016</u> F-6
	<u>Consolidated Statements of Comprehensive Income for the years ended December 31, 2018, 2017 and 2016</u> F-7
	<u>Consolidated Balance Sheets as of December 31, 2018 and 2017</u> F-8
	<u>Consolidated Statements of Cash Flows for the years ended December 31, 2018, 2017 and 2016</u> F-9
	<u>Consolidated Statements of Equity for the years ended December 31, 2018, 2017 and 2016</u> F-10
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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Realogy Holdings Corp.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Realogy Holdings Corp. and its subsidiaries (the "Company") as of December 31, 2018 and 2017, and the related consolidated statements of operations, comprehensive income, equity and cash flows for each of the three years in the period ended December 31, 2018, including the related notes and schedule of valuation and qualifying accounts for each of the three years in the period ended December 31, 2018 appearing under Item 15(A)(4) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally

accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP  
Florham Park, New Jersey  
February 26, 2019

We have served as the Company's auditor since 2009.

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholder of Realogy Group LLC

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Realogy Group LLC and its subsidiaries (the "Company") as of December 31, 2018 and 2017, and the related consolidated statements of operations, comprehensive income, and cash flows for each of the three years in the period ended December 31, 2018, including the related notes and schedule of valuation and qualifying accounts for each of the three years in the period ended December 31, 2018 appearing under Item 15(A)(4) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that

transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP  
Florham Park, New Jersey  
February 26, 2019

We have served as the Company's auditor since 2009.

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Table of ContentsREALOGY HOLDINGS CORP. AND REALOGY GROUP LLC  
CONSOLIDATED STATEMENTS OF OPERATIONS

(In millions, except per share data)

	Year Ended December 31,		
	2018	2017	2016
Revenues			
Gross commission income	\$4,533	\$4,576	\$4,277
Service revenue	947	938	955
Franchise fees	393	396	372
Other	206	204	206
Net revenues	6,079	6,114	5,810
Expenses			
Commission and other agent-related costs	3,282	3,230	2,945
Operating	1,548	1,544	1,542
Marketing	258	261	241
General and administrative	328	364	321
Former parent legacy cost (benefit), net	4	(10)	(2)
Restructuring costs, net	58	12	39
Depreciation and amortization	195	198	202
Interest expense, net	190	158	174
Loss on the early extinguishment of debt	7	5	—
Other expense (income), net	—	1	(1)
Total expenses	5,870	5,763	5,461
Income before income taxes, equity in losses (earnings) and noncontrolling interests	209	351	349
Income tax expense (benefit)	65	(65)	144
Equity in losses (earnings) of unconsolidated entities	4	(18)	(12)
Net income	140	434	217
Less: Net income attributable to noncontrolling interests	(3)	(3)	(4)
Net income attributable to Realogy Holdings and Realogy Group	\$137	\$431	\$213
Earnings per share attributable to Realogy Holdings:			
Basic earnings per share	\$1.10	\$3.15	\$1.47
Diluted earnings per share	\$1.09	\$3.11	\$1.46
Weighted average common and common equivalent shares of Realogy Holdings outstanding:			
Basic	124.0	136.7	144.5
Diluted	125.3	138.4	145.8

See Notes to Consolidated Financial Statements.

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REALOGY HOLDINGS CORP. AND REALOGY GROUP LLC  
 CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME  
 (In millions)

	Year Ended December 31,		
	2018	2017	2016
Net income	\$140	\$434	\$217
Currency translation adjustment	(3 )	3	(5 )
Defined Benefit Plans:			
Actuarial loss for the plans	(6 )	(1 )	(3 )
Less: amortization of actuarial loss to periodic pension cost	(2 )	(2 )	(1 )
Defined benefit plans	(4 )	1	(2 )
Other comprehensive (loss) income, before tax	(7 )	4	(7 )
Income tax (benefit) expense related to items of other comprehensive (loss) income amounts	(1 )	1	(3 )
Other comprehensive (loss) income, net of tax	(6 )	3	(4 )
Comprehensive income	134	437	213
Less: comprehensive income attributable to noncontrolling interests	(3 )	(3 )	(4 )
Comprehensive income attributable to Realogy Holdings and Realogy Group	\$131	\$434	\$209

See Notes to Consolidated Financial Statements.

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REALOGY HOLDINGS CORP. AND REALOGY GROUP LLC  
 CONSOLIDATED BALANCE SHEETS  
 (In millions, except share data)

	December 31,	
	2018	2017
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$225	\$227
Restricted cash	13	7
Trade receivables (net of allowance for doubtful accounts of \$9 and \$11)	146	153
Relocation receivables	231	223
Other current assets	153	179
Total current assets	768	789
Property and equipment, net	304	289
Goodwill	3,712	3,710
Trademarks	749	749
Franchise agreements, net	1,227	1,294
Other intangibles, net	254	284
Other non-current assets	276	222
Total assets	\$7,290	\$7,337
<b>LIABILITIES AND EQUITY</b>		
Current liabilities:		
Accounts payable	\$147	\$156
Securitization obligations	231	194
Current portion of long-term debt	748	127
Accrued expenses and other current liabilities	401	478
Total current liabilities	1,527	955
Long-term debt	2,800	3,221
Deferred income taxes	389	327
Other non-current liabilities	259	212
Total liabilities	4,975	4,715
Commitments and contingencies (Note 13)		
Equity:		
Realogy Holdings preferred stock: \$.01 par value; 50,000,000 shares authorized, none issued and outstanding at December 31, 2018 and December 31, 2017	—	—
Realogy Holdings common stock: \$.01 par value; 400,000,000 shares authorized, 114,620,499 shares issued and outstanding at December 31, 2018 and 131,636,870 shares issued and outstanding at December 31, 2017	1	1
Additional paid-in capital	4,869	5,285
Accumulated deficit	(2,507 )	(2,631 )
Accumulated other comprehensive loss	(52 )	(37 )
Total stockholders' equity	2,311	2,618
Noncontrolling interests	4	4
Total equity	2,315	2,622
Total liabilities and equity	\$7,290	\$7,337

See Notes to Consolidated Financial Statements.  
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REALOGY HOLDINGS CORP. AND REALOGY GROUP LLC  
CONSOLIDATED STATEMENTS OF CASH FLOWS  
(In millions)

	Year Ended December 31,		
	2018	2017	2016
Operating Activities			
Net income	\$140	\$434	\$217
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	195	198	202
Deferred income taxes	71	(63 )	124
Amortization of deferred financing costs and discount	15	16	16
Loss on the early extinguishment of debt	7	5	—
Equity in losses (earnings) of unconsolidated entities	4	(18 )	(12 )
Stock-based compensation	40	52	57
Mark-to-market adjustments on derivatives	3	(2 )	4
Other adjustments to net income	—	1	(4 )
Net change in assets and liabilities, excluding the impact of acquisitions and dispositions:			
Trade receivables	7	(1 )	(10 )
Relocation receivables	(9 )	23	31
Other assets	(6 )	(25 )	(22 )
Accounts payable, accrued expenses and other liabilities	(71 )	9	(17 )
Dividends received from unconsolidated entities	3	52	11
Other, net	(5 )	(14 )	(11 )
Net cash provided by operating activities	394	667	586
Investing Activities			
Property and equipment additions	(105 )	(99 )	(87 )
Payments for acquisitions, net of cash acquired	(1 )	(18 )	(95 )
Investment in unconsolidated entities	(15 )	(55 )	—
Proceeds from investments in unconsolidated entities	19	11	—
Other, net	11	15	(9 )
Net cash used in investing activities	(91 )	(146 )	(191 )
Financing Activities			
Net change in revolving credit facilities	200	(130 )	—
Payments for refinancing of Term Loan B	(4 )	—	(758 )
Proceeds from refinancing of Term Loan A & A-1	17	—	355
Amortization payments on term loan facilities	(25 )	(42 )	(41 )
Proceeds from issuance of Senior Notes	—	—	750
Redemption of Senior Notes	—	—	(500 )
Net change in securitization obligations	38	(11 )	(40 )
Debt issuance costs	(16 )	(6 )	(16 )
Cash paid for fees associated with early extinguishment of debt	—	(1 )	—
Repurchase of common stock	(402 )	(280 )	(195 )
Dividends paid on common stock	(45 )	(49 )	(26 )
Proceeds from exercise of stock options	1	8	2
Taxes paid related to net share settlement for stock-based compensation	(10 )	(11 )	(6 )
Payments of contingent consideration related to acquisitions	(22 )	(22 )	(25 )

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Other, net	(29 )	(26 )	(34 )
Net cash used in financing activities	(297 )	(570 )	(534 )
Effect of changes in exchange rates on cash, cash equivalents and restricted cash	(2 )	2	(3 )
Net increase (decrease) in cash, cash equivalents and restricted cash	4	(47 )	(142 )
Cash, cash equivalents and restricted cash, beginning of period	234	281	423
Cash, cash equivalents and restricted cash, end of period	\$238	\$234	\$281

Supplemental Disclosure of Cash Flow Information

Interest payments (including securitization interest of \$9, \$7 and \$6 respectively)	\$185	\$172	\$181
Income tax payments, net	7	12	24

See Notes to Consolidated Financial Statements.

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REALOGY HOLDINGS CORP.  
CONSOLIDATED STATEMENTS OF EQUITY  
(In millions)

	Realogy Holdings Stockholders' Equity						
	Common Stock Shares	Amount	Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Non- controlling Interests	Total Equity
Balance at January 1, 2016	146.7	\$ 1	\$ 5,733	\$ (3,280 )	\$ (36 )	\$ 4	\$ 2,422
Cumulative effect of adoption of new accounting pronouncements related to stock-based compensation	—	—	—	5	—	—	5
Net income	—	—	—	213	—	4	217
Other comprehensive loss	—	—	—	—	(4 )	—	(4 )
Repurchase of common stock	(6.9 )	—	(195 )	—	—	—	(195 )
Exercise of stock options	0.1	—	2	—	—	—	2
Stock-based compensation	—	—	57	—	—	—	57
Issuance of shares for vesting of equity awards	0.5	—	—	—	—	—	—
Shares withheld for taxes on equity awards	(0.2 )	—	(6 )	—	—	—	(6 )
Dividends (\$0.18 per share)	—	—	(26 )	—	—	(3 )	(29 )
Balance at December 31, 2016	140.2	\$ 1	\$ 5,565	\$ (3,062 )	\$ (40 )	\$ 5	\$ 2,469
Net income	—	—	—	431	—	3	434
Other comprehensive income	—	—	—	—	3	—	3
Repurchase of common stock	(9.5 )	—	(280 )	—	—	—	(280 )
Exercise of stock options	0.3	—	8	—	—	—	8
Stock-based compensation	—	—	52	—	—	—	52
Issuance of shares for vesting of equity awards	1.0	—	—	—	—	—	—
Shares withheld for taxes on equity awards	(0.4 )	—	(11 )	—	—	—	(11 )
Dividends (\$0.36 per share)	—	—	(49 )	—	—	(4 )	(53 )
Balance at December 31, 2017	131.6	\$ 1	\$ 5,285	\$ (2,631 )	\$ (37 )	\$ 4	\$ 2,622
Cumulative effect of adoption of new accounting pronouncements	—	—	—	(13 )	(9 )	—	(22 )
Net income	—	—	—	137	—	3	140
Other comprehensive loss	—	—	—	—	(6 )	—	(6 )
Repurchase of common stock	(17.9 )	—	(402 )	—	—	—	(402 )
Exercise of stock options	—	—	1	—	—	—	1
Stock-based compensation	—	—	40	—	—	—	40
Issuance of shares for vesting of equity awards	1.2	—	—	—	—	—	—
Shares withheld for taxes on equity awards	(0.3 )	—	(10 )	—	—	—	(10 )
Dividends (\$0.36 per share)	—	—	(45 )	—	—	(3 )	(48 )
Balance at December 31, 2018	114.6	\$ 1	\$ 4,869	\$ (2,507 )	\$ (52 )	\$ 4	\$ 2,315

See Notes to Consolidated Financial Statements.

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## REALOGY HOLDINGS CORP. AND REALOGY GROUP LLC

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Unless otherwise noted, all amounts are in millions, except per share amounts)

## 1. BASIS OF PRESENTATION

Realogy Holdings Corp. ("Realogy Holdings", "Realogy" or the "Company") is a holding company for its consolidated subsidiaries including Realogy Intermediate Holdings LLC ("Realogy Intermediate") and Realogy Group LLC ("Realogy Group") and its consolidated subsidiaries. Realogy, through its subsidiaries, is a global provider of residential real estate services. Neither Realogy Holdings, the indirect parent of Realogy Group, nor Realogy Intermediate, the direct parent company of Realogy Group, conducts any operations other than with respect to its respective direct or indirect ownership of Realogy Group. As a result, the consolidated financial positions, results of operations, comprehensive income and cash flows of Realogy Holdings, Realogy Intermediate and Realogy Group are the same.

The accompanying Consolidated Financial Statements include the financial statements of Realogy Holdings and Realogy Group. Realogy Holdings' only asset is its investment in the common stock of Realogy Intermediate, and Realogy Intermediate's only asset is its investment in Realogy Group. Realogy Holdings' only obligations are its guarantees of certain borrowings and certain franchise obligations of Realogy Group. All expenses incurred by Realogy Holdings and Realogy Intermediate are for the benefit of Realogy Group and have been reflected in Realogy Group's consolidated financial statements. The consolidated financial statements of the Company have been prepared in accordance with accounting principles generally accepted in the United States of America. All intercompany balances and transactions have been eliminated.

## Business Description

The Company reports its operations in the following four business segments (the number of offices and agents are unaudited):

Real Estate Franchise Services (known as Realogy Franchise Group or RFG)—franchises the Century 21 Coldwell Banker®, Coldwell Banker Commercial®, ERA®, Sotheby's International Realty® and Better Homes and Gardens® Real Estate brand names. As of December 31, 2018, our real estate franchise systems and proprietary brands had approximately 299,400 independent sales agents worldwide, including approximately 191,700 independent sales agents operating in the U.S. (which included approximately 50,200 company owned brokerage independent sales agents). As of December 31, 2018, our real estate franchise systems and proprietary brands had approximately 16,600 offices worldwide in 113 countries and territories, including approximately 6,000 brokerage offices in the U.S. (which included approximately 760 company owned brokerage offices).

Company Owned Real Estate Brokerage Services (known as NRT)—operates a full-service real estate brokerage business with approximately 760 owned and operated brokerage offices with approximately 50,200 independent sales agents principally under the Coldwell Banker®, Corcoran®, Sotheby's International Realty®, ZipRealty®, Citi Habitats<sup>SM</sup> and Climb Real Estate® brand names in many of the largest metropolitan areas in the U.S. This segment also included the Company's share of earnings for our PHH Home Loans venture, which was sold to PHH in the first quarter of 2018 and we transitioned to our new mortgage origination joint venture with Guaranteed Rate Affinity, which is included in the financial results of the Title and Settlement Services segment.

Relocation Services (known as Cartus®)—primarily offers clients employee relocation services such as homesale assistance, providing home equity advances to transferees (generally guaranteed by the individual's employer), home finding and other destination services, expense processing, relocation policy counseling and consulting services, arranging household goods moving services, coordinating visa and immigration support, intercultural and language training and group move management services. In addition, we provide home buying and selling assistance to members of affinity clients.

Title and Settlement Services (known as Title Resource Group or TRG)—provides full-service title and settlement services to real estate companies, affinity groups, corporations and financial institutions with many of these services provided in connection with the Company's real estate brokerage and relocation services business. This segment also

includes the Company's share of equity earnings and losses for our Guaranteed Rate Affinity mortgage origination joint venture.

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2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

USE OF ESTIMATES

In presenting the consolidated financial statements, management makes estimates and assumptions that affect the amounts reported and related disclosures. Estimates, by their nature, are based on judgment and available information. Accordingly, actual results could differ materially from those estimates.

REVENUE RECOGNITION

See Note 3, "Revenue Recognition", for further discussion.

CONSOLIDATION

The Company consolidates any variable interest entity ("VIE") for which it is the primary beneficiary with a controlling financial interest. Also, the Company consolidates an entity not deemed a VIE if its ownership, direct or indirect, exceeds 50% of the outstanding voting shares of an entity and/or it has the ability to control the financial or operating policies through its voting rights, board representation or other similar rights. For entities where the Company does not have a controlling interest (financial or operating), the investments in such entities are accounted for using the equity method or at fair value with changes in fair value recognized in net income, as appropriate. The Company applies the equity method of accounting when it has the ability to exercise significant influence over operating and financial policies of an investee. The Company measures all other investments at fair value with changes in fair value recognized in net income or in the case that an equity investment does not have readily determinable fair values, at cost minus impairment (if any) plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment.

CASH AND CASH EQUIVALENTS

The Company considers highly liquid investments with remaining maturities not exceeding three months at the date of purchase to be cash equivalents.

RESTRICTED CASH

Restricted cash primarily relates to amounts specifically designated as collateral for the repayment of outstanding borrowings under the Company's securitization facilities. Such amounts approximated \$13 million and \$7 million at December 31, 2018 and 2017, respectively.

ALLOWANCE FOR DOUBTFUL ACCOUNTS

The Company estimates the allowance necessary to provide for uncollectible accounts receivable. The estimate is based on historical experience, combined with a review of current developments and includes specific accounts for which payment has become unlikely. The process by which the Company calculates the allowance begins in the individual business units where specific problem accounts are identified and reserved primarily based upon the age profile of the receivables and specific payment issues.

ADVERTISING EXPENSES

Advertising costs are generally expensed in the period incurred. Advertising expenses, recorded within the marketing expense line item on the Company's Consolidated Statements of Operations, were approximately \$207 million, \$211 million and \$198 million for the years ended December 31, 2018, 2017 and 2016, respectively.

DEBT ISSUANCE COSTS

Debt issuance costs include costs incurred in connection with obtaining debt and extending existing debt. These financing costs are presented in the balance sheet as a direct deduction from the carrying value of the associated debt liability, consistent with the presentation of a debt discount, with the exception of the debt issuance costs related to the Revolving Credit Facility and securitization obligations which are classified as a deferred financing asset within other assets. The debt issuance costs are amortized via the effective interest method and the amortization period is the life of the related debt.

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## INCOME TAXES

The Company's provision for income taxes is determined using the asset and liability method, under which deferred tax assets and liabilities are calculated based upon the temporary differences between the financial statement and income tax bases of assets and liabilities using currently enacted tax rates. These differences are based upon estimated differences between the book and tax basis of the assets and liabilities for the Company. Certain tax assets and liabilities of the Company may be adjusted in connection with the finalization of income tax audits.

The Company's deferred tax assets are recorded net of a valuation allowance when, based on the weight of available evidence, it is more likely than not that all or some portion of the recorded deferred tax balances will not be realized in future periods. Decreases to the valuation allowance are recorded as reductions to the Company's provision for income taxes and increases to the valuation allowance result in additional provision for income taxes.

## DERIVATIVE INSTRUMENTS

The Company records derivatives and hedging activities on the balance sheet at their respective fair values. The Company uses foreign currency forward contracts largely to manage its exposure to changes in foreign currency exchange rates associated with its foreign currency denominated receivables and payables and interest rate swaps to manage its exposure to future interest rate volatility associated with its variable rate borrowings. The Company has not elected to utilize hedge accounting for these instruments; therefore, any change in fair value is recorded in the Consolidated Statements of Operations. However, the fluctuations in the value of these instruments generally offset the impact of changes in the value of the underlying risk that they are intended to economically hedge. See Note 16, "Risk Management and Fair Value of Financial Instruments", for further discussion.

## INVESTMENTS

The Company owned 49.9% of PHH Home Loans, a mortgage origination venture formed in 2005 for the purpose of originating and selling mortgage loans primarily sourced through the Company's real estate brokerage and relocation businesses, while PHH Corporation ("PHH") owned the remaining percentage. In February 2017, Realogy announced that it and Guaranteed Rate, Inc. ("Guaranteed Rate") agreed to form a new mortgage origination joint venture, Guaranteed Rate Affinity, LLC ("Guaranteed Rate Affinity"). During the third and fourth quarters of 2017, Guaranteed Rate Affinity, acquired certain assets of the mortgage operations of PHH Home Loans, including its four regional centers and employees across the United States, but not its mortgage assets. Guaranteed Rate Affinity began doing business in August 2017 on a phased-in basis.

Guaranteed Rate Affinity originates and markets its mortgage lending services to the Company's real estate brokerage and relocation subsidiaries as well as other real estate brokerage companies across the country. Guaranteed Rate owns a controlling 50.1% stake of Guaranteed Rate Affinity and the Company owns 49.9%. The Company has certain governance rights related to the joint venture, however it does not have control of the day-to-day operations of Guaranteed Rate Affinity. While the equity earnings or losses related to PHH Home Loans were included in the financial results of the Company Owned Real Estate Brokerage Services segment, the equity earnings or losses related to Guaranteed Rate Affinity are included in the financial results of the Title and Settlement Services segment.

At December 31, 2018 and 2017, the Company had various equity method investments aggregating \$51 million and \$74 million, respectively, which are recorded within other current and non-current assets on the accompanying Consolidated Balance Sheets. The \$51 million investment balance at December 31, 2018 included \$43 million for the Company's investment in Guaranteed Rate Affinity. The \$74 million investment balance at December 31, 2017 included \$48 million for the Company's investment in Guaranteed Rate Affinity and \$19 million for the Company's remaining investment in PHH Home Loans. During the first quarter of 2018, the Company's interest in PHH Home Loans was sold to a subsidiary of PHH Corporation and the Company received net cash proceeds of \$19 million reducing the investment balance in PHH Home Loans to zero.

For the year ended December 31, 2018, the Company recorded equity losses of \$4 million at the Title and Settlement Services segment primarily related to losses from the operations of Guaranteed Rate Affinity.

For the year ended December 31, 2017, the Company recorded equity earnings of \$18 million which consisted of \$35 million of earnings from the sale of PHH Home Loans' assets to Guaranteed Rate Affinity, partially offset by \$7

million of exit costs and losses of \$6 million from the continuing operations of PHH Home Loans. In addition, there was a \$4 million loss from equity method investments at the Title and Settlement Services segment primarily related to costs associated with

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the start up of operations of Guaranteed Rate Affinity, including \$3 million of amortization of intangible assets recorded in purchase accounting.

For the year ended December 31, 2016, the Company recorded equity earnings of \$12 million, which consisted of \$8 million relating to its investment in PHH Home Loans.

The Company received \$3 million, \$63 million and \$11 million in cash dividends from equity method investments during the years ended December 31, 2018, 2017 and 2016, respectively. The Company invested \$4 million and \$55 million of cash into Guaranteed Rate Affinity during the years ended December 31, 2018 and 2017, respectively.

**PROPERTY AND EQUIPMENT**

Property and equipment (including leasehold improvements) are initially recorded at cost, net of accumulated depreciation and amortization. Depreciation, recorded as a component of depreciation and amortization on the Consolidated Statements of Operations, is computed utilizing the straight-line method over the estimated useful lives of the related assets. Amortization of leasehold improvements, also recorded as a component of depreciation and amortization, is computed utilizing the straight-line method over the estimated benefit period of the related assets or the lease term, if shorter. Useful lives are 30 years for buildings, up to 20 years for leasehold improvements, and from 3 to 7 years for furniture, fixtures and equipment.

The Company capitalizes the costs of software developed for internal use which commences during the development phase of the project. The Company amortizes software developed or obtained for internal use on a straight-line basis, generally from 1 to 5 years, when such software is ready for use. The net carrying value of software developed or obtained for internal use was \$93 million and \$86 million at December 31, 2018 and 2017, respectively.

**IMPAIRMENT OF GOODWILL, INTANGIBLE ASSETS AND OTHER LONG-LIVED ASSETS**

Goodwill represents the excess of acquisition costs over the fair value of the net tangible assets and identifiable intangible assets acquired in a business combination. Indefinite-lived intangible assets primarily consist of trademarks acquired in business combinations. Goodwill and indefinite-lived assets are not amortized, but are subject to impairment testing. The aggregate carrying values of our goodwill and other indefinite-lived intangible assets were \$3,712 million and \$767 million, respectively, at December 31, 2018 and are subject to impairment testing annually as of October 1, or whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable. This testing compares carrying values to fair values and, when appropriate, the carrying value is reduced to fair value. In testing goodwill, the fair value of our reporting units is estimated utilizing a discounted cash flow approach utilizing long-term cash flow forecasts and our annual operating plans adjusted for terminal value assumptions.

We determine the fair value of our reporting units utilizing our best estimate of future revenues, operating expenses including commission expense, cash flows, market and general economic conditions as well as assumptions that we believe marketplace participants would utilize including discount rates, cost of capital, trademark royalty rates and long-term growth rates. The trademark royalty rate was determined by reviewing similar trademark agreements with third parties. Although we believe our assumptions are reasonable, actual results may vary significantly. These impairment tests involve the use of accounting estimates and assumptions, changes in which could materially impact our financial condition or operating performance if actual results differ from such estimates and assumptions. To address this uncertainty, we perform sensitivity analysis on key estimates and assumptions.

Based upon the impairment analysis performed in the fourth quarter of 2018, 2017 and 2016, there was no impairment of goodwill or other indefinite-lived intangible assets for these years. Management evaluated the effect of lowering the estimated fair value for each of the reporting units by 10% and determined that no impairment of goodwill would have been recognized under this evaluation for 2018, 2017 or 2016.

The Company evaluates the recoverability of its other long-lived assets, including amortizable intangible assets, if circumstances indicate an impairment may have occurred. This analysis is performed by comparing the respective carrying values of the assets to the current and expected future cash flows, on an undiscounted basis, to be generated from such assets. If such analysis indicates that the carrying value of these assets is not recoverable, then the carrying value of such assets is reduced to fair value through a charge to the Company's Consolidated Statements of Operations.

There were no impairments relating to other long-lived assets, including amortizable intangible assets, during 2018, 2017 or 2016.

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**SUPPLEMENTAL CASH FLOW INFORMATION**

Significant non-cash transactions in 2018, 2017 and 2016 included \$20 million, \$18 million and \$14 million, respectively, in capital lease additions, which resulted in non-cash additions to property and equipment, net and other non-current liabilities.

**STOCK-BASED COMPENSATION**

The Company grants stock-based awards to certain senior management, employees and directors including non-qualified stock options, restricted stock, restricted stock units and performance share units. The fair value of non-qualified stock options is estimated using the Black-Scholes option pricing model on the grant date and is recognized as expense over the service period based on the vesting requirements. The fair value of restricted stock, restricted stock units and performance share units without a market condition is measured based on the closing price of the Company's common stock on the grant date and is recognized as expense over the service period of the award, or when requisite performance metrics or milestones are probable of being achieved. The fair value of awards with a market condition are estimated using the Monte Carlo simulation method and expense is recognized on a straight-line basis over the requisite service period of the award. The Company recognizes forfeitures as they occur. Determining the fair value of stock-based awards at the grant date requires considerable judgment, including estimating expected volatility and expected term, risk-free rate.

**RECENTLY ADOPTED ACCOUNTING PRONOUNCEMENTS**

In May 2014, the FASB issued Accounting Standards Update ("ASUs") No. 2014-09 (Topic 606) "Revenue from Contracts with Customers" (the "new revenue standard"). The Company adopted the new revenue standard on January 1, 2018 using the modified retrospective transition method in which the cumulative effect of applying the new revenue standard was recognized as an adjustment to the opening balance of retained earnings. See Note 3, "Revenue Recognition", for further details.

In February 2018, the FASB issued a new standard which permits companies to reclassify certain income tax effects resulting from the 2017 Tax Act, called "stranded tax effects", from accumulated other comprehensive income ("AOCI") to retained earnings. According to the new guidance, the reclassification amount should include the effect of the change in the U.S. federal corporate income tax rate on the gross deferred tax amounts and related valuation allowances, if any, at the date of enactment of the 2017 Tax Act related to items remaining in AOCI. The guidance is effective for all companies for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, with early adoption is permitted. The Company early adopted this standard in the first quarter of 2018 which resulted in a debit to Accumulated other comprehensive loss and a credit to Accumulated deficit for \$9 million. The Company's accounting policy for releasing income tax effects from AOCI is to release those effects when our entire portfolio of the type of item is liquidated.

In June 2018, the FASB issued a new standard related to non-employee share-based payment accounting. The new guidance eliminates specific accounting for non-employee share-based payments and aligns the treatment for awards issued to employees and non-employees reducing the complexity of measurement of non-employee awards and creating a single accounting model. The new standard is applied to all new awards granted after the date of adoption. The Company elected to early adopt this guidance during the second quarter of 2018. There was an immaterial impact upon adoption.

In August 2018, the SEC issued a final rule that amends certain disclosure requirements as part of the SEC's overall project to improve disclosure effectiveness and simplify compliance. The final rule eliminates redundant, duplicative and overlapping requirements which are substantially similar to current GAAP or other SEC disclosure requirements, as well as amends or removes outdated and superseded requirements. However, in some situations, the amendments expanded disclosure requirements, such as an analysis of changes in stockholders' equity will now be required for the current and comparative quarter and year-to-date interim periods. The Company applied the amendments in the final rule to its Annual Report on Form 10-K for the year ended December 31, 2018.

**RECENTLY ISSUED ACCOUNTING PRONOUNCEMENTS**

The Company considers the applicability and impact of all Accounting Standards Updates. ASUs not listed below were assessed and determined to be either not applicable or are expected to have minimal impact on our consolidated financial position or results of operations.

In February 2016, the FASB issued its new standard on leases which requires virtually all leases to be recognized on the balance sheet. Lessees will recognize a right-of-use asset and a lease liability for all leases (other than leases that meet the definition of a short-term lease). The liability will be equal to the present value of lease payments. The asset will be based

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on the liability, subject to adjustment, such as for lease incentives, prepayments and initial direct costs. For income statement purposes, leases will be classified as either operating or finance leases. Operating leases will result in straight-line expense, similar to current operating leases, while finance leases will result in a front-loaded expense pattern, similar to current capital leases. Classification will be based on criteria that are largely similar to those applied in current lease accounting, but without explicit bright lines.

The new standard was effective on January 1, 2019, with early adoption permitted, initially requiring a modified retrospective transition approach, applying the new standard to all leases existing at the date of initial application. In July 2018, the FASB issued an ASU that allows entities to elect an optional transition relief giving companies the option to apply the provisions of the new guidance at the effective date (e.g., January 1, 2019), as opposed to the earliest comparative period presented in the financial statements under the modified retrospective transition approach (January 1, 2017), and recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. The Company will adopt the new standard during the first quarter of 2019 and will elect the optional transition relief. The new standard allows for an optional package of practical expedients during transition which permit companies to not reassess prior conclusions about lease identification, lease classification and initial direct costs under the new standard. The Company will elect this package of practical expedients; however, the Company will not elect the use of hindsight practical expedients and therefore current lease terms largely remained unchanged.

The new standard also allows practical expedients for future accounting under the new standard. The Company will elect the short-term lease recognition exemption and will not recognize a lease obligation and right-of-use asset on its balance sheet for all leases with terms of 12 months or less. The Company also will elect the practical expedient to not separate lease and non-lease components for all of its leases resulting in a larger lease liability recorded on the balance sheet.

The Company evaluated the impact of the standard on its consolidated financial statements and believes that the most significant effects of adoption relate to the recognition of new right-of-use assets and lease liabilities on the balance sheet for real estate operating leases. On adoption, the Company currently expects to recognize total lease liabilities ranging from \$650 million to \$670 million with corresponding right-of-use assets of \$595 million to \$615 million based on the present value of the remaining minimum rental payments partially offset by the reclassification of existing deferred rent liabilities. The Company has revised and implemented policies and internal controls, as well as a new lease management system to account for leases under the new guidance.

### 3. REVENUE RECOGNITION

#### Adoption of the New Revenue Standard

Effective January 1, 2018, the Company adopted the new revenue standard using the modified retrospective method. Results for reporting periods beginning after January 1, 2018 are presented under the new revenue standard; however, the comparative prior period amounts have not been restated and continue to be reported in accordance with historic accounting under ASC Topic 605. The majority of the Company's revenue continues to be recognized at the completion of a homesale transaction under the new revenue standard, however as a result of the adoption the Company recognized additional contract liabilities and deferred assets associated with certain other revenue streams. As of January 1, 2018, the Company recorded a net debit to its opening Accumulated deficit of \$22 million, net of tax, due to the cumulative impact of adopting the new revenue standard, with the impact primarily related to the recognition of additional contract liabilities for initial area development fees and deferred assets for prepaid commissions.

#### Contract Liabilities for Initial Area Development Fees ("ADF"):

Contract liabilities are recorded when cash payments are received or due in advance of the Company's performance. The Company records these as deferred revenues and are classified as current or non-current liabilities in the Consolidated Balance Sheets based on the expected timing of revenue recognition.

The Real Estate Franchise Services segment collects an initial ADF for international territory transactions, which are recorded as deferred revenue when received and recognized into revenue over the term of the agreement, typically 25

years, as consideration for the right to access and benefit from Realogy's brands. In the event an ADF agreement is terminated prior to the end of its term, the unamortized deferred revenue balance will be recognized into revenue immediately upon termination. ADFs were recognized as revenue upfront when received under historical guidance.

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## Prepaid Commissions:

The incremental direct costs of obtaining a contract, which primarily consist of franchise sales commissions, are deferred and amortized generally over the estimated life of the customer relationship for domestic and international contracts. The Company classifies prepaid commissions as current or non-current assets in the Consolidated Balance Sheets based on the expected timing of recognizing expense.

The Real Estate Franchise Services segment recognizes a deferred asset for commissions paid to Realogy franchise sales employees upon the sale of a new franchise. The amount of commissions is calculated as a percentage of the anticipated gross commission income of the new franchisee or the amount of the ADF and is amortized on a straight-line basis over the estimated life of franchise customer relationships, 30 years for domestic franchise agreements, or the agreement term for international franchise agreements which is generally 25 years. Franchise sales commissions were expensed upfront when paid under historical guidance.

## Practical Expedients and Exemptions:

The Company elected to apply the practical expedient that only requires the Company to apply the revenue standard to contracts that were open as of the beginning of the earliest period presented which impacted the amount of prepaid commissions capitalized.

The majority of the Company's contracts are transactional in nature or have a duration of one-year or less.

Accordingly, the Company does not disclose the value of unsatisfied performance obligations for contracts with an original expected length of one year or less.

The cumulative effect of the changes made to the Consolidated Balance Sheets for the adoption of the new revenue standard were as follows:

	Balance Sheet accounts prior to the new revenue standard adoption adjustments	Adjustments due to the adoption of the new revenue standard	Balance Sheet accounts after the new revenue standard adoption adjustments
<b>ASSETS</b>			
Current assets:			
Trade receivables	\$ 153	\$ 1	\$ 154
Other current assets	179	2	181
Total current assets	789	3	792
Other non-current assets	222	23	245
Total assets	\$ 7,337	\$ 26	\$ 7,363
<b>LIABILITIES AND EQUITY</b>			
Current liabilities:			
Accrued expenses and other current liabilities	\$ 478	\$ 2	\$ 480
Total current liabilities	955	2	957
Deferred income taxes	327	(8 )	319
Other non-current liabilities	212	54	266
Total liabilities	4,715	48	4,763
Equity:			
Accumulated deficit (a)	(2,622 )	(22 )	(2,644 )
Accumulated other comprehensive loss (a)	(46 )	—	(46 )
Total stockholders' equity	2,618	(22 )	2,596

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Total equity	2,622	(22	)	2,600
Total liabilities and equity	\$ 7,337	\$ 26		\$ 7,363

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Beginning balances have been adjusted for the adoption of the accounting standard update on stranded tax effects (a) related to the 2017 Tax Act which resulted in a debit to Accumulated other comprehensive loss and a credit to Accumulated deficit of \$9 million.

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See Note 2, "Summary of Significant Accounting Policies" in the "Recently Adopted Accounting Pronouncements" section for additional information.

The impact of adopting the new revenue standard, as compared to historic guidance under ASC Topic 605, was immaterial to the Company's Consolidated Financial Statements as of and for the year ended December 31, 2018.

**Revenue Recognition**

Revenue is recognized upon the transfer of control of promised services to customers in an amount that reflects the consideration the Company expects to receive in exchange for those services in accordance with the new revenue standard. The Company's revenue is disaggregated by major revenue categories on our Consolidated Statements of Operations and further disaggregated by business segment as follows:

## Years Ended December 31, 2018 vs December 31, 2017 (e)

	Real Estate Franchise Services		Company Owned Brokerage Services		Relocation Services		Title and Settlement Services		Corporate and Other		Total Company	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Gross commission income (a)	\$—	\$—	\$4,533	\$4,576	\$—	\$—	\$—	\$—	\$—	\$—	\$4,533	\$4,576
Service revenue (b)	—	—	9	9	374	378	564	551	—	—	947	938
Franchise fees (c)	688	695	—	—	—	—	—	—	(295 )	(299 )	393	396
Other (d)	132	135	65	58	4	4	16	19	(11 )	(12 )	206	204
Net revenues	\$820	\$830	\$4,607	\$4,643	\$378	\$382	\$580	\$570	\$(306)	\$(311)	\$6,079	\$6,114

## Years Ended December 31, 2017 vs December 31, 2016 (e)

	Real Estate Franchise Services		Company Owned Brokerage Services		Relocation Services		Title and Settlement Services		Corporate and Other		Total Company	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Gross commission income (a)	\$—	\$—	\$4,576	\$4,277	\$—	\$—	\$—	\$—	\$—	\$—	\$4,576	\$4,277
Service revenue (b)	—	—	9	3	378	401	551	551	—	—	938	955
Franchise fees (c)	695	654	—	—	—	—	—	—	(299 )	(282 )	396	372
Other (d)	135	127	58	64	4	4	19	22	(12 )	(11 )	204	206
Net revenues	\$830	\$781	\$4,643	\$4,344	\$382	\$405	\$570	\$573	\$(311)	\$(293)	\$6,114	\$5,810

- (a) Approximately 75% of the Company's total net revenues related to gross commission income at the Company Owned Brokerage Services segment, which is recognized at a point in time at the closing of a homesale transaction. Approximately 15% of the Company's total net revenues related to service fees primarily consisting of title and escrow fees at the Title and Settlement Services segment, which are recognized at a point in time at the closing of a homesale transaction, and relocation fees at the Relocation Services segment, which are recognized as revenue when or as the related performance obligation is satisfied, which is dependent on the type of service performed.
- (b) Relocation fees at the Relocation Services segment primarily include: (i) referral fees which are recognized at a point in time of the closing of a homesale transaction, (ii) outsourcing fees, which are management fees charged to clients frequently related to a bundle of relocation services performed and are recognized over the average time period to complete a move, and (iii) referral commissions from third party suppliers which are recognized at the time of the completion of the related service.
- (c) Approximately 5% of the Company's total net revenues related to franchise fees at the Real Estate Franchise Services segment, primarily domestic royalties, which are recognized at a point in time when the underlying

franchisee revenue is earned (upon close of the homesale transaction).

Approximately 5% of the Company's total net revenues related to other revenue, which comprised of brand (d) marketing funds received at the Real Estate Franchise Services segment from franchisees and other miscellaneous revenues across all of the business segments.

(e) Prior period amounts have not been adjusted under the modified retrospective method.

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The Company's revenue streams are discussed further below by business segment:

Real Estate Franchise Services

The Company franchises its real estate brands to real estate brokerage businesses that are independently owned and operated. Franchise revenue principally consists of royalty and marketing fees from the Company's franchisees. The royalty received is primarily based on a gross percentage (generally 6%) of the franchisee's gross commission income. Royalty fees are accrued as the underlying franchisee revenue is earned (upon close of the homesale transaction). Annual volume incentives given to certain franchisees on royalty fees are recorded as a reduction to revenue and are accrued for in relative proportion to the recognition of the underlying gross franchise revenue. Non-standard sales incentives are recorded as a reduction to revenue ratably over the related performance period or from the date of issuance through the remaining life of the related franchise agreement. Franchise revenue also includes domestic initial franchise fees which are generally non-refundable and recognized by the Company as revenue upon the execution or opening of a new franchisee office to cover the upfront costs associated with opening the franchisee for business under one of Realogy's brands.

The Company also earns marketing fees from its franchisees and utilizes such fees to fund marketing campaigns on behalf of its franchisees. As such, brand marketing fund fees are recorded as deferred revenue when received and recognized into revenue as earned when these funds are spent on marketing activities. The balance for deferred brand marketing fund fees decreased from \$13 million at January 1, 2018 to \$12 million at December 31, 2018 primarily due to amounts recognized into revenue matching expenses for marketing activities, partially offset by additional fees received from franchisees during the year ended December 31, 2018.

The Company collects initial ADFs for international territory transactions, which are recorded as deferred revenue when received and recognized into franchise revenue over the average 25 year life of the related franchise agreement as consideration for the right to access and benefit from Realogy's brands. The balance for deferred ADFs decreased from \$58 million at January 1, 2018 to \$54 million at December 31, 2018 due to revenues of \$5 million recognized during the year ended December 31, 2018 that were included in the deferred revenue balance at the beginning of the period, partially offset by \$1 million of additional area development fees received during the year ended December 31, 2018.

In addition, the Company recognizes a deferred asset for commissions paid to Realogy franchise sales employees upon the sale of a new franchise as these are considered costs of obtaining a contract with a customer that are expected to provide benefits to the Company for longer than one year. The amount of commissions is calculated as a percentage of the anticipated gross commission income of the new franchisee or ADF and is amortized over 30 years for domestic franchise agreements or the agreement term for international franchise agreements (generally 25 years). The amount of prepaid commissions was \$24 million at January 1, 2018 and \$25 million at December 31, 2018.

Company Owned Real Estate Brokerage Services

As an owner-operator of real estate brokerages, the Company assists home buyers and sellers in listing, marketing, selling and finding homes. Real estate commissions earned by the Company's real estate brokerage business are recorded as revenue at a point in time which is upon the closing of a real estate transaction (i.e., purchase or sale of a home). These revenues are referred to as gross commission income. The commissions the Company pays to real estate agents are recognized concurrently with associated revenues and presented as the commission and other agent-related costs line item on the accompanying Consolidated Statements of Operations.

The Company has relationships with developers, primarily in major cities, to provide marketing and brokerage services in new developments. New development closings generally have a development period of between 18 and 24 months from contracted date to closing. In some cases, the Company receives advanced commissions which are recorded as deferred revenue when received and recognized as revenue when the new development closes. The balance of advanced commissions related to developments was a liability of \$10 million at both January 1, 2018 and December 31, 2018. During the year ended December 31, 2018, the balance increased \$6 million related to additional commissions received for new developments, offset by a \$6 million decrease due to revenues recognized on units closed.

Relocation Services

The Company provides relocation services to corporate and government clients for the transfer of their employees ("transferees"). Such services include homesale assistance including the purchasing and/or selling of a transferee's home and providing home equity advances to transferees (generally guaranteed by the individual's employer), arranging household goods moving services, and other relocation services such as expense processing, relocation policy counseling, relocation-

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related accounting, coordinating visa and immigration support, intercultural and language training and destination services. In the majority of relocation transactions, the gain or loss on the sale of a transferee's home is generally borne by the individual's employer. Clients may pay an outsourcing management fee that can cover several of the relocation services listed above, according to the clients' specific needs. In addition, the Company provides home buying and selling assistance to members of Affinity organizations.

The Company earns referral commission revenue primarily from real estate brokers for the home sale and purchase for transferees and Affinity members, which is recognized at a point in time when the underlying property closes.

Revenues from other third-party service providers where the Company earns a referral commission are recognized at the point in time at the completion of services. Furthermore, the Company generally earns interest income on the funds it advances on behalf of the transferring employee, which is recorded within other revenue (as is the corresponding interest expense on the securitization obligations) in the accompanying Consolidated Statements of Operations.

The Company earns revenues from outsourcing management fees charged to clients for the performance and facilitation of relocation services. Outsourcing management fees are recorded as deferred revenue when billed (usually at the start of the relocation) and are recognized as revenue over the average time period required to complete the transferee's move, or a phase of the move that the fee covers, which is typically 3 to 6 months depending on the move type. The balance for outsourcing management fees decreased from \$5 million on January 1, 2018 to \$4 million on December 31, 2018. During the year ended December 31, 2018, the balance increased \$62 million primarily related to additions due to new management fees billed on new relocation files in advance of the Company satisfying its performance obligation, offset by a \$63 million decrease as a result of revenues recognized as the performance obligations were satisfied.

The Relocation Services segment manages the Cartus Broker Network, which is a network of real estate brokers consisting of our company owned brokerage operations, select franchisees and independent real estate brokers who have been approved to become members. Network fees are billed in the fourth quarter of the previous year for the following year's membership. Starting with 2019 membership fees, the network fees were billed in the first quarter of 2019, resulting in a zero balance at the end of 2018. These fees are recognized into revenue on a straight-line basis each month during the membership period. The balance for Cartus Broker Membership decreased from \$8 million at January 1, 2018 to zero at December 31, 2018 due to \$12 million of revenues recognized during the year ended December 31, 2018 that were included in the deferred revenue balance at the beginning of the period, offset by a \$4 million increase related to new network fees.

**Title and Settlement Services**

The Company provides title and closing services, which include title search procedures for title insurance policies, homesale escrow and other closing services. Title revenues and title and closing service fees are recorded at a point in time which occurs at the time a homesale transaction or refinancing closes. The Company also owns an underwriter of title insurance. For unaffiliated agents, the underwriter recognizes policy premium revenue on a gross basis (before deduction of agent commission) upon notice of policy issuance from the agent. For affiliated title agents, the underwriter recognizes the incremental policy premium revenue upon the effective date of the title policy as the agent commission revenue is already recognized by the affiliated title agent.

**Contract Balances (Deferred Revenue)**

The following table shows the change in the Company's contract liabilities related to revenue contracts by reportable segment for the period:

Year Ended December 31, 2018			
Beginning	Additions	Recognized	Ending
Balance	during	as Revenue	Balance
at	the	during the	at
January	period	period	December
1,			31, 2018

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	2018			
Real Estate Franchise Services (a)	\$79	\$ 118	\$ (119	) \$ 78
Company Owned Real Estate Brokerage Services	17	19	(18	) 18
Relocation Services	18	87	(96	) 9
Total	\$114	\$ 224	\$ (233	) \$ 105

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(a) Revenues recognized include intercompany marketing fees paid by the Company Owned Real Estate Brokerage Services segment.

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## 4. INTANGIBLE ASSETS

Goodwill by segment and changes in the carrying amount are as follows:

	Real Estate Franchise Services	Company Owned Brokerage Services	Relocation Services	Title and Settlement Services	Total Company
Balance at January 1, 2016	\$ 2,292	\$ 841	\$ 360	\$ 125	\$ 3,618
Goodwill acquired (a)	—	52	—	20	72
Balance at December 31, 2016	2,292	893	360	145	3,690
Goodwill acquired (b)	—	11	—	9	20
Balance at December 31, 2017	2,292	904	360	154	3,710
Goodwill acquired (c)	—	2	—	—	2
Balance at December 31, 2018	\$ 2,292	\$ 906	\$ 360	\$ 154	\$ 3,712
Goodwill and accumulated impairment summary					
Gross goodwill	\$ 3,315	\$ 1,064	\$ 641	\$ 478	\$ 5,498
Accumulated impairment losses (d)	(1,023 )	(158 )	(281 )	(324 )	(1,786 )
Balance at December 31, 2018	\$ 2,292	\$ 906	\$ 360	\$ 154	\$ 3,712

(a) Goodwill acquired during the year ended December 31, 2016 relates to the acquisition of eleven real estate brokerage operations and one title and settlement operation.

(b) Goodwill acquired during the year ended December 31, 2017 relates to the acquisition of sixteen real estate brokerage operations and two title and settlement operations.

(c) Goodwill acquired during the year ended December 31, 2018 relates to the acquisition of three real estate brokerage operations.

(d) During the fourth quarter of 2008 and 2007 the Company recorded impairment charges, which reduced goodwill by \$1,279 million and \$507 million, respectively. No goodwill or unamortized intangible asset impairments have been recorded since 2008.

Intangible assets are as follows:

	As of December 31, 2018			As of December 31, 2017		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Amortizable—Franchise agreements (a)	\$2,019	\$ 792	\$ 1,227	\$2,019	\$ 725	\$ 1,294
Indefinite life—Trademarks (b)	\$749		\$ 749	\$749		\$ 749
Other Intangibles						
Amortizable—License agreements (c)	\$45	\$ 11	\$ 34	\$45	\$ 10	\$ 35
Amortizable—Customer relationships (d)	549	359	190	549	335	214
Indefinite life—Title plant shares (e)	18		18	18		18
Amortizable—Pendings and listings (f)	—	—	—	2	1	1
Amortizable—Other (g)	33	21	12	33	17	16
Total Other Intangibles	\$645	\$ 391	\$ 254	\$647	\$ 363	\$ 284

(a) Generally amortized over a period of 30 years.

(b) Primarily related to real estate franchise brands and Cartus tradenames, which are expected to generate future cash flows for an indefinite period of time.

(c)

Relates to the Sotheby's International Realty® and Better Homes and Gardens® Real Estate agreements which are being amortized over 50 years (the contractual term of the license agreements).

Relates to the customer relationships at the Relocation Services segment, the Title and Settlement Services segment (d) and our Company Owned Real Estate Brokerage Services segment. These relationships are being amortized over a period of 2 to 20 years.

(e) Ownership in a title plant is required to transact title insurance in certain states. The Company expects to generate future cash flows for an indefinite period of time.

(f) Generally amortized over a period of 5 months.

(g) Consists of covenants not to compete which are amortized over their contract lives and other intangibles which are generally amortized over periods ranging from 5 to 10 years.



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Intangible asset amortization expense is as follows:

	For the Year Ended December 31, 2018 2017 2016		
Franchise agreements	\$67	\$67	\$67
License agreements	1	1	1
Customer relationships	24	25	28
Pendings and listings	1	4	12
Other	4	5	5
Total	\$97	\$102	\$113

Based on the Company's amortizable intangible assets as of December 31, 2018, the Company expects related amortization expense to be approximately \$97 million, \$95 million, \$93 million, \$92 million, \$91 million and \$995 million in 2019, 2020, 2021, 2022, 2023 and thereafter, respectively.

#### 5. FRANCHISING AND MARKETING ACTIVITIES

Franchise fee revenue includes domestic initial franchise fees and international area development fees of \$6 million, \$8 million and \$8 million for each of the years ended December 31, 2018, 2017 and 2016, respectively. The Company's real estate franchisees may receive volume incentives on their royalty payments. Such annual incentives are based upon the amount of the franchisees commission income earned and paid to the Company during the calendar year. Each brand has several different annual incentive schedules currently in effect. Franchise fee revenue is recorded net of annual volume incentives provided to real estate franchisees of \$52 million, \$62 million and \$56 million for the years ended December 31, 2018, 2017 and 2016, respectively.

The Company's wholly-owned real estate brokerage services segment, NRT, pays royalties to the Company's franchise business; however, such amounts are eliminated in consolidation. NRT paid royalties to the Real Estate Franchise Services segment of \$295 million, \$299 million and \$282 million for the years ended December 31, 2018, 2017 and 2016, respectively.

Marketing fees are generally paid by the Company's real estate franchisees and are generally calculated based on a specified percentage of gross closed commissions earned on real estate transactions, and may be subject to certain minimum and maximum payments. Brand marketing fund revenue was \$86 million, \$87 million and \$83 million for the years ended December 31, 2018, 2017 and 2016, respectively, which included marketing fees paid to the Real Estate Franchise Services segment from NRT of \$11 million, \$12 million and \$11 million for the years ended December 31, 2018, 2017 and 2016, respectively. As provided for in the franchise agreements and generally at the Company's discretion, all of these fees are to be expended for marketing purposes.

The number of franchised and company owned offices in operation are as follows:

	(Unaudited) As of December 31, 2018 2017 2016		
Franchised:			
Century 21 <sup>®</sup>	9,637	7,973	7,330
ERA <sup>®</sup>	2,331	2,298	2,347
Coldwell Banker <sup>®</sup>	2,380	2,330	2,289
Coldwell Banker Commercial <sup>®</sup>	171	180	180
Sotheby's International Realty <sup>®</sup>	949	905	836
Better Homes and Gardens <sup>®</sup> Real Estate	362	353	332
Total Franchised	15,830	14,039	13,314
Company Owned:			
Coldwell Banker <sup>®</sup>	672	707	708

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Sotheby's International Realty®	41	41	41
Corcoran®/Other	42	41	40
Total Company Owned	755	789	789

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The number of franchised and company owned offices (in the aggregate) changed as follows:

	(Unaudited)		
	For the Year Ended December 31,		
	2018	2017	2016
Franchised:			
Beginning balance	14,039	13,314	12,771
Additions	2,149	1,137	847
Terminations	(358 )	(412 )	(304 )
Ending balance	15,830	14,039	13,314
Company Owned:			
Beginning balance	789	789	787
Additions	8	20	38
Closures	(42 )	(20 )	(36 )
Ending balance	755	789	789

As of December 31, 2018, there were an insignificant number of franchise agreements that were executed for which offices are not yet operating. Additionally, as of December 31, 2018, there were an insignificant number of franchise agreements pending termination.

In order to assist franchisees in converting to one of the Company's brands or as an incentive to renew their franchise agreement, the Company may at its discretion, provide non-standard incentives, primarily in the form of conversion notes. Provided the franchisee meets certain minimum annual revenue thresholds during the term of the notes and is in compliance with the terms of the franchise agreement, the amount of the note is forgiven annually in equal ratable amounts generally over the life of the franchise agreement. Otherwise, related principal is due and payable to the Company. The amount of such franchisee conversion notes were \$131 million and \$124 million, at December 31, 2018 and 2017, respectively. These notes are principally classified within other non-current assets in the Company's Consolidated Balance Sheets. The Company recorded a contra-revenue in the statement of operations related to the forgiveness and impairment of these notes and other sales incentives of \$29 million, \$25 million and \$24 million for the years ended December 31, 2018, 2017 and 2016, respectively.

#### 6. PROPERTY AND EQUIPMENT, NET

Property and equipment, net consisted of:

	December	
	2018	2017
Furniture, fixtures and equipment	\$274	\$281
Capitalized software	401	366
Building and leasehold improvements	290	265
Land	3	3
Gross property and equipment	968	915
Less: accumulated depreciation	(664 )	(626 )
Property and equipment, net	\$304	\$289

The Company recorded depreciation expense related to property and equipment of \$98 million, \$96 million and \$89 million for the years ended December 31, 2018, 2017 and 2016, respectively.

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## 7. ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

Accrued expenses and other current liabilities consisted of:

	December 31,	
	2018	2017
Accrued payroll and related employee costs	\$118	\$140
Accrued volume incentives	37	41
Accrued commissions	30	38
Restructuring accruals	15	5
Deferred income	59	68
Accrued interest	15	13
Contingent consideration for acquisitions	8	26
Due to former parent	21	18
Other	98	129
Total accrued expenses and other current liabilities	\$401	\$478

## 8. SHORT AND LONG-TERM DEBT

Total indebtedness is as follows:

	December 31,	
	2018	2017
Senior Secured Credit Facility:		
Revolving Credit Facility	\$270	\$70
Term Loan B	1,053	1,063
Term Loan A Facility:		
Term Loan A	732	390
Term Loan A-1	—	339
4.50% Senior Notes	449	444
5.25% Senior Notes	547	546
4.875% Senior Notes	497	496
Total Short-Term & Long-Term Debt	\$3,548	\$3,348
Securitization Obligations:		
Apple Ridge Funding LLC	\$218	\$181
Cartus Financing Limited	13	13
Total Securitization Obligations	\$231	\$194

## Indebtedness Table

As of December 31, 2018, the Company's borrowing arrangements were as follows:

	Interest Rate	Expiration Date	Principal Amount	Unamortized Discount and Debt Issuance Costs	Net Amount
Senior Secured Credit Facility:					
Revolving Credit Facility (1)	(2)	February 2023	\$ 270	\$ *	\$ 270
Term Loan B	(3)	February 2025	1,069	16	1,053
Term Loan A Facility:					
Term Loan A	(4)	February 2023	736	4	732
Senior Notes	4.50%	April 2019	450	1	449
Senior Notes	5.25%	December 2021	550	3	547

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Senior Notes	4.875% June 2023	500	3	497
Securitization obligations: (5)				
Apple Ridge Funding LLC (6)	June 2019	218	*	218
Cartus Financing Limited (7)	August 2019	13	*	13
Total (8)		\$ 3,806	\$ 27	\$ 3,779

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\* The debt issuance costs related to our Revolving Credit Facility and securitization obligations are classified as a deferred financing asset within other assets.

As of December 31, 2018, the Company had \$1,400 million of borrowing capacity under its Revolving Credit Facility, with \$1,130 million of available capacity. The Revolving Credit Facility expires in February 2023 but is classified on the balance sheet as current due to the revolving nature and terms and conditions of the facility. On February 15, 2019, the Company redeemed all of its outstanding \$450 million 4.50% Senior Notes due in April 2019. The Company utilized borrowings under its Revolving Credit Facility to redeem the 4.50% Senior Notes and plans to refinance on a long-term basis all or a portion of the funds used to redeem the 4.50% Senior Notes, subject to market conditions. On February 22, 2019, the Company had \$880 million in outstanding borrowings under the Revolving Credit Facility, leaving \$520 million of available capacity.

Interest rates with respect to revolving loans under the Senior Secured Credit Facility at December 31, 2018 were based on, at the Company's option, (a) adjusted London Interbank Offering Rate ("LIBOR") plus an additional margin or (b) JP Morgan Chase Bank, N.A.'s prime rate ("ABR") plus an additional margin, in each case subject to adjustment based on the then current senior secured leverage ratio. Based on the previous quarter senior secured leverage ratio, the LIBOR margin was 2.25% and the ABR margin was 1.25% for the three months ended December 31, 2018.

The Term Loan B provides for quarterly amortization payments totaling 1% per annum of the original principal amount. The interest rate with respect to term loans under the Term Loan B is based on, at the Company's option, (a) adjusted LIBOR plus 2.25% (with a LIBOR floor of 0.75%) or (b) ABR plus 1.25% (with an ABR floor of 1.75%).

The Term Loan A provides for quarterly amortization payments, which commenced on June 30, 2018, totaling per annum 2.5%, 2.5%, 5.0%, 7.5% and 10.0% of the original principal amount of the Term Loan A, with the balance of the Term Loan A due at maturity on February 8, 2023. The interest rates with respect to the Term Loan A are based on, at the Company's option, (a) adjusted LIBOR plus an additional margin or (b) ABR plus an additional margin, in each case subject to adjustment based on the then current senior secured leverage ratio. Based on the previous quarter senior secured leverage ratio, the LIBOR margin was 2.25% and the ABR margin was 1.25% for the three months ended December 31, 2018.

Available capacity is subject to maintaining sufficient relocation related assets to collateralize these securitization obligations.

As of December 31, 2018, the Company had \$250 million of borrowing capacity under the Apple Ridge Funding LLC securitization program leaving \$32 million of available capacity.

Consists of a £10 million revolving loan facility and a £5 million working capital facility. As of December 31, 2018, the Company had \$19 million of borrowing capacity under the Cartus Financing Limited securitization program leaving \$6 million of available capacity.

Not included in this table is the Company's Unsecured Letter of Credit Facility which had a capacity of \$66 million with \$63 million utilized at a weighted average rate of 3.33% at December 31, 2018.

**Maturities Table**

As of December 31, 2018, the combined aggregate amount of maturities for long-term borrowings, excluding securitization obligations, for each of the next five years is as follows:

Year	Amount
2019 (a)	\$ 749
2020	44
2021	612
2022	81
2023	1,075

Consists of \$450 million of 4.50% Senior Notes due in April 2019, four quarters of 2019 amortization payments totaling \$18 million and \$11 million for the Term Loan A and Term Loan B facilities, respectively, as well as \$270 million of revolver borrowings under the Revolving Credit Facility which expires in February 2023, but is classified on the balance sheet as current due to the revolving nature and terms and conditions of the facility. On (a) February 15, 2019, the Company redeemed all of its outstanding \$450 million 4.50% Senior Notes due in April 2019. The Company utilized borrowings under its Revolving Credit Facility to redeem the 4.50% Senior Notes and plans to refinance on a long-term basis all or a portion of the funds used to redeem the 4.50% Senior Notes, subject to market conditions. See Note 19, "Subsequent Events" for further details.

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## Senior Secured Credit Facility

In July 2016, the Company entered into a third amendment (the "Third Amendment") to the Amended and Restated Credit Agreement dated as of March 5, 2013, as amended. The Third Amendment replaced the \$1,858 million Term Loan B due March 2020 with a new \$1,100 million Term Loan B due July 20, 2022. In January 2017, the Company entered into a fourth amendment (the "Fourth Amendment") to the Amended and Restated Credit Agreement that repriced the Term Loan B through a refinancing of the existing term loan with a new Term Loan B reducing the interest rate by 75 basis points. In February 2018, the Company entered into a fifth amendment (the "Fifth Amendment") to the Amended and Restated Credit Agreement (as amended, amended and restated, modified or supplemented from time to time, the "Senior Secured Credit Agreement") that replaced the approximately \$1,100 million Term Loan B due July 2022 with a new \$1,080 million Term Loan B due February 2025.

In January 2017, the Company entered into an Incremental Assumption Agreement to the Senior Secured Credit Agreement pursuant to which the Company increased the borrowing capacity under its Revolving Credit Facility to \$1,050 million from the existing \$815 million. In February 2018, the Company entered into the sixth amendment (the "Sixth Amendment") to the Amended and Restated Senior Secured Credit Agreement which increased the borrowing capacity under its Revolving Credit Facility to \$1,400 million from the prior \$1,050 million and extended the maturity date to February 2023 from October 2020.

The Senior Secured Credit Agreement provides for:

- the Term Loan B issued in the original aggregate principal amount of \$1,080 million with a maturity date of February 2025. The Term Loan B has quarterly amortization payments totaling 1% per annum of the initial aggregate principal amount. The interest rate with respect to term loans under the Term Loan B is based on, at Realogy Group's option, adjusted LIBOR plus 2.25% (with a LIBOR floor of 0.75%) or ABR plus 1.25% (with an ABR floor of 1.75%); and
- a \$1,400 million Revolving Credit Facility with a maturity date of February 2023, which includes a \$125 million letter of credit subfacility. The interest rate with respect to revolving loans under the Revolving Credit Facility is based on, at Realogy Group's option, adjusted LIBOR or ABR plus an additional margin subject to the following adjustments based on the Company's then current senior secured leverage ratio:

Senior Secured Leverage Ratio	Applicable LIBOR Margin	Applicable ABR Margin
Greater than 3.50 to 1.00	2.50%	1.50%
Less than or equal to 3.50 to 1.00 but greater than or equal to 2.50 to 1.00	2.25%	1.25%
Less than 2.50 to 1.00 but greater than or equal to 2.00 to 1.00	2.00%	1.00%
Less than 2.00 to 1.00	1.75%	0.75%

The Senior Secured Credit Agreement permits the Company to obtain up to \$500 million of additional credit facilities from lenders reasonably satisfactory to the administrative agent and us, without the consent of the existing lenders under the new senior secured credit facility, plus an unlimited amount if Realogy Group's senior secured leverage ratio is less than 3.50 to 1.00 on a pro forma basis. Subject to certain restrictions, the Senior Secured Credit Agreement also permits us to issue senior secured or unsecured notes in lieu of any incremental facility.

The obligations under the Senior Secured Credit Agreement are secured to the extent legally permissible by substantially all of the assets of Realogy Group, Realogy Intermediate and all of their domestic subsidiaries, other than certain excluded subsidiaries.

Realogy Group's Senior Secured Credit Agreement contains financial, affirmative and negative covenants and requires Realogy Group to maintain (so long as the Revolving Credit Facility is outstanding) a senior secured leverage ratio, not to exceed 4.75 to 1.00. The leverage ratio is tested quarterly regardless of the amount of borrowings outstanding and letters of credit issued under the revolver at the testing date. Total senior secured net debt does not include unsecured indebtedness, including the Unsecured Notes as well as the securitization obligations. At December 31, 2018, Realogy Group was in compliance with the senior secured leverage ratio covenant.



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## Term Loan A Facility

In October 2015, Realogy Group entered into the Term Loan A senior secured credit agreement which provides for a five-year, \$435 million loan issued at par with a maturity date of October 23, 2020 (the "Term Loan A") and has terms substantially similar to the Senior Secured Credit Agreement. In July 2016, Realogy Group entered into a first amendment to the Term Loan A senior secured credit agreement. Under the amendment, the Company issued the Term Loan A-1 in the amount of \$355 million with a maturity date in July 2021 under its existing Term Loan A Facility and on terms substantially similar to its existing Term Loan A.

In February 2018, Realogy Group entered into a second amendment to the Term Loan A senior secured credit agreement. Under the amendment, the Company aggregated the existing \$435 million Term Loan A and \$355 million Term Loan A-1 tranches due October 2020 and July 2021, respectively, into a new single tranche of \$750 million Term Loan A due February 2023. The Term Loan A provides for quarterly amortization payments totaling per annum 2.5%, 2.5%, 5.0%, 7.5% and 10.0% of the original principal amount of the Term Loan A, which commence on June 30, 2018 and continue through February 8, 2023. The interest rates with respect to the Term Loan A are based on, at our option, adjusted LIBOR or ABR plus an additional margin subject to the following adjustments based on the Company's then current senior secured leverage ratio:

Senior Secured Leverage Ratio	Applicable LIBOR Margin	Applicable ABR Margin
Greater than 3.50 to 1.00	2.50%	1.50%
Less than or equal to 3.50 to 1.00 but greater than or equal to 2.50 to 1.00	2.25%	1.25%
Less than 2.50 to 1.00 but greater than or equal to 2.00 to 1.00	2.00%	1.00%
Less than 2.00 to 1.00	1.75%	0.75%

Consistent with the Senior Secured Credit Agreement, the Term Loan A Facility permits the Company to obtain up to \$500 million of additional credit facilities from lenders reasonably satisfactory to the administrative agent and the Company, without the consent of the existing lenders under the Term Loan A, plus an unlimited amount if the Company's senior secured leverage ratio is less than 3.50 to 1.00 on a pro forma basis. Subject to certain restrictions, the Term Loan A Facility also permits us to issue senior secured or unsecured notes in lieu of any incremental facility.

## Unsecured Notes

The 4.50% Senior Notes, 5.25% Senior Notes and 4.875% Senior Notes (collectively the "Unsecured Notes") are unsecured senior obligations of Realogy Group that mature on April 15, 2019, December 1, 2021 and June 1, 2023, respectively. Interest on the Unsecured Notes is payable each year semiannually on April 15 and October 15 for the 4.50% Senior Notes and June 1 and December 1 for both the 5.25% Senior Notes and 4.875% Senior Notes.

The Unsecured Notes are guaranteed on an unsecured senior basis by each domestic subsidiary of Realogy Group that is a guarantor under the Senior Secured Credit Facility and Realogy Group's outstanding debt securities, and are guaranteed by Realogy Holdings on an unsecured senior subordinated basis. The indentures governing the Unsecured Notes contain affirmative and negative covenants of Realogy Group and the subsidiary guarantors.

On February 15, 2019, the Company redeemed all of its outstanding \$450 million 4.50% Senior Notes due in April 2019. The Company utilized borrowings under its Revolving Credit Facility to redeem the 4.50% Senior Notes and plans to refinance on a long-term basis all or a portion of the funds used to redeem the 4.50% Senior Notes, subject to market conditions. See Note 19, "Subsequent Events" for further details.

## Other Debt Facilities

The Company has an Unsecured Letter of Credit Facility to provide for the issuance of letters of credit required for general corporate purposes by the Company which expires in December 2019. At December 31, 2018, the capacity of the facility was \$66 million, with \$63 million being utilized and at December 31, 2017, the capacity was \$74 million, with \$69 million being utilized.

The fixed pricing to the Company is based on a spread above the credit default swap rate for senior unsecured debt obligations of the Company over the applicable letter of credit period. Realogy Group's obligations under the

Unsecured Letter of Credit Facility are guaranteed on an unsecured senior basis by each domestic subsidiary of Realogy Group that is a guarantor under the Senior Secured Credit Facility and Realogy Group's outstanding debt securities.

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### Securitization Obligations

Realogy Group has secured obligations through Apple Ridge Funding LLC under a securitization program which expires in June 2019. As of December 31, 2018, the Company had \$250 million of borrowing capacity under the Apple Ridge Funding LLC securitization program with \$218 million being utilized.

Realogy Group, through a special purpose entity known as Cartus Financing Limited, has agreements providing for a £10 million revolving loan facility and a £5 million working capital facility which expires in August 2019. As of December 31, 2018, there were \$13 million of outstanding borrowings on the facilities. These Cartus Financing Limited facilities are secured by the relocation assets of a U.K. government contract in this special purpose entity and are therefore classified as permitted securitization financings as defined in Realogy Group's Senior Secured Credit Facility and the indentures governing the Unsecured Notes.

The Apple Ridge entities and the Cartus Financing Limited entity are consolidated special purpose entities that are utilized to securitize relocation receivables and related assets. These assets are generated from advancing funds on behalf of clients of Realogy Group's relocation business in order to facilitate the relocation of their employees. Assets of these special purpose entities are not available to pay Realogy Group's general obligations. Under the Apple Ridge program, provided no termination or amortization event has occurred, any new receivables generated under the designated relocation management agreements are sold into the securitization program and as new eligible relocation management agreements are entered into, the new agreements are designated to the program. The Apple Ridge program has restrictive covenants and trigger events, including performance triggers linked to the age and quality of the underlying assets, foreign obligor limits, multicurrency limits, financial reporting requirements, restrictions on mergers and change of control, any uncured breach of Realogy Group's senior secured leverage ratio under Realogy Group's Senior Secured Credit Facility, and cross-defaults to Realogy Group's material indebtedness. The occurrence of a trigger event under the Apple Ridge securitization facility could restrict our ability to access new or existing funding under this facility or result in termination of the facility, either of which would adversely affect the operation of our relocation business.

Certain of the funds that Realogy Group receives from relocation receivables and related assets must be utilized to repay securitization obligations. These obligations were collateralized by \$238 million and \$218 million of underlying relocation receivables and other related relocation assets at December 31, 2018 and 2017, respectively. Substantially all relocation related assets are realized in less than twelve months from the transaction date. Accordingly, all of Realogy Group's securitization obligations are classified as current in the accompanying Consolidated Balance Sheets. Interest incurred in connection with borrowings under these facilities amounted to \$9 million and \$7 million for the years ended December 31, 2018 and 2017, respectively. This interest is recorded within net revenues in the accompanying Consolidated Statements of Operations as related borrowings are utilized to fund Realogy Group's relocation business where interest is generally earned on such assets. These securitization obligations represent floating rate debt for which the average weighted interest rate was 3.8% and 3.3% for the years ended December 31, 2018 and 2017, respectively.

### Loss on the Early Extinguishment of Debt and Write-Off of Financing Costs

As a result of the refinancing transactions in February 2018, the Company recorded a loss on the early extinguishment of debt of \$7 million and wrote off financing costs of \$2 million to interest expense during the year ended December 31, 2018.

As a result of the refinancing transaction in January 2017 and a reduction of the Unsecured Letter of Credit Facility in September of 2017, the Company recorded losses on the early extinguishment of debt of \$5 million during the year ended December 31, 2017.

## 9. EMPLOYEE BENEFIT PLANS

### DEFINED BENEFIT PENSION PLAN

The Company's defined benefit pension plan was closed to new entrants as of July 1, 1997 and existing participants do not accrue any additional benefits. The net periodic pension cost for 2018 was less than \$1 million and was comprised of interest cost of approximately \$5 million and the amortization of the actuarial net loss of \$2 million, offset by a

benefit of \$7 million for the expected return on assets. The net periodic pension cost for 2017 was \$1 million and was comprised of interest cost of approximately \$6 million and the amortization of the actuarial net loss of \$2 million, partially offset by a benefit of \$7 million for the expected return on assets.

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At December 31, 2018 and 2017, the accumulated benefit obligation of this plan was \$128 million and \$145 million, respectively, and the fair value of the plan assets were \$90 million and \$108 million, respectively, resulting in an unfunded accumulated benefit obligation of \$38 million and \$37 million, respectively, which is recorded in Other non-current liabilities in the Consolidated Balance Sheets.

Estimated future benefit payments as of December 31, 2018 are as follows:

Year	Amount
2019	\$ 9
2020	9
2021	9
2022	9
2023	9
2024 through 2028	45

The minimum funding required during 2019 is estimated to be \$3 million.

The following table presents the fair values of plan assets by category as of December 31, 2018:

Asset Category	Quoted Price in Active Market for Identical Assets (Level I)	Significant Other Observable Inputs (Level II)	Significant Unobservable Inputs (Level III)	Total
Cash and cash equivalents	\$ 3	\$ —	\$ —	\$ 3
Equity securities	—	43	—	43
Fixed income securities	—	44	—	44
Total	\$ 3	\$ 87	\$ —	\$ 90

The following table presents the fair values of plan assets by category as of December 31, 2017:

Asset Category	Quoted Price in Active Market for Identical Assets (Level I)	Significant Other Observable Inputs (Level II)	Significant Unobservable Inputs (Level III)	Total
Cash and cash equivalents	\$ 1	\$ —	\$ —	\$ 1
Equity securities	—	71	—	71
Fixed income securities	—	36	—	36
Total	\$ 1	\$ 107	\$ —	\$ 108

**OTHER EMPLOYEE BENEFIT PLANS**

The Company also maintains post-retirement health and welfare plans for certain subsidiaries and a non-qualified pension plan for certain individuals. At December 31, 2018 and 2017, the related projected benefit obligation for these plans accrued on the Company's Consolidated Balance Sheets (primarily within other non-current liabilities) was \$5 million and \$6 million, respectively.

**DEFINED CONTRIBUTION SAVINGS PLAN**

The Company sponsors a defined contribution savings plan that provides certain of its eligible employees an opportunity to accumulate funds for retirement and has a Company match for a portion of the contributions made by participating employees. The Company's cost for contributions to this plan was \$16 million, \$16 million and \$15 million for the years ended December 31, 2018, 2017 and 2016, respectively.



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## 10. INCOME TAXES

The components of pretax income for domestic and foreign operations consisted of the following:

	Year Ended December 31,		
	2018	2017	2016
Domestic	\$204	\$365	\$351
Foreign	1	4	10
Pretax income	\$205	\$369	\$361

The components of income tax expense (benefit) consisted of the following:

	Year Ended December 31,		
	2018	2017	2016
Current:			
Federal	\$(13)	\$(7 )	\$10
State	5	4	8
Foreign	2	1	2
Total current	(6 )	(2 )	20
Deferred:			
Federal	62	(72 )	107
State	9	9	16
Foreign	—	—	1
Total deferred	71	(63 )	124
Income tax expense (benefit)	\$65	\$(65)	\$144

The Tax Cuts and Jobs Act of 2017 (the “2017 Tax Act”), which became law on December 22, 2017, reduced the U.S. Federal corporate tax rate from 35% to 21% for tax years beginning in 2018. The \$65 million income tax benefit in 2017 included a tax benefit of approximately \$184 million due to the re-measurement of the Company’s net deferred tax liabilities associated with the 2017 Tax Act and a \$32 million reduction in the Company’s reserve for uncertain tax positions, partially offset by current operating results.

A reconciliation of the Company’s effective income tax rate at the U.S. federal statutory rate of 21% to the actual expense was as follows:

	Year Ended December 31,		
	2018	2017	2016
Federal statutory rate	21 %	35 %	35 %
State and local income taxes, net of federal tax benefits	6	4	4
Impact of the 2017 Tax Act	—	(50)	—
Non-deductible equity compensation	2	1	1
Non-deductible executive compensation	1	—	—
Other permanent differences	1	1	—
Uncertain tax positions	(1)	(9 )	—
Net change in valuation allowance	2	1	—
Other	—	(1 )	—
Effective tax rate	32 %	(18 %)	40 %



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Deferred income taxes result from temporary differences between the amount of assets and liabilities recognized for financial reporting and tax purposes. The components of the deferred income tax assets and liabilities, as of December 31, are as follows:

	2018	2017
Deferred income tax assets:		
Net operating loss carryforwards	\$241	\$288
Tax credit carryforwards	24	35
Accrued liabilities and deferred income	92	85
Minimum pension obligations	16	16
Provision for doubtful accounts	7	8
Liability for unrecognized tax benefits	1	1
Interest rate swaps	5	2
Total deferred tax assets	386	435
Less: valuation allowance	(18 )	(13 )
Total deferred income tax assets after valuation allowance	368	422
Deferred income tax liabilities:		
Depreciation and amortization	747	736
Prepaid expenses	8	2
Basis difference in investment in joint ventures	1	10
Total deferred tax liabilities	756	748
Net deferred income tax liabilities	\$(388)	\$(326)

Deferred tax assets and deferred tax liabilities are netted by tax jurisdiction. The net deferred income tax liability of \$388 million as of December 31, 2018 is included in the accompanying Consolidated Balance Sheets with \$389 million in deferred income taxes (non-current liabilities) and \$1 million in other non-current assets. The net deferred income tax liability of \$326 million as of December 31, 2017 is included in the accompanying Consolidated Balance Sheets with \$327 million in deferred income taxes (non-current liabilities) and \$1 million in other non-current assets. As of December 31, 2018, the Company had gross federal and state net operating loss carryforwards of \$855 million. The federal net operating loss carryforwards expire between 2029 and 2033 and the state net operating loss carryforwards expire between 2019 and 2033.

#### Accounting for Uncertainty in Income Taxes

The Company utilizes the FASB guidance for accounting for uncertainty in income taxes, which prescribes a recognition threshold and a measurement attribute for the financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. The Company reflects changes in its liability for unrecognized tax benefits as income tax expense in the Consolidated Statements of Operations. As of December 31, 2018, the Company's gross liability for unrecognized tax benefits was \$20 million, of which \$17 million would affect the Company's effective tax rate, if recognized. The Company does not expect that its unrecognized tax benefits will significantly change over the next 12 months.

The Company files U.S., state and foreign income tax returns in jurisdictions with varying statutes of limitations. Tax returns for the 2006 through 2018 tax years remain subject to examination by federal and certain state tax authorities. In significant foreign jurisdictions, tax returns for the 2008 through 2018 tax years generally remain subject to examination by their respective tax authorities. The Company believes that it is reasonably possible that the total amount of its unrecognized tax benefits could decrease by \$1 million in certain taxing jurisdictions where the statute of limitations is set to expire within the next 12 months.

The Company recognizes accrued interest and penalties related to unrecognized tax benefits in interest expense and operating expenses, respectively. The Company recognized a reduction of interest expense of \$1 million for the year ended December 31, 2018, a reduction of interest expense of \$2 million for the year ended December 31, 2017 and a reduction of interest expense of \$4 million for the year ended December 31, 2016.

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The rollforward of unrecognized tax benefits are summarized in the table below:

Unrecognized tax benefits—January 1, 2016	\$78
Gross increases—tax positions in prior periods	3
Reduction due to lapse of statute of limitations	(3)
Unrecognized tax benefits—December 31, 2016	78
Gross increases—tax positions in prior periods	1
Gross decreases—tax positions in prior periods	(54)
Reduction due to lapse of statute of limitations	(3)
Unrecognized tax benefits—December 31, 2017	22
Reduction due to lapse of statute of limitations	(2)
Unrecognized tax benefits—December 31, 2018	\$20

The Company is subject to income taxes in the United States and several foreign jurisdictions. Significant judgment is required in determining the worldwide provision for income taxes and recording related assets and liabilities. In the ordinary course of business, there are many transactions and calculations where the ultimate tax determination is uncertain. The Company is regularly under audit by tax authorities whereby the outcome of the audits is uncertain. The Company believes there is appropriate support for positions taken on its tax returns. The liabilities that have been recorded represent the best estimates of the probable loss on certain positions and are adequate for all open years based on an assessment of many factors including past experience and interpretations of tax law applied to the facts of each matter. However, the outcomes of tax audits are inherently uncertain.

**Tax Sharing Agreement**

Under the Tax Sharing Agreement with Cendant, Wyndham Worldwide and Travelport, the Company is generally responsible for 62.5% of payments made to settle claims with respect to tax periods ending on or prior to December 31, 2006 that relate to income taxes imposed on Cendant and certain of its subsidiaries, the operations (or former operations) of which were determined by Cendant not to relate specifically to the respective businesses of Realogy, Wyndham Worldwide, Avis Budget or Travelport. With respect to any remaining residual legacy Cendant tax liabilities, the Company and its former parent believe there is appropriate support for the positions taken on Cendant's tax returns. However, tax audits and any related litigation, including disputes or litigation on the allocation of tax liabilities between parties under the Tax Sharing Agreement, could result in outcomes for the Company that are different from those reflected in the Company's historical financial statements.

**11. RESTRUCTURING COSTS**

Restructuring charges for the years ended December 31, 2018, 2017 and 2016 were \$58 million, \$12 million and \$39 million, respectively. The components of the restructuring charges for the years ended December 31, 2018, 2017 and 2016 were as follows:

	Years Ended December		
	31,		
	2018	2017	2016
Personnel-related costs (1)	\$ 25	\$ 7	\$ 22
Facility-related costs (2)	22	4	11
Internal use software impairment (3)	11	—	—
Other restructuring costs (4)	—	1	6
Total restructuring charges (5)	\$ 58	\$ 12	\$ 39

(1) Personnel-related costs consist of severance costs provided to employees who have been terminated and duplicate payroll costs during transition.

(2) Facility-related costs consist of costs associated with planned facility closures such as contract termination costs, lease payments, net of applicable sublease income, that will continue to be incurred under the contract for its remaining term without economic benefit to the Company, accelerated depreciation on asset disposals and other

facility and employee relocation related costs.

- (3) Internal use software impairment relates to development costs capitalized for a project that was determined to not meet the Company's strategic goals when analyzed by the Company's new leadership team.

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(4) Other restructuring costs consist of costs related to professional fees, consulting fees and other costs associated with restructuring activities which are primarily included in the Corporate and Other business segment.

The year ended December 31, 2018 includes \$56 million of expense related to the Leadership Realignment and

(5) Other Restructuring Activities program and \$2 million of expense related to the Business Optimization Initiative program. The years ended December 31, 2017 and December 31, 2016 include expenses related to the Business Optimization Initiative program.

#### Leadership Realignment and Other Restructuring Activities

Beginning in the first quarter of 2018, the Company commenced the implementation of a plan to drive its business forward and enhance stockholder value. The key aspects of this plan include senior leadership realignment, an enhanced focus on technology and talent, as well as further attention on office footprint and other operational efficiencies.

The following is a reconciliation of the beginning and ending reserve balances for the restructuring program related to Leadership Realignment and Other Restructuring Activities:

	Personnel-related costs	Facility-related costs	Internal use software impairment	Total
Balance at December 31, 2017	\$ —	\$ —	\$ —	\$ —
Restructuring charges	25	20	11	56
Costs paid or otherwise settled	(18 )	(7 )	(11 )	(36 )
Balance at December 31, 2018	\$ 7	\$ 13	\$ —	\$ 20

The following table shows the total costs currently expected to be incurred by type of cost for the restructuring program related to Leadership Realignment and Other Restructuring Activities:

	Total amount expected to be incurred	Amount incurred to date	Total amount remaining to be incurred
Personnel-related costs	\$ 27	\$ 25	\$ 2
Facility-related costs	20	20	—
Internal use software impairment	11	11	—
Total	\$ 58	\$ 56	\$ 2

The following table shows the total costs currently expected to be incurred by reportable segment for the restructuring program related to Leadership Realignment and Other Restructuring Activities:

	Total amount expected to be incurred	Amount incurred to date	Total amount remaining to be incurred
Real Estate Franchise Services	\$ 3	\$ 3	\$ —
Company Owned Real Estate Brokerage Services	37	36	1
Relocation Services	11	11	—
Title and Settlement Services	3	3	—
Corporate and Other	4	3	1
Total	\$ 58	\$ 56	\$ 2

#### Business Optimization Initiative

During the fourth quarter of 2015, the Company began a business optimization initiative that focused on maximizing the efficiency and effectiveness of the cost structure of each of the Company's business units. The action was designed to improve client service levels across each of the business units while enhancing the Company's profitability and incremental margins. The plan focused on several key areas of opportunity which include process improvement efficiencies, office footprint optimization, leveraging technology and media spend, centralized

procurement, outsourcing administrative services and organizational design. The expected costs of activities undertaken in connection with the restructuring plan are largely complete. At December 31, 2017, the remaining liability was \$7 million. During the year ended December 31, 2018, the Company incurred facility-related costs of \$2 million and paid or settled costs of \$7 million, resulting in a remaining accrual of \$2 million.

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## 12. STOCK-BASED COMPENSATION

The Company grants stock-based compensation awards to certain senior management, employees and directors including non-qualified stock options, restricted stock units ("RSUs"), performance restricted stock units ("PRSUs") and performance share units ("PSUs").

The Company's stockholders approved the 2018 Long-Term Incentive Plan (the "2018 Plan") at the 2018 Annual Meeting of Stockholders held on May 2, 2018. Upon approval of the 2018 Plan, the 2012 Amended and Restated Long-Term Incentive Plan, as amended (the "2012 Plan") was terminated, no future awards were permitted to be granted under the 2012 Plan, and any shares available for future issuance under the 2012 Plan were canceled. Under the 2018 Plan, 6 million shares were authorized for issuance plus any shares that expire or are forfeited under the 2012 Plan after March 1, 2018. As of December 31, 2018, there are approximately 5 million shares available for future grants.

Each of the 2012 and 2018 Plan includes a retirement provision for equity grants which provide for continued vesting of awards once an employee has attained the age of 65 years, or 55 years of age or older plus at least ten years of tenure with the Company, provided they have been employed or provided services to the Company for one year following the date of grant or start of the performance period.

A summary of activity for the year ended December 31, 2018 is presented below (number of shares in millions):

	Restricted Stock Units	Weighted Average Grant Date Fair Value	Performance Share Units (a)	Weighted Average Grant Date Fair Value	Options (e)	Weighted Average Exercise Price
Outstanding at January 1, 2018	2.0	\$ 31.71	1.8	\$ 33.16	3.6	\$ 31.75
Granted	1.5	25.39	0.5	25.11	0.4	25.35
Distributed/Exercised	(0.9 )	(b)33.67	(0.4 )	(c)42.14	—	—
Forfeited/Expired	(0.1 )	27.80	(0.1 )	27.99	(0.2 )	38.28
Outstanding at December 31, 2018	2.5	\$ 27.32	1.8	\$ 28.13	3.8	(d)\$ 30.92

(a) The PSU amounts in the table are shown at the target amount of the award.

(b) The total fair value of RSUs which were distributed during the year ended December 31, 2018 was \$30 million.

The total fair value of PSUs which were distributed during the year ended December 31, 2018 was \$15 million, which includes the distribution of PSUs awarded in 2015 subject to performance over the three-year performance period ended December 31, 2017, at a fair value of \$9 million. Amounts distributed do not include 0.2 million

(c) PSUs awarded in 2016 subject to achievement against performance over the three-year period ended and vested December 31, 2018, at a fair value of \$5 million and at a weighted average grant date fair value of \$34.00. These PSUs were distributed in early 2019.

(d) Options outstanding at December 31, 2018 have an intrinsic value of zero and have a weighted average remaining contractual life of 5.3 years.

(e) The following table summarizes information regarding exercisable stock options as of December 31, 2018:

Range of Exercise Prices	Options Vested	Weighted Average Exercise Price	Aggregate Intrinsic Value	Weighted Average Remaining Contractual Life
\$15.00 to \$50.00	2.6	\$ 28.82	\$ —	4.1 years
\$50.01 and above	0.1	\$ 137.50	\$ —	1.9 years

Awards granted annually include a mix of RSUs (PRSUs for the CEO and direct reports in 2017 and 2016), options and PSUs.

The RSUs and PRSUs vest over three years, with 33.33% vesting on each anniversary of the grant date. The fair value of RSUs and PRSUs are equal to the closing sale price of the Company's common stock on the date of grant.

Time-vesting of the PRSUs granted to the CEO and direct reports in 2017 and 2016 was subject to achievement of a minimum EBITDA performance goal during the year that the award was granted.

The PSUs are incentives that reward grantees based upon the Company's financial performance over a three-year performance period which begins January 1st of the grant year and ends on December 31st of the third year following the grant year. There are two PSU awards: one is based upon the total stockholder return of Realogy's common stock relative to the total stockholder return of the SPDR S&P Homebuilders Index ("XHB") (the "RTSR award"), and the other is based



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upon the achievement of cumulative free cash flow goals. The number of shares that may be issued under each PSU award is variable and based upon the extent to which the performance goals are achieved over the performance period (with a range of payout from 0% to 175% of target for the RTSR award and 0% to 200% of target for the achievement of cumulative free cash flow award). The shares earned will be distributed during the first quarter after the end of the performance period. The fair value of PSUs without a market condition is equal to the closing sale price of the Company's common stock on the date of grant. The fair value of the PSU RTSR awards was estimated on the date of grant using the Monte Carlo Simulation method utilizing the following assumptions:

	2018	2017	2016		
	RTSR	RTSR	RTSR		
	PSU	PSU	PSU		
Weighted average grant date fair value	\$25.45	\$27.98	\$27.99		
Weighted average expected volatility (a)	29.8	% 29.0	% 28.1	%	
Weighted average volatility of XHB	17.9	% 18.4	% 19.4	%	
Weighted average correlation coefficient	0.44	0.53	0.58		
Weighted average risk-free interest rate	2.6	% 1.5	% 0.9	%	
Weighted average dividend yield	—	—	—		

(a) Expected volatility is based on historical volatilities of the Company and select comparable companies.

The stock options have a maximum term of ten years and vest over four years, with 25% vesting on each anniversary date of the grant date. The options have an exercise price equal to the closing sale price of the Company's common stock on the date of grant. The fair value of the options was estimated on the date of grant using the Black-Scholes option-pricing model utilizing the following assumptions:

	2018	2017	2016		
	Options	Options	Options		
Weighted average grant date fair value	\$7.12	\$8.61	\$10.81		
Weighted average expected volatility (a)	28.5	% 30.7	% 31.7	%	
Weighted average expected term (years) (b)	6.25	6.25	6.25		
Weighted average risk-free interest rate (c)	2.7	% 2.0	% 1.3	%	
Weighted average dividend yield	1.4	% 1.2	% 0.1	%	

(a) Expected volatility was based on historical volatilities of the Company and select comparable companies.

(b) The expected term of the options granted represents the period of time that options are expected to be outstanding and is based on the simplified method.

(c) The risk-free interest rate was based on the U.S. Treasury yield curve in effect at the time of the grant, which corresponds to the expected term of the options.

#### Stock-Based Compensation Expense

As of December 31, 2018, based on current performance achievement expectations, there was \$42 million of unrecognized compensation cost related to incentive equity awards under the plans which will be recorded in future periods as compensation expense over a remaining weighted average period of approximately 1.9 years. The Company recorded stock-based compensation expense related to the incentive equity awards of \$40 million, \$52 million and \$57 million for the years ended December 31, 2018, 2017 and 2016, respectively.

### 13. COMMITMENTS AND CONTINGENCIES

#### Litigation

The Company is involved in claims, legal proceedings, alternative dispute resolution and governmental inquiries related to alleged contract disputes, business practices, intellectual property and other commercial, employment, regulatory and tax matters. Examples of such matters include but are not limited to allegations:

•

that independent residential real estate sales agents engaged by NRT or by affiliated franchisees —under certain state or federal laws—are potentially employees instead of independent contractors, and they or regulators therefore may bring claims against NRT for breach of contract, wage and hour classification claims, wrongful discharge, unemployment and workers' compensation and could seek benefits, back wages, overtime, indemnification, penalties related to classification practices and expense reimbursement available to employees or

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similar claims against our franchise operations as an alleged joint employer of an affiliated franchisee's independent sales agents;

• concerning other employment law matters, including wage and hour claims;

• that the Company is vicariously liable for the acts of franchisees under theories of actual or apparent agency;

• by current or former franchisees that franchise agreements were breached including improper terminations;

• concerning claims for alleged RESPA or state real estate law violations;

• concerning claims generally against the company owned brokerage operations for negligence, misrepresentation or breach of fiduciary duty in connection with the performance of real estate brokerage or other professional services as well as other brokerage claims associated with listing information and property history;

• related to copyright law, including infringement actions alleging improper use of copyrighted photographs on websites or in marketing materials without consent of the copyright holder;

• concerning claims generally against the title company contending that, as the escrow company, the company knew or should have known that a transaction was fraudulent or concerning other title defects or settlement errors;

• concerning information security and cyber-crime, including claims under new and emerging data privacy laws related to the protection of customer, employee or third-party information, as well as those related to the diversion of homesale transaction closing funds;

• concerning anti-trust and anti-competition matters; and

• those related to general fraud claims.

Real Estate Business Litigation

*Whitlach v. Premier Valley, Inc. d/b/a Century 21 M&M and Century 21 Real Estate LLC* (California Superior Court for the County of Alameda). This is a putative class action complaint filed on December 20, 2018 by plaintiff James Whitlach against Premier Valley Inc., a Century 21 Real Estate independently-owned franchisee doing business as Century 21 M&M ("Century 21 M&M"). The complaint also names Century 21 Real Estate LLC, a wholly-owned subsidiary of the Company and the franchisor of Century 21 Real Estate ("Century 21"), as an alleged joint employer of the franchisee's independent sales agents and seeks to certify a class that could potentially include all agents of both Century 21 M&M and Century 21 in California. The plaintiff alleges that Century 21 M&M misclassified all of its independent real estate agents, salespeople, sales professionals, broker associates and other similar positions as independent contractors, failed to pay minimum wages, failed to provide meal and rest breaks, failed to pay timely wages, failed to keep proper records, failed to provide appropriate wage statements, made unlawful deductions from wages, and failed to reimburse plaintiff and the putative class for business related expenses, resulting in violations of the California Labor Code. The complaint also asserts an unfair business practice claim based on the alleged violations described above.

On February 15, 2019, the plaintiff amended his complaint to assert a claim pursuant to the California Private Attorneys Generals Act ("PAGA"). The PAGA claim included in the amended complaint are substantively similar to those asserted in the original complaint. Under California law, PAGA claims are generally not subject to arbitration and may result in exposure in the form of additional penalties.

The case raises significant and various previously unlitigated claims and the PAGA claim adds additional financial risks and uncertainties. Given the early stage of this case, we cannot estimate a range of reasonably potential losses for this litigation. The Company will vigorously defend this action.

*Dodge, et al. v. PHH Corporation, et al., formerly captioned Strader, et al. and Hall v. PHH Corporation, et al.* (U.S. District Court for the Central District of California). This is a purported class action brought by four California residents against 15 defendants, including Realogy and certain of its subsidiaries, PHH Corporation and PHH Home Loans, LLC (a joint venture between Realogy and PHH), alleging violations of Section 8(a) of RESPA. On May 19, 2017, the parties agreed in principle to a settlement of the action, pursuant to which the Company agreed to pay approximately \$8 million (or one-half of the settlement). In settling the matter, the Company specifically denied any wrongdoing with respect to the claims asserted in the case. As a result of the settlement, the Company accrued \$8 million in the second quarter of 2017 and the liability is included in accrued expenses and other current liabilities on

the Consolidated Balance Sheets. The Court granted final approval of the settlement effective as of August 27, 2018. The Company is involved in certain other claims and legal actions arising in the ordinary course of our business. Such litigation, regulatory actions and other proceedings may include, but are not limited to, actions relating to intellectual property, commercial arrangements, franchising arrangements, the fiduciary duties of brokers, actions against our title

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company alleging it knew or should have known that others were committing mortgage fraud, standard brokerage disputes like the failure to disclose accurate square footage or hidden defects in the property such as mold, vicarious liability based upon conduct of individuals or entities outside of our control, including franchisees and independent sales agents, antitrust and anti-competition claims, general fraud claims (including wire fraud associated with third-party diversion of funds from a brokerage transaction), employment law claims, including claims challenging the classification of our sales agents as independent contractors, wage and hour classification claims and claims alleging violations of RESPA or state consumer fraud statutes. While the results of such claims and legal actions cannot be predicted with certainty, we do not believe based on information currently available to us that the final outcome of current proceedings against the Company will have a material adverse effect on our consolidated financial position, results of operations or cash flows. In addition, with the increasing requirements resulting from government laws and regulations concerning data breach notifications and data privacy and protection obligations, claims associated with these laws may become more common.

\* \* \*

The Company believes that it has adequately accrued for legal matters as appropriate. The Company records litigation accruals for legal matters which are both probable and estimable.

Litigation and other disputes are inherently unpredictable and subject to substantial uncertainties and unfavorable resolutions could occur. In addition, class action lawsuits can be costly to defend and, depending on the class size and claims, could be costly to settle. As such, the Company could incur judgments or enter into settlements of claims with liability that are materially in excess of amounts accrued and these settlements could have a material adverse effect on the Company's financial condition, results of operations or cash flows in any particular period.

Cendant Corporate Liabilities and Guarantees to Cendant and Affiliates

Realogy Group (then Realogy Corporation) separated from Cendant on July 31, 2006 (the "Separation"), pursuant to a plan by Cendant (now known as Avis Budget Group, Inc.) to separate into four independent companies-one for each of Cendant's business units-real estate services (Realogy Group), travel distribution services ("Travelport"), hospitality services, including timeshare resorts ("Wyndham Worldwide"), and vehicle rental ("Avis Budget Group"). Pursuant to the Separation and Distribution Agreement dated as of July 27, 2006 among Cendant, Realogy Group, Wyndham Worldwide and Travelport, (the "Separation and Distribution Agreement"), each of Realogy Group, Wyndham Worldwide and Travelport have assumed certain contingent and other corporate liabilities (and related costs and expenses), which are primarily related to each of their respective businesses. In addition, Realogy Group has assumed 62.5% and Wyndham Worldwide has assumed 37.5% of certain contingent and other corporate liabilities (and related costs and expenses) of Cendant.

The due to former parent balance was \$21 million and \$18 million at December 31, 2018 and 2017, respectively. The due to former parent balance was comprised of the Company's portion of the following: (i) Cendant's remaining state and foreign contingent tax liabilities, (ii) accrued interest on contingent tax liabilities, (iii) potential liabilities related to Cendant's terminated or divested businesses, and (iv) potential liabilities related to the residual portion of accruals for Cendant operations.

Tax Matters

The Company is subject to income taxes in the United States and several foreign jurisdictions. Significant judgment is required in determining the worldwide provision for income taxes and recording related assets and liabilities. In the ordinary course of business, there are many transactions and calculations where the ultimate tax determination is uncertain. The Company is regularly under audit by tax authorities whereby the outcome of the audits is uncertain. The Company believes there is appropriate support for positions taken on its tax returns. The liabilities that have been recorded represent the best estimates of the probable loss on certain positions and are adequate for all open years based on an assessment of many factors including past experience and interpretations of tax law applied to the facts of each matter. However, the outcomes of tax audits are inherently uncertain.

Escrow and Trust Deposits

As a service to its customers, the Company administers escrow and trust deposits which represent undisbursed amounts received for the settlement of real estate transactions. Deposits at FDIC-insured institutions are insured up to \$250 thousand. These escrow and trust deposits totaled \$426 million and \$469 million at December 31, 2018 and 2017, respectively. These escrow and trust deposits are not assets of the Company and, therefore, are excluded from the

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accompanying Consolidated Balance Sheets. However, the Company remains contingently liable for the disposition of these deposits.

**Leases**

The Company is committed to making rental payments under noncancelable operating leases covering various facilities and equipment. Future minimum lease payments required under noncancelable operating leases as of December 31, 2018 are as follows:

Year	Amount
2019	\$ 165
2020	144
2021	120
2022	95
2023	79
Thereafter	196
Total	\$ 799

Capital lease obligations were \$33 million, net of \$2 million of imputed interest, at December 31, 2018 and \$29 million, net of \$2 million of imputed interest, at December 31, 2017.

The Company incurred rent expense of \$196 million, \$192 million and \$186 million for the years ended December 31, 2018, 2017 and 2016, respectively.

**Purchase Commitments and Minimum Licensing Fees**

In the normal course of business, the Company makes various commitments to purchase goods or services from specific suppliers, including those related to capital expenditures. The purchase commitments made by the Company as of December 31, 2018 are approximately \$113 million.

The Company is required to pay a minimum licensing fee to Sotheby's which began in 2009 and continues through 2054. The annual minimum licensing fee is approximately \$2 million per year. The Company is also required to pay a minimum licensing fee to Meredith Corporation for the licensing of the Better Homes and Gardens Real Estate brand. The annual minimum licensing fee began in 2009 at \$0.5 million and increased to \$4 million in 2014, where it will generally remain through 2058.

Future minimum payments for these purchase commitments and minimum licensing fees as of December 31, 2018 are as follows:

Year	Amount
2019	\$ 71
2020	25
2021	20
2022	9
2023	9
Thereafter	226
Total	\$ 360

**Standard Guarantees/Indemnifications**

In the ordinary course of business, the Company enters into numerous agreements that contain standard guarantees and indemnities whereby the Company indemnifies another party for breaches of representations and warranties. In addition, many of these parties are also indemnified against any third-party claim resulting from the transaction that is contemplated in the underlying agreement. Such guarantees or indemnifications are granted under various agreements, including those governing: (i) purchases, sales or outsourcing of assets or businesses, (ii) leases and sales of real estate, (iii) licensing of trademarks, (iv) use of derivatives, and (v) issuances of debt securities. The guarantees or indemnifications issued are for the benefit of the: (i) buyers in sale agreements and sellers in purchase agreements, (ii) landlords in lease contracts, (iii) franchisees in licensing agreements, (iv) financial institutions in derivative contracts, and (v) underwriters in issuances of securities. While some of these guarantees extend only for the duration

of the underlying agreement, many survive the expiration of the term of the agreement or extend into perpetuity (unless subject to a legal statute of limitations). There are

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no specific limitations on the maximum potential amount of future payments that the Company could be required to make under these guarantees, nor is the Company able to develop an estimate of the maximum potential amount of future payments to be made under these guarantees as the triggering events are not subject to predictability. With respect to certain of the aforementioned guarantees, such as indemnifications of landlords against third-party claims for the use of real estate property leased by the Company, the Company maintains insurance coverage that mitigates any potential payments to be made.

**Other Guarantees/Indemnifications**

In the normal course of business, the Company coordinates numerous events for its franchisees and thus reserves a number of venues with certain minimum guarantees, such as room rentals at hotels local to the conference center. However, such room rentals are paid by each individual franchisee. If the franchisees do not meet the minimum guarantees, the Company is obligated to fulfill the minimum guaranteed fees. The maximum potential amount of future payments that the Company would be required to make under such guarantees is approximately \$13 million. The Company would only be required to pay this maximum amount if none of the franchisees conducted their planned events at the reserved venues. Historically, the Company has not been required to make material payments under these guarantees.

**Insurance and Self-Insurance**

At December 31, 2018 and 2017, the Consolidated Balance Sheets include approximately \$26 million and \$40 million, respectively, of liabilities relating to: (i) self-insured risks for errors and omissions and other legal matters incurred in the ordinary course of business within the Company Owned Real Estate Brokerage Services segment, (ii) vacant dwellings and household goods in transit and storage within the Relocation Services segment, and (iii) premium and claim reserves for the Company's title underwriting business. The Company may also be subject to legal claims arising from the handling of escrow transactions and closings. The Company's subsidiary, NRT, carries errors and omissions insurance for errors made during the real estate settlement process of \$15 million in the aggregate, subject to a deductible of \$1 million per occurrence. In addition, the Company carries an additional errors and omissions insurance policy for Realogy Holdings Corp. and its subsidiaries for errors made for real estate related services up to \$45 million in the aggregate, subject to a deductible of \$2.5 million per occurrence. This policy also provides excess coverage to NRT creating an aggregate limit of \$60 million, subject to the NRT deductible of \$1 million per occurrence.

The Company issues title insurance policies which provide coverage for real property to mortgage lenders and buyers of real property. When acting as a title agent issuing a policy on behalf of an underwriter, assuming no negligence on part of the title agent, the Company is not liable for losses under those policies but rather the title insurer is typically liable for such losses. The title underwriter which the Company acquired in January 2006 typically underwrites title insurance policies of up to \$1.5 million. For policies in excess of \$1.5 million, the Company typically obtains a reinsurance policy from a national underwriter to reinsure the excess amount. The Company, as an underwriter, manages our claims losses through strict agent vetting, clear underwriting guidelines, training and frequent communications with our agents.

Fraud, defalcation and misconduct by employees are also risks inherent in the business. The Company is the custodian of cash deposited by customers with specific instructions as to its disbursement from escrow, trust and account servicing files. The Company maintains Fidelity insurance covering the loss or theft of funds of up to \$30 million per occurrence, subject to a deductible of \$750 thousand per occurrence.

The Company also maintains self-insurance arrangements relating to health and welfare, workers' compensation, auto and general liability in addition to other benefits provided to the Company's employees. The accruals for these self-insurance arrangements totaled approximately \$15 million and \$16 million at December 31, 2018 and 2017, respectively.



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## 14. EQUITY

## Changes in Accumulated Other Comprehensive Loss

The components of accumulated other comprehensive losses are as follows:

	Currency Translation Adjustments (1)	Minimum Pension Liability Adjustment (2)	Accumulated Other Comprehensive Loss (2)
Balance at January 1, 2016	\$ (3 )	\$ (33 )	\$ (36 )
Other comprehensive loss before reclassifications	(5 )	(3 )	(8 )
Amounts reclassified from accumulated other comprehensive income	—	1	(3)1
Income tax benefit	2	1	3
Current period change	(3 )	(1 )	(4 )
Balance at December 31, 2016	(6 )	(34 )	(40 )
Other comprehensive income (loss) before reclassifications	3	(1 )	2
Amounts reclassified from accumulated other comprehensive income	—	2	(3)2
Income tax expense	(1 )	—	(1 )
Current period change	2	1	3
Balance at December 31, 2017	(4 )	(33 )	(37 )
Adoption of a new accounting pronouncement	(1 )	(4)(8 )	(4)(9 )
Other comprehensive loss before reclassifications	(3 )	(6 )	(9 )
Amounts reclassified from accumulated other comprehensive income	—	2	(3)2
Income tax benefit	—	1	1
Current period change	(4 )	(11 )	(15 )
Balance at December 31, 2018	\$ (8 )	\$ (44 )	\$ (52 )

(1) Assets and liabilities of foreign subsidiaries having non-U.S. dollar functional currencies are translated at exchange rates at the balance sheet dates and equity accounts are translated at historical spot rates. Revenues and expenses are translated at average exchange rates during the periods presented. The gains or losses resulting from translating foreign currency financial statements into U.S. dollars are included in accumulated other comprehensive income (loss). Gains or losses resulting from foreign currency transactions are included in the Consolidated Statements of Operations.

(2) As of December 31, 2018, the Company does not have any after-tax components of accumulated other comprehensive loss attributable to noncontrolling interests.

(3) These amounts represent the amortization of actuarial loss to periodic pension cost and were reclassified from accumulated other comprehensive income to the general and administrative expenses line on the statement of operations.

(4) These amounts represent adjustments for the adoption of the accounting standard update on stranded tax effects related to the 2017 Tax Act which resulted in a debit to Accumulated other comprehensive loss and a credit to Accumulated deficit of \$9 million during the first quarter of 2018. See Note 2, "Summary of Significant Accounting Policies" in the "Recently Adopted Accounting Pronouncements" section for additional information.

## Dividend Policy

In August 2016, the Company's Board of Directors approved the initiation of a quarterly cash dividend policy of \$0.09 per share on its common stock. The Board declared and paid a quarterly cash dividend of \$0.09 per share of the Company's common stock during each quarter of 2018, returning \$45 million to stockholders.

The declaration and payment of any future dividend will be subject to the discretion of the Board of Directors and will depend on a variety of factors, including the Company's financial condition and results of operations, contractual restrictions, including restrictive covenants contained in the Company's credit agreements, and the indentures

governing the Company's outstanding debt securities, capital requirements and other factors that the Board of Directors deems relevant.

Pursuant to the Company's policy, the dividends payable in cash are treated as a reduction of additional paid-in capital since the Company is currently in an accumulated deficit position.

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## Realogy Group Statements of Equity for the years ended December 31, 2018, 2017 and 2016

Total equity for Realogy Group equals that of Realogy Holdings, but the components, common stock and additional paid-in capital are different. The table below presents information regarding the balances and changes in common stock and additional paid-in capital of Realogy Group for each of the three years ended December 31, 2018, 2017 and 2016.

	Realogy Group Stockholder's Equity					Total Equity
	Common Stock	Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Non-controlling Interests	
Balance at January 1, 2016	-\$	-\$ 5,734	\$ (3,280 )	\$ (36 )	\$ 4	\$ 2,422
Cumulative effect of adoption of new accounting pronouncements	—	—	5	—	—	5
Net income	—	—	213	—	4	217
Other comprehensive loss	—	—	—	(4 )	—	(4 )
Repurchase of Common Stock	—	(195 )	—	—	—	(195 )
Contributions from Realogy Holdings	—	2	—	—	—	2
Stock-based compensation	—	51	—	—	—	51
Dividends	—	(26 )	—	—	(3 )	(29 )
Balance at December 31, 2016	-\$	-\$ 5,566	\$ (3,062 )	\$ (40 )	\$ 5	\$ 2,469
Net income	—	—	431	—	3	434
Other comprehensive income	—	—	—	3	—	3
Repurchase of Common Stock	—	(280 )	—	—	—	(280 )
Contributions from Realogy Holdings	—	8	—	—	—	8
Stock-based compensation	—	41	—	—	—	41
Dividends	—	(49 )	—	—	(4 )	(53 )
Balance at December 31, 2017	-\$	-\$ 5,286	\$ (2,631 )	\$ (37 )	\$ 4	\$ 2,622
Cumulative effect of adoption of new accounting pronouncements	—	—	(13 )	(9 )	—	(22 )
Net income	—	—	137	—	3	140
Other comprehensive loss	—	—	—	(6 )	—	(6 )
Repurchase of Common Stock	—	(402 )	—	—	—	(402 )
Contributions from Realogy Holdings	—	1	—	—	—	1
Stock-based compensation	—	30	—	—	—	30
Dividends	—	(45 )	—	—	(3 )	(48 )
Balance at December 31, 2018	-\$	-\$ 4,870	\$ (2,507 )	\$ (52 )	\$ 4	\$ 2,315

## 15. EARNINGS PER SHARE

## Earnings per share attributable to Realogy Holdings

Basic earnings per share is computed based on net income attributable to Realogy Holdings stockholders divided by the basic weighted-average shares outstanding during the period. Dilutive earnings per share is computed consistently with the basic computation while giving effect to all dilutive potential common shares and common share equivalents that were outstanding during the period. Realogy Holdings uses the treasury stock method to reflect the potential dilutive effect of unvested stock awards and unexercised options. The following table sets forth the computation of basic and diluted earnings per share:

(in millions, except per share data)	Year Ended		
	December 31,		
	2018	2017	2016

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Net income attributable to Realogy Holdings shareholders	\$137	\$431	\$213
Basic weighted average shares	124.0	136.7	144.5
Stock options, restricted stock units and performance share units (a)	1.3	1.7	1.3
Weighted average diluted shares	125.3	138.4	145.8
Earnings Per Share:			
Basic	\$1.10	\$3.15	\$1.47
Diluted	\$1.09	\$3.11	\$1.46

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Excludes 6.9 million, 5.3 million and 4.5 million shares of common stock issuable for incentive equity awards which includes performance share units based on the achievement of target amounts, for the years ended (a) December 31, 2018, 2017 and 2016, respectively, that are anti-dilutive to the diluted earnings per share computation.

Under the 2016, 2017 and 2018 share repurchase programs, the Company's Board of Directors authorized up to \$925 million of the Company's common stock. For the year ended December 31, 2018, the Company repurchased and retired 17.9 million shares of common stock for \$402 million at a weighted average market price of \$22.47 per share. For the year ended December 31, 2017, the Company repurchased and retired 9.4 million shares of common stock for \$276 million at a weighted average market price of \$29.38 per share. For the year ended December 31, 2016, the Company repurchased and retired 7.1 million shares of common stock for \$199 million at a weighted average market price of \$27.96 per share, which included 0.2 million shares for which the trade date occurred in late December 2016 while settlement occurred in January 2017. The purchase of shares under these plans reduce the weighted-average number of shares outstanding in the basic earnings per share calculation.

## 16. RISK MANAGEMENT AND FAIR VALUE OF FINANCIAL INSTRUMENTS

### RISK MANAGEMENT

The following is a description of the Company's risk management policies.

#### Interest Rate Risk

The Company is exposed to market risk from changes in interest rates primarily through senior secured debt. At December 31, 2018, the Company's primary interest rate exposure was to interest rate fluctuations, specifically LIBOR, due to its impact on variable rate borrowings of Revolving Credit Facility and Term Loan B under the Senior Secured Credit Agreement and Term Loan A Facility. Given that borrowings under the Senior Secured Credit Agreement and Term Loan A Facility are generally based upon LIBOR, this rate will be the Company's primary market risk exposure for the foreseeable future. At December 31, 2018, the Company had variable interest rate long-term debt, which was based on LIBOR, from the outstanding term loans and revolver under its Senior Secured Credit Facility and Term Loan A Facility of \$2,075 million, excluding \$231 million of securitization obligations. The Company has interest rate swaps with an aggregate notional value of \$1,600 million to manage a portion of the Company's exposure to changes in interest rate associated with variable rate borrowings. The fixed interest rates on the swaps range from 2.07% to 3.11%. Although we have entered into these interest rate swaps, involving the exchange of floating for fixed rate interest payments, such interest rate swaps do not eliminate interest rate volatility for all of our variable rate indebtedness at December 31, 2018. In addition, the fair value of the interest rate swaps is also subject to movements in LIBOR and will fluctuate in future periods. The Company has recognized an asset of \$6 million and a liability of \$16 million for the fair value of the interest rate swaps at December 31, 2018. Therefore, an increase in the LIBOR yield curve could increase the fair value of the interest rate swaps and decrease interest expense.

In the normal course of business, the Company borrows funds under its securitization facilities and utilizes such funds to generate assets on which it generally earns interest income. The Company does not believe it is exposed to significant interest rate risk in connection with these activities as the rate it incurs on such borrowings and the rate it earns on such assets are generally based on similar variable indices, thereby providing a natural hedge.

#### Credit Risk and Exposure

The Company is exposed to counterparty credit risk in the event of nonperformance by counterparties to various agreements and sales transactions. The Company manages such risk by evaluating the financial position and creditworthiness of such counterparties and by requiring collateral in instances in which financing is provided. The Company mitigates counterparty credit risk associated with its derivative contracts by monitoring the amounts at risk with each counterparty to such contracts, periodically evaluating counterparty creditworthiness and financial position, and where possible, dispersing its risk among multiple counterparties.

As of December 31, 2018, there were no significant concentrations of credit risk with any individual counterparty or a group of counterparties. The Company actively monitors the credit risk associated with the Company's receivables.

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## Market Risk Exposure

The Company Owned Real Estate Brokerage Services segment, NRT, owns real estate brokerage offices located in and around large metropolitan areas in the U.S. NRT has more offices and realizes more of its revenues in California, Florida and the New York metropolitan area than any other regions of the country. For the year ended December 31, 2018, NRT generated approximately 27% of its revenues from California, 20% from the New York metropolitan area and 9% from Florida. For the year ended December 31, 2017, NRT generated approximately 27% of its revenues from California, 22% from the New York metropolitan area and 9% from Florida. For the year ended December 31, 2016, NRT generated approximately 26% of its revenues from California, 22% from the New York metropolitan area and 9% from Florida.

## Derivative Instruments

The Company records derivatives and hedging activities on the balance sheet at their respective fair values. The Company uses foreign currency forward contracts largely to manage its exposure to changes in foreign currency exchange rates associated with its foreign currency denominated receivables and payables. The Company primarily manages its foreign currency exposure to the Euro, British Pound, Swiss Franc and Canadian Dollar. The Company has not elected to utilize hedge accounting for these forward contracts; therefore, any change in fair value is recorded in the Consolidated Statements of Operations. However, the fluctuations in the value of these forward contracts generally offset the impact of changes in the value of the underlying risk that they are intended to economically hedge. As of December 31, 2018, the Company had outstanding foreign currency forward contracts in a liability position with a fair value of less than \$1 million and a notional value of \$27 million. As of December 31, 2017, the Company had outstanding foreign currency forward contracts in a liability position with a fair value of less than \$1 million and a notional value of \$25 million.

The Company also enters into interest rate swaps to manage its exposure to changes in interest rates associated with its variable rate borrowings. As of December 31, 2018, the Company had interest rate swaps with an aggregate notional value of \$1,600 million to offset the variability in cash flows resulting from the term loan facilities as follows:

Notional Value (in millions)	Commencement Date	Expiration Date
\$600	August 2015	August 2020
\$450	November 2017	November 2022
\$400	(a) August 2020	August 2025
\$150	(a) November 2022	November 2027

(a) During the second quarter of 2018, the Company entered into four new forward starting interest rate swaps, two with a notional value of \$125 million and two with a notional value of \$150 million.

The swaps help to protect our outstanding variable rate borrowings from future interest rate volatility. The Company has not elected to utilize hedge accounting for these interest rate swaps; therefore, any change in fair value is recorded in the Consolidated Statements of Operations.

The fair value of derivative instruments was as follows:

Liability Derivatives	Balance Sheet Location	Fair Value	
		December 31, 2018	December 31, 2017
Interest rate swap contracts	Other non-current assets	\$ 6	\$ —
	Other current and non-current liabilities	\$ 16	\$ 13

The effect of derivative instruments on earnings was as follows:

Derivative Instruments Not Designated as Hedging Instruments	Location of (Gain) or Loss Recognized for Derivative Instruments	(Gain) or Loss Recognized on Derivatives
--	--	--

		Year Ended		
		December 31,		
		2018	2017	2016
Interest rate swap contracts	Interest expense	\$4	\$(4)	\$6
Foreign exchange contracts	Operating expense	(1)	2	(2)

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## Fair Value Measurements

The following tables present the Company's assets and liabilities that are measured at fair value on a recurring basis and are categorized using the fair value hierarchy. The fair value hierarchy has three levels based on the reliability of the inputs used to determine fair value.

## Level Input: Input Definitions:

Level I Inputs are unadjusted, quoted prices for identical assets or liabilities in active markets at the measurement date.

Level II Inputs other than quoted prices included in Level I that are observable for the asset or liability through corroboration with market data at the measurement date.

Level III Unobservable inputs that reflect management's best estimate of what market participants would use in pricing the asset or liability at the measurement date.

The availability of observable inputs can vary from asset to asset and is affected by a wide variety of factors including, for example, the type of asset, whether the asset is new and not yet established in the marketplace, and other characteristics particular to the transaction. To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level III. In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for disclosure purposes, the level in the fair value hierarchy within which the fair value measurement in its entirety falls is determined based on the lowest level input that is significant to the fair value measurement in its entirety.

The fair value of financial instruments is generally determined by reference to quoted market values. In cases where quoted market prices are not available, fair value is based on estimates using present value or other valuation techniques, as appropriate. The fair value of interest rate swaps is determined based upon a discounted cash flow approach.

The Company measures financial instruments at fair value on a recurring basis and recognizes transfers within the fair value hierarchy at the end of the fiscal quarter in which the change in circumstances that caused the transfer occurred. The following table summarizes fair value measurements by level at December 31, 2018 for assets and liabilities measured at fair value on a recurring basis:

	Level I	Level II	Level III	Total
Deferred compensation plan assets (included in other non-current assets)	\$ 2	\$ —	\$ —	\$ 2
Interest rate swaps (included in other non-current assets)	—	6	—	6
Interest rate swaps (included in other non-current liabilities)	—	16	—	16
Contingent consideration for acquisitions (included in accrued expenses and other current liabilities and other non-current liabilities)	—	—	10	10

The following table summarizes fair value measurements by level at December 31, 2017 for assets and liabilities measured at fair value on a recurring basis:

	Level I	Level II	Level III	Total
Deferred compensation plan assets (included in other non-current assets)	\$ 3	\$ —	\$ —	\$ 3
Interest rate swaps (included in other current and non-current liabilities)	—	13	—	13
Contingent consideration for acquisitions (included in accrued expenses and other current liabilities and other non-current liabilities)	—	—	34	34

The fair value of the Company's contingent consideration for acquisitions is measured using a probability weighted-average discount rate to estimate future cash flows based upon the likelihood of achieving future operating results for individual acquisitions. These assumptions are deemed to be unobservable inputs and as such the Company's contingent consideration is classified within Level III of the valuation hierarchy. The Company reassesses

the fair value of the contingent consideration liabilities on a quarterly basis.

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The following table presents changes in Level III financial liabilities measured at fair value on a recurring basis:

	Level III
Fair value of contingent consideration at December 31, 2017	\$ 34
Additions: contingent consideration related to acquisitions completed during the period	1
Reductions: payments of contingent consideration	(23 )
Changes in fair value (reflected in the Consolidated Statement of Operations)	(2 )
Fair value of contingent consideration at December 31, 2018	\$ 10

The following table summarizes the principal amount of the Company's indebtedness compared to the estimated fair value, primarily determined by quoted market values, at:

Debt	December 31, 2018		December 31, 2017	
	Principal Amount	Estimated Fair Value (a)	Principal Amount	Estimated Fair Value (a)
Senior Secured Credit Facility:				
Revolving Credit Facility	\$ 270	\$ 270	\$ 70	\$ 70
Term Loan B	1,069	1,010	1,083	1,085
Term Loan A Facility:				
Term Loan A	736	707	391	393
Term Loan A-1	—	—	342	343
4.50% Senior Notes	450	447	450	457
5.25% Senior Notes	550	524	550	569
4.875% Senior Notes	500	434	500	495
Securitization obligations	231	231	194	194

(a) The fair value of the Company's indebtedness is categorized as Level II.

## 17. SEGMENT INFORMATION

The reportable segments presented below represent the Company's operating segments for which separate financial information is available and which is utilized on a regular basis by its chief operating decision maker to assess performance and to allocate resources. In identifying its reportable segments, the Company also considers the nature of services provided by its operating segments. Management evaluates the operating results of each of its reportable segments based upon revenue and Operating EBITDA. Operating EBITDA is defined by us as net income (loss) before depreciation and amortization, interest expense, net (other than relocation services interest for securitization assets and securitization obligations) income taxes, and other items that are not core to the operating activities of the Company such as restructuring charges, former parent legacy items, losses on the early extinguishment of debt, asset impairments, gains or losses on discontinued operations and gains or losses on the sale of investments or other assets. The Company's presentation of Operating EBITDA may not be comparable to similar measures used by other companies.

	Revenues (a) (b)		
	Year Ended December 31,		
	2018	2017	2016
Real Estate Franchise Services	\$820	\$830	\$781
Company Owned Real Estate Brokerage Services	4,607	4,643	4,344
Relocation Services	378	382	405
Title and Settlement Services	580	570	573
Corporate and Other (c)	(306 )	(311 )	(293 )
Total Company	\$6,079	\$6,114	\$5,810

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Transactions between segments are eliminated in consolidation. Revenues for the Real Estate Franchise Services (a) segment include intercompany royalties and marketing fees paid by the Company Owned Real Estate Brokerage Services segment of \$306 million,

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\$311 million and \$293 million for the years ended December 31, 2018, 2017 and 2016, respectively. Such amounts are eliminated through the Corporate and Other line.

- Revenues for the Relocation Services segment include intercompany referral commissions paid by the Company Owned Real Estate Brokerage Services segment of \$39 million, \$40 million and \$43 million for the years ended (b) December 31, 2018, 2017 and 2016, respectively. Such amounts are recorded as contra-revenues by the Company Owned Real Estate Brokerage Services segment. There are no other material intersegment transactions.
- (c) Includes the elimination of transactions between segments.

Set forth in the tables below is a reconciliation of Net income to Operating EBITDA and Operating EBITDA presented by reportable segment for the years ended December 31, 2018, 2017 and 2016:

	Year Ended December 31,		
	2018	2017	2016
Net income attributable to Realogy Holdings and Realogy Group	\$ 137	\$ 431	\$ 213
Income tax expense (benefit) (a)	65	(65 )	144
Income before income taxes	202	366	357
Add: Depreciation and amortization (b)	197	201	202
Interest expense, net	190	158	174
Restructuring costs, net (c)	58	12	39
Former parent legacy cost (benefit) (d)	4	(10 )	(2 )
Loss on the early extinguishment of debt (d)	7	5	—
Operating EBITDA	\$ 658	\$ 732	\$ 770

	Operating EBITDA Year Ended December 31,		
	2018	2017	2016
Real Estate Franchise Services	\$ 564	\$ 560	\$ 520
Company Owned Real Estate Brokerage Services (e)	44	135	159
Relocation Services	86	85	100
Title and Settlement Services	49	59	63
Corporate and Other (d)(f)	(85 )	(107 )	(72 )
Total Company	\$ 658	\$ 732	\$ 770

(a) Income tax benefit for the year ended December 31, 2017 reflects the impact of the 2017 Tax Act.

Depreciation and amortization for the years ended December 31, 2018 and 2017 includes \$2 million and \$3 (b) million, respectively, of amortization expense related to Guaranteed Rate Affinity's purchase accounting included in the "Equity in losses (earnings) of unconsolidated entities" line on the Consolidated Statement of Operations.

The year ended December 31, 2018 includes restructuring charges of \$3 million in the Real Estate Franchise Services segment, \$37 million in the Company Owned Real Estate Brokerage Services segment, \$11 million in the (c) Relocation Services segment, \$4 million at the Title and Settlement Services segment and \$3 million in the Corporate and Other segment.

The year ended December 31, 2017 includes restructuring charges of \$1 million in the Real Estate Franchise Services segment, \$9 million in the Company Owned Real Estate Brokerage Services segment, \$1 million at the Title and Settlement Services segment and \$1 million in the Corporate and Other segment.

The year ended December 31, 2016 includes restructuring charges of \$4 million in the Real Estate Franchise Services segment, \$22 million in the Company Owned Real Estate Brokerage Services segment, \$4 million in the Relocation Services segment, \$1 million at the Title and Settlement Services segment and \$8 million in the Corporate and Other

segment.

(d) Former parent legacy items and loss on the early extinguishment of debt are recorded in the Corporate and Other segment.

(e) Includes \$22 million and \$8 million of equity earnings from PHH Home Loans for the years ended December 31, 2017 and 2016, respectively.

(f) Includes the elimination of transactions between segments.

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## Depreciation and Amortization

	Year Ended		
	December 31,		
	2018	2017	2016
Real Estate Franchise Services	\$77	\$79	\$77
Company Owned Real Estate Brokerage Services	51	50	49
Relocation Services	33	33	31
Title and Settlement Services	13	16	23
Corporate and Other	21	20	22
Total Company	\$195	\$198	\$202
Segment Assets			

	As of	
	December 31,	
	2018	2017
Real Estate Franchise Services	\$4,388	\$4,413
Company Owned Real Estate Brokerage Services	1,228	1,258
Relocation Services	1,010	1,029
Title and Settlement Services	492	486
Corporate and Other	172	151
Total Company	\$7,290	\$7,337
Capital Expenditures		

	Year Ended		
	December 31,		
	2018	2017	2016
Real Estate Franchise Services	\$10	\$9	\$8
Company Owned Real Estate Brokerage Services	44	44	44
Relocation Services	13	11	12
Title and Settlement Services	11	13	9
Corporate and Other	27	22	14
Total Company	\$105	\$99	\$87

The geographic segment information provided below is classified based on the geographic location of the Company's subsidiaries.

	United States	All Other Countries	Total
On or for the year ended December 31, 2018			
Net revenues	\$5,961	\$ 118	\$6,079
Total assets	7,214	76	7,290
Net property and equipment	302	2	304
On or for the year ended December 31, 2017			
Net revenues	\$5,997	\$ 117	\$6,114
Total assets	7,261	76	7,337
Net property and equipment	287	2	289
On or for the year ended December 31, 2016			
Net revenues	\$5,683	\$ 127	\$5,810
Total assets	7,347	74	7,421
Net property and equipment	265	2	267

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## 18. SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

Provided below is selected unaudited quarterly financial data for 2018 and 2017.

	2018			
	First	Second	Third	Fourth
Net revenues				
Real Estate Franchise Services	\$ 176	\$ 237	\$ 221	\$ 186
Company Owned Real Estate Brokerage Services	917	1,408	1,268	1,014
Relocation Services	79	105	108	86
Title and Settlement Services	120	162	162	136
Corporate and Other (a)	(63 )	(92 )	(83 )	(68 )
Total Company	\$ 1,229	\$ 1,820	\$ 1,676	\$ 1,354
Income (loss) before income taxes, equity in earnings and noncontrolling interests (b)				
Real Estate Franchise Services	\$ 85	\$ 152	\$ 141	\$ 107
Company Owned Real Estate Brokerage Services	(76 )	45	22	(37 )
Relocation Services	(14 )	29	34	9
Title and Settlement Services	(8 )	26	18	1
Corporate and Other	(69 )	(78 )	(70 )	(108 )
Total Company	\$(82 )	\$ 174	\$ 145	\$(28 )
Net income (loss) attributable to Realogy Holdings and Realogy Group	\$(67 )	\$ 123	\$ 103	\$(22 )
Earnings (loss) per share attributable to Realogy Holdings (c):				
Basic earnings (loss) per share	\$(0.51 )	\$ 0.97	\$ 0.84	\$(0.19 )
Diluted earnings (loss) per share	\$(0.51 )	\$ 0.96	\$ 0.83	\$(0.19 )

(a) Represents the elimination of transactions primarily between the Real Estate Franchise Services segment and the Company Owned Real Estate Brokerage Services segment.

(b) The quarterly results include the following:

restructuring charges of \$30 million, \$6 million, \$9 million and \$13 million in the first, second, third and fourth quarters, respectively;

former parent legacy net cost of \$4 million in the fourth quarter; and

a loss on the early extinguishment of debt of \$7 million in the first quarter.

Basic and diluted EPS amounts in each quarter are computed using the weighted-average number of shares outstanding during that quarter, while basic and diluted EPS for the full year is computed using the

(c) weighted-average number of shares outstanding during the year. Therefore, the sum of the four quarters' basic or diluted EPS may not equal the full year basic or diluted EPS (see Note 15 "Earnings Per Share" for further information).

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	2017			
	First	Second	Third	Fourth
Net revenues				
Real Estate Franchise Services	\$ 170	\$ 237	\$ 224	\$ 199
Company Owned Real Estate Brokerage Services	897	1,392	1,267	1,087
Relocation Services	77	102	111	92
Title and Settlement Services	120	157	154	139
Corporate and Other (a)	(61 )	(95 )	(82 )	(73 )
Total Company	\$1,203	\$1,793	\$1,674	\$1,444
Income (loss) before income taxes, equity in earnings and noncontrolling interests (b)				
Real Estate Franchise Services	\$82	\$146	\$139	\$113
Company Owned Real Estate Brokerage Services	(35 )	65	36	(14 )
Relocation Services	(5 )	21	32	15
Title and Settlement Services	(3 )	23	19	6
Corporate and Other	(73 )	(72 )	(73 )	(71 )
Total Company	\$(34 )	\$183	\$153	\$49
Net income (loss) attributable to Realogy Holdings and Realogy Group	\$(28 )	\$109	\$95	\$255
Earnings (loss) per share attributable to Realogy Holdings (c):				
Basic earnings (loss) per share	\$(0.20 )	\$0.79	\$0.70	\$1.91
Diluted earnings (loss) per share	\$(0.20 )	\$0.78	\$0.69	\$1.89

(a) Represents the elimination of transactions primarily between the Real Estate Franchise Services segment and the Company Owned Real Estate Brokerage Services segment.

(b) The quarterly results include the following:

restructuring charges of \$5 million, \$2 million, \$2 million and \$3 million in the first, second, third and fourth quarters, respectively;

- former parent legacy net benefit of \$11 million in the second quarter former parent legacy net cost of \$1 million in the third quarter; and
- a loss on the early extinguishment of debt of \$4 million and \$1 million in the first and third quarters, respectively.

Basic and diluted EPS amounts in each quarter are computed using the weighted-average number of shares outstanding during that quarter, while basic and diluted EPS for the full year is computed using the

(c) weighted-average number of shares outstanding during the year. Therefore, the sum of the four quarters' basic or diluted EPS may not equal the full year basic or diluted EPS.

#### 19. SUBSEQUENT EVENTS

##### Redemption of \$450 million of 4.50% Senior Notes

On February 15, 2019, the Company redeemed all of its outstanding \$450 million 4.50% Senior Notes due in April 2019. The Company utilized borrowings under its Revolving Credit Facility to redeem the 4.50% Senior Notes and plans to refinance on a long-term basis all or a portion of the funds used to redeem the 4.50% Senior Notes, subject to market conditions.

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EXHIBIT INDEX

Exhibit Description

- Separation and Distribution Agreement by and among Cendant Corporation, Realogy Group LLC (f/k/a Realogy Corporation), Wyndham Worldwide Corporation and Travelport Inc. dated as of July 27, 2006 (Incorporated by reference to Exhibit 2.1 to Realogy Corporation's Current Report on Form 8-K filed July 31, 2006).
- 2.1 Letter Agreement dated August 23, 2006 relating to the Separation and Distribution Agreement by and among Realogy Group LLC (f/k/a Realogy Corporation), Cendant Corporation, Wyndham Worldwide Corporation and Travelport Inc. dated as of July 27, 2006 (Incorporated by reference to Exhibit 2.1 to Realogy Corporation's Current Report on Form 8-K filed August 23, 2006).
- 2.2 Third Amended and Restated Certificate of Incorporation of Realogy Holdings Corp. (Incorporated by reference to Exhibit 3.1 to the Registrants' Current Report on Form 8-K filed on May 5, 2014).
- 3.1 Fifth Amended and Restated Bylaws of Realogy Holdings Corp., as adopted by the Board of Directors, effective February 23, 2019.
- 3.2\* Certificate of Conversion of Realogy Corporation (Incorporated by reference to Exhibit 3.1 to Registrants' Current Report on Form 8-K filed on October 16, 2012).
- 3.3 Certificate of Formation of Realogy Group LLC (Incorporated by reference to Exhibit 3.2 to Registrants' Current Report on Form 8-K filed on October 16, 2012).
- 3.4 Limited Liability Company Agreement of Realogy Group LLC (Incorporated by reference to Exhibit 3.3 to Registrants' Current Report on Form 8-K filed on October 16, 2012).
- 3.5 Indenture, dated as of November 21, 2014, among Realogy Group LLC, as Issuer, Realogy Co-Issuer Corp., as Co-Issuer, Realogy Holdings Corp., the Note Guarantors (as defined therein), and The Bank of New York Mellon Trust Company, N.A., as Trustee, governing the 5.250% Senior Notes due 2021 (the "5.250% Senior Note Indenture") (Incorporated by reference to Exhibit 4.27 to Registrants' Form 10-K for the year ended December 31, 2014).
- 4.1 Supplemental Indenture No. 1 dated as of January 2, 2015 to the 5.250% Senior Note Indenture (Incorporated by reference to Exhibit 4.28 to Registrants' Form 10-K for the year ended December 31, 2014).
- 4.2 Supplemental Indenture No. 2 dated as of October 15, 2015 to the 5.250% Senior Note Indenture (Incorporated by reference to Exhibit 4.19 to Registrants' Form 10-K for the year ended December 31, 2015).
- 4.3 Supplemental Indenture No. 3 dated as of February 9, 2016 to the 5.250% Senior Note Indenture (Incorporated by reference to Exhibit 4.20 to Registrants' Form 10-K for the year ended December 31, 2015).
- 4.4 Supplemental Indenture No. 4 dated as of March 1, 2016 to the 5.250% Senior Note Indenture (Incorporated by reference to Exhibit 4.2 to Registrants' Current Report on Form 8-K filed on March 1, 2016).
- 4.5 Supplemental Indenture No. 5 dated as of October 31, 2016 to the 5.250% Senior Note Indenture (Incorporated by reference to Exhibit 4.15 to Registrants' Form 10-K for the year ended December 31, 2016).
- 4.6 Supplemental Indenture No. 6 dated as of February 6, 2018 to the 5.250% Senior Note Indenture (Incorporated by reference to Exhibit 4.2 to the Registrants' Form 10-Q for the three months ended March 31, 2018).
- 4.7 Supplemental Indenture No. 7 dated as of November 14, 2018 to the 5.250% Senior Note Indenture.
- 4.8\* Form of 5.250% Senior Notes due 2021 (included in the 5.250% Senior Note Indenture (included in the 5.250% Senior Note Indenture filed as Exhibit 4.27 to Registrants' Form 10-K for the year ended December 31, 2014).
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## Exhibit Description

- Indenture, dated as of June 1, 2016, among Realogy Group LLC, as Issuer, Realogy Co-Issuer Corp., as Co-Issuer, Realogy Holdings Corp., the Note Guarantors (as defined therein), and The Bank of New York Mellon Trust Company, N.A., as Trustee, governing the 4.875% Senior Notes due 2023 (the "4.875% Senior Note Indenture") (Incorporated by reference to Exhibit 4.1 to Registrants' Current Report on Form 8-K filed on June 3, 2016).
- 4.10 Supplemental Indenture No. 1 dated as of October 31, 2016 to the 4.875% Senior Note Indenture (Incorporated by reference to Exhibit 4.18 to Registrants' Form 10-K for the year ended December 31, 2016).
- 4.11 Supplemental Indenture No. 2 dated as of June 26, 2017 to the 4.875% Senior Note Indenture (Incorporated by reference to Exhibit 4.2 to Registrants' Form 10-Q for the three months ended June 30, 2017).
- 4.12 Supplemental Indenture No. 3 dated as of February 6, 2018 to the 4.875% Senior Note Indenture (Incorporated by reference to Exhibit 4.3 to the Registrants' Form 10-Q for the three month period ended March 31, 2018).
- 4.13 \* Supplemental Indenture No. 4 dated as of November 14, 2018 to the 4.875% Senior Note Indenture.
- 4.14 Form of 4.875% Senior Notes due 2023 (included in the 5.250% Senior Note Indenture (included in the 4.875% Senior Note Indenture filed as Exhibit 4.1 to Registrants' Current Report on Form 8-K filed on June 3, 2016).
- 4.15 Tax Sharing Agreement by and among Realogy Group LLC (f/k/a Realogy Corporation), Cendant Corporation, Wyndham Worldwide Corporation and Travelport Inc. dated as of July 28, 2006 (Incorporated by reference to Exhibit 10.1 to Realogy Group LLC's (f/k/a Realogy Corporation's) Quarterly Report on Form 10-Q for the three months ended June 30, 2009).
- 10.1 Amendment executed July 8, 2008 and effective as of July 26, 2006 to the Tax Sharing Agreement filed as Exhibit 10.2 (Incorporated by reference to Exhibit 10.2 to Realogy Group LLC's (f/k/a Realogy Corporation's) Form 10-Q for the three months ended June 30, 2008).
- 10.2 Amended and Restated Credit Agreement, dated as of March 5, 2013, among Realogy Intermediate Holdings LLC, Realogy Group LLC, the lenders party thereto from time to time, JPMorgan Chase Bank, N.A., as administrative agent for the lenders, and the other financial institutions parties thereto (Incorporated by reference to Exhibit 10.4 to Registrants' Form 10-Q for the three months ended March 31, 2013).
- 10.3 First Amendment, dated as of March 10, 2014, to the Amended and Restated Credit Agreement, dated as of March 5, 2013, among Realogy Intermediate Holdings LLC, Realogy Group LLC, the lenders from time to time party thereto, JPMorgan Chase Bank, N.A., as administrative agent, and the other agents parties thereto (Incorporated by reference to Exhibit 10.1 to Registrants' Current Report on Form 8-K filed on March 10, 2014).
- 10.4 Second Amendment, dated as of October 23, 2015, to the Amended and Restated Credit Agreement, dated as of March 5, 2013, as amended, among Realogy Intermediate Holdings LLC, Realogy Group LLC, the several lenders parties thereto from time to time, JPMorgan Chase Bank, N.A., as administrative agent for the lenders, and the other agents parties thereto (Incorporated by reference to Exhibit 10.1 to Registrants' Current Report on Form 8-K filed on October 28, 2015).
- 10.5 Third Amendment, dated as of July 20, 2016, to the Amended and Restated Credit Agreement, dated as of March 5, 2013, as amended, among Realogy Intermediate Holdings LLC, Realogy Group LLC, the several lenders parties thereto from time to time, JPMorgan Chase Bank, N.A., as administrative agent for the lenders, and the other agents parties thereto (Incorporated by reference to Exhibit 10.2 to Registrants' Current Report on Form 8-K filed on July 22, 2016).
- 10.6 Fourth Amendment, dated as of January 23, 2017, to the Amended and Restated Credit Agreement, dated as of March 5, 2013, as amended, among Realogy Intermediate Holdings LLC, Realogy Group LLC, the several lenders parties thereto from time to time, JPMorgan Chase Bank, N.A., as administrative agent for the lenders, and the other agents parties thereto (Incorporated by reference to Exhibit 10.1 to Registrants' Current Report on Form 8-K filed on January 23, 2017).
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## Exhibit Description

- Fifth Amendment, dated as of February 8, 2018, to the Amended and Restated Credit Agreement, dated as of March 5, 2013, as amended, among Realogy Intermediate Holdings LLC, Realogy Group LLC, the several  
10.8 lenders parties thereto from time to time, JPMorgan Chase Bank, N.A., as administrative agent for the lenders, and the other agents parties thereto (Incorporated by reference to Exhibit 10.1 to Registrants' Current Report on Form 8-K filed on February 8, 2018).
- Sixth Amendment, dated as of February 8, 2018, to the Amended and Restated Credit Agreement, dated as of March 5, 2013, as amended, among Realogy Intermediate Holdings LLC, Realogy Group LLC, the several  
10.9 lenders parties thereto from time to time, JPMorgan Chase Bank, N.A., as administrative agent for the lenders, and the other agents parties thereto (Incorporated by reference to Exhibit 10.2 to Registrants' Current Report on Form 8-K filed on February 8, 2018).
- Incremental Assumption Agreement, dated as of January 23, 2017, among Realogy Intermediate Holdings LLC, Realogy Group LLC, the financial institutions party thereto, and JPMorgan Chase Bank, N.A., as administrative  
10.10 agent (Incorporated by reference to Exhibit 10.2 to Registrants' Current Report on Form 8-K filed on January 23, 2017).
- Amended and Restated Guaranty and Collateral Agreement, dated as of March 5, 2013, among Realogy  
10.11 Intermediate Holdings LLC, Realogy Group LLC, the subsidiary loan parties thereto, and JPMorgan Chase Bank, N.A., as administrative and collateral agent (Incorporated by reference to Exhibit 10.2 to Registrants' Current Report on Form 8-K filed on March 8, 2013).
- Term Loan A Agreement, dated as of October 23, 2015, among Realogy Intermediate Holdings LLC, Realogy  
10.12 Group LLC, the lenders party thereto from time to time and JPMorgan Chase Bank, N.A., as administrative agent for the lenders (Incorporated by reference to Exhibit 10.2 to Registrants' Current Report on Form 8-K filed on October 28, 2015). Note: The Term Loan A Agreement reflecting the cumulative effect of all amendments through February 8, 2018 is attached as Exhibit A to Exhibit 10.14 in this Exhibit Index.
- First Amendment, dated as of July 20, 2016, to the Term Loan A Agreement, dated as of October 23, 2015,  
10.13 among Realogy Intermediate Holdings LLC, Realogy Group LLC, the lenders party thereto from time to time and JPMorgan Chase Bank, N.A., as administrative agent for the lenders (Incorporated by reference to Exhibit 10.1 to Registrants' Current Report on Form 8-K filed on July 22, 2016).
- Second Amendment, dated as of February 8, 2018, to the Term Loan A Agreement, dated as of October 23,  
10.14 2015, among Realogy Intermediate Holdings LLC, Realogy Group LLC, the lenders party thereto from time to time and JPMorgan Chase Bank, N.A., as administrative agent for the lenders (Incorporated by reference to Exhibit 10.3 to Registrants' Current Report on Form 8-K filed on February 8, 2018). Note: The Term Loan A Agreement reflecting the cumulative effect of all amendments through February 8, 2018 is attached as Exhibit A to this Exhibit 10.14.
- Term Loan A Guaranty and Collateral Agreement, dated as of October 23, 2015, among Realogy Intermediate  
10.15 Holdings LLC, Realogy Group LLC, the subsidiary loan parties thereto and JPMorgan Chase Bank, N.A., as administrative and collateral agent (Incorporated by reference to Exhibit 10.3 to Registrants' Current Report on Form 8-K filed on October 28, 2015).
- Intercreditor Agreement, dated as of February 2, 2012, among Realogy Group LLC (f/k/a Realogy Corporation),  
10.16 the other Grantors (as defined therein) from time to time party hereto, JPMorgan Chase Bank, N.A., as collateral agent for the Credit Agreement Secured Parties (as defined therein) and as Authorized Representative for the Credit Agreement Secured Parties, The Bank of New York, Mellon Trust Company, N.A., as the collateral agent and Authorized Representative for the Initial Additional First Lien Priority Note Secured Parties (as defined therein) (Incorporated by reference as Exhibit 10.13 to Registrants' Form 10-K for the year ended December 31, 2011).
- 10.17 Joinder No. 1 dated as of October 23, 2015 to the First Lien Priority Intercreditor Agreement dated as of February 2, 2012, with JPMorgan Chase Bank, N.A. and the other parties thereto (Incorporated by reference to



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Exhibit Description

- 10.18\*\* Employment Agreement, dated as of October 17, 2017, between Realogy Holdings Corp. and Ryan M. Schneider (Incorporated by reference to Exhibit 10.1 to Registrants' Current Report on Form 8-K filed on October 23, 2017).
- 10.19\*\* Non-Plan Inducement Stock Option Agreement, dated October 23, 2017, between Realogy Holdings Corp. and Ryan M. Schneider (Incorporated by reference to Exhibit 10.2 to Registrants' Current Report on Form 8-K filed on October 23, 2017).
- 10.20\*\* Non-Plan Inducement Restricted Stock Unit Agreement, dated October 23, 2017, between Realogy Holdings Corp. and Ryan M. Schneider (Incorporated by reference to Exhibit 10.3 to Registrants' Current Report on Form 8-K filed on October 23, 2017).
- 10.21\*\* Employment Agreement, dated as of March 13, 2017, between Realogy Holdings Corp. and Richard A. Smith (Incorporated by reference to Exhibit 10.1 to Registrants' Current Report on Form 8-K filed on March 13, 2017).
- 10.22\*\* Amendment, dated October 23, 2017, to Employment Agreement, dated as of March 13, 2017, between Realogy Holdings Corp. and Richard A. Smith (Incorporated by reference to Exhibit 10.5 to Registrants' Current Report on Form 8-K filed on October 23, 2017).
- 10.23\*\* Amendment No. 2, dated December 21, 2017, to Employment Agreement, dated as of March 13, 2017, as amended on October 23, 2017, between Realogy Holdings Corp. and Richard A. Smith (Incorporated by reference to Exhibit 10.1 to Registrants' Current Report on Form 8-K filed on December 22, 2017).
- 10.24\*\* Advisory Services Agreement, dated December 21, 2017, between Realogy Holdings Corp. and Richard A. Smith (Incorporated by reference to Exhibit 10.2 to Registrants' Current Report on Form 8-K filed on December 22, 2017).
- 10.25\*\* Severance Agreement dated February 23, 2016, between Realogy Holdings Corp. and Anthony E. Hull (Incorporated by reference to Exhibit 10.16 to Registrants' Form 10-K for the year ended December 31, 2015).
- 10.26\*\* Severance Agreement dated February 23, 2016, between Realogy Holdings Corp. and Bruce G. Zipf (Incorporated by reference to Exhibit 10.22 to Registrants' Form 10-K for the year ended December 31, 2015).
- 10.27\*\* Letter Agreement dated February 14, 2018 between Realogy Holdings Corp. and Bruce Zipf (Incorporated by reference to Exhibit 10.5 to the Registrants' Form 10-Q for the three months ended March 31, 2018).
- 10.28\*\* Severance Agreement dated October 13, 2016, between Realogy Holdings Corp. and John Peyton (Incorporated by reference to Exhibit 10.28 to the Registrant's Form 10-K for the year ended December 31, 2017).
- 10.29\*\* Realogy Holdings Corp. Severance Pay Plan for Executives (Incorporated by reference to Exhibit 10.1 to Registrants' Current Report on Form 8-K filed on November 6, 2018).
- 10.30\*\* Realogy Holdings Corp. Change in Control Plan for Executives (Incorporated by reference to Exhibit 10.2 to Registrants' Current Report on Form 8-K filed on November 6, 2018).
- 10.31\*\* Realogy Holdings Corp. Executive Restrictive Covenant Agreement (Incorporated by reference to Exhibit 10.3 to Registrants' Current Report on Form 8-K filed on November 6, 2018).
- 10.32\*\* Realogy Holdings Corp. 2007 Stock Incentive Plan (Incorporated by reference to Exhibit 10.6 to Registrants' Form 10-Q for the three months ended September 30, 2012).
- 10.33\*\* Form of Option Agreement under 2007 Stock Incentive Plan between Realogy Holdings Corp. and the Optionee party thereto governing time-vested options (Incorporated by reference to Exhibit 10.6 to Realogy Group LLC's (f/k/a Realogy Corporation's) Form 10-Q for the three months ended September 30, 2010).
- 10.34\*\* Amended and Restated Realogy Group LLC Executive Deferred Compensation Plan (Incorporated by reference to Exhibit 10.1 to Registrants' Current Report on Form 8-K filed on April 9, 2013).
- 10.35\*\*

Amendment No. 1 dated November 4, 2014 to Realogy Group LLC Amended and Restated Realogy Group LLC Executive Deferred Compensation Plan (Incorporated by reference to Exhibit 10.26 to Registrants' Form 10-K for the year ended December 31, 2014).

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- 10.36\*\* Amendment No. 2 dated December 11, 2014 to Realogy Group LLC Amended and Restated Realogy Group LLC Executive Deferred Compensation Plan (Incorporated by reference to Exhibit 10.27 to Registrants' Form 10-K for the year ended December 31, 2014).
- 10.37\*\* Amendment No. 3 dated December 15, 2017 to Realogy Group LLC Amended and Restated Realogy Group LLC Executive Deferred Compensation Plan (Incorporated by reference to Exhibit 10.1 to Registrants' Current Report on Form 8-K filed on December 15, 2017).
- 10.38\*\* Realogy Holdings Corp. Director Deferred Compensation Plan (Incorporated by reference to Exhibit 10.2 to Registrants' Form 10-Q for the three months ended March 31, 2013).
- 10.39\*\* Amendment No. 1 dated November 4, 2014 to Realogy Holdings Corp. Director Deferred Compensation Plan (Incorporated by reference to Exhibit 10.29 to Registrants' Form 10-K for the year ended December 31, 2014).
- 10.40\*\* Amendment No. 2 dated December 11, 2014 to Realogy Holdings Corp. Director Deferred Compensation Plan (Incorporated by reference to Exhibit 10.30 to Registrants' Form 10-K for the year ended December 31, 2014).
- 10.41 Trademark License Agreement, dated as of February 17, 2004, among SPTC Delaware LLC (as assignee of SPTC, Inc.), Sotheby's (as successor to Sotheby's Holdings, Inc.), Cendant Corporation and Monticello Licensee Corporation (Incorporated by reference to Exhibit 10.12 to Realogy Group LLC's (f/k/a Realogy Corporation's) Registration Statement on Form 10 (File No. 001-32852)).
- 10.42 Amendment No. 1 to Trademark License Agreement, dated May 2, 2005, by and among SPTC Delaware LLC (as assignee of SPTC, Inc.), Sotheby's (as successor to Sotheby's Holdings, Inc.), Cendant Corporation and Sotheby's International Realty Licensee Corporation (f/k/a Monticello Licensee Corporation) (Incorporated by reference to Exhibit 10.12(a) to Realogy Group LLC's (f/k/a Realogy Corporation's) Registration Statement on Form 10 (File No. 001-32852)).
- 10.43 Amendment No. 2 to Trademark License Agreement, dated May 2, 2005, by and among SPTC Delaware LLC (as assignee of SPTC, Inc.), Sotheby's (as successor to Sotheby's Holdings, Inc.), Cendant Corporation and Sotheby's International Realty Licensee Corporation (f/k/a Monticello Licensee Corporation) (Incorporated by reference to Exhibit 10.12(b) to Realogy Group LLC's (f/k/a Realogy Corporation's) Registration Statement on Form 10 (File No. 001-32852)).
- 10.44 Consent of SPTC Delaware LLC, Sotheby's (as successor to Sotheby's Holdings, Inc.) and Sotheby's International Realty License Corporation (Incorporated by reference to Exhibit 10.12(c) to Amendment No. 5 to Realogy Group LLC's (f/k/a Realogy Corporation's) Registration Statement on Form 10 (File No. 001-32852)).
- 10.45 Joinder Agreement dated as of January 1, 2005, between SPTC Delaware LLC, Sotheby's (as successor to Sotheby's Holdings, Inc.), and Cendant Corporation and Sotheby's International Realty Licensee Corporation (Incorporated by reference to Exhibit 10.11 to Realogy Group LLC's (f/k/a Realogy Corporation's) Quarterly Report on Form 10-Q for the three months ended June 30, 2009).
- 10.46 Amendment No. 3 to Trademark License Agreement dated January 14, 2011, by and among SPTC Delaware LLC (as assignee of SPTC, Inc.) and Sotheby's, as successor by merger to Sotheby's Holdings, Inc., on the one hand, and Realogy Group LLC (f/k/a Realogy Corporation), as successor to Cendant Corporation, and Sotheby's International Realty Licensee (f/k/a Monticello Licensee Corporation) (Incorporated by reference to Exhibit 10.49 to Realogy Group LLC's (f/k/a Realogy Corporation's) Form 10-K for the year ended December 31, 2010).
- 10.47 Lease Agreement dated November 23, 2011, between 175 Park Avenue, LLC and Realogy Operations LLC (Incorporated by reference to Exhibit 10.57 to Registrants' Form 10-K for the year ended December 31, 2011).
- 10.48 First Amendment to Lease dated April 29, 2013, between 175 Park Avenue, LLC and Realogy Operations LLC amending Lease dated November 23, 2011 (Incorporated by reference to Exhibit 10.3 to Registrants' Form 10-Q for the three months ended March 31, 2013).

Guaranty dated November 23, 2011, by Realogy Group LLC (f/k/a Realogy Corporation) to 175 Park Avenue, 10.49 LLC (Incorporated by reference to Exhibit 10.58 to Registrants' Form 10-K for the year ended December 31, 2011).

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## Exhibit Description

- 10.50 Note Purchase Agreement (Secured Variable Funding Notes, Series 2011-1) dated as of December 14, 2011, among Apple Ridge Funding LLC, Cartus Corporation, the commercial paper conduit purchasers party thereto, the financial institutions party thereto, the managing agents party thereto, and committed purchasers and managing agents party thereto and Crédit Agricole Corporate and Investment Bank, as administrative and lead arranger (Incorporated by reference to Exhibit 10.60 to Registrants' Form 10-K for the year ended December 31, 2011).
- 10.51 Amendment dated June 13, 2014 to the Note Purchase Agreement dated as of December 14, 2011, by and among Apple Ridge Funding LLC, Cartus Corporation, Realogy Group LLC, the managing agents, committed purchasers and conduit purchasers named therein, and Crédit Agricole Corporate and Investment Bank, as administrative agent (Incorporated by reference to Exhibit 10.1 to the Registrants' Form 10-Q for the three months ended June 30, 2014).
- 10.52 Amendment dated November 10, 2014 to the Note Purchase Agreement dated as of December 14, 2011, by and among Apple Ridge Funding LLC, Cartus Corporation, Realogy Group LLC, the managing agents, committed purchasers and conduit purchasers named therein, and Crédit Agricole Corporate and Investment Bank, as administrative agent (Incorporated by reference to Exhibit 10.49 to Registrants' Form 10-K for the year ended December 31, 2014).
- 10.53 Amendment to Note Purchase Agreement, dated as of June 1, 2016, among Apple Ridge Funding LLC, Cartus Corporation, Realogy Group LLC, the Managing Agents, Committed Purchasers and Conduit Purchasers, and Crédit Agricole Corporate and Investment Bank, as Administrative Agent (Incorporated by reference to Exhibit 10.1 to Registrants' Current Report on Form 8-K filed with the Securities and Exchange Commission on June 3, 2016).
- 10.54 Series 2011-1 Indenture Supplement, dated as of December 16, 2011, between Apple Ridge Funding LLC and U.S. Bank National Association, as indenture trustee, paying agent, authentication agent, transfer agent and registrar, which modifies the Master Indenture, dated as of April 25, 2000, among Apple Ridge Funding LLC and U.S. Bank National Association, as indenture trustee, paying agent, authentication agent, transfer agent and registrar (Incorporated by reference to Exhibit 10.61 to Registrants' Form 10-K for the year ended December 31, 2011).
- 10.55 Eighth Omnibus Amendment, dated as of September 11, 2013, among Cartus Corporation, Cartus Financial Corporation, Apple Ridge Services Corporation, Apple Ridge Funding LLC, Realogy Group LLC, U.S. Bank National Association, the managing agents party to the Note Purchase Agreement dated December 14, 2011 and Crédit Agricole Corporate and Investment Bank (Incorporated by reference to Exhibit 10.1 to Registrants' Current Report on Form 8-K filed on September 13, 2013).
- 10.56 Ninth Omnibus Amendment, dated as of June 11, 2015, among Cartus Corporation, Cartus Financial Corporation, Apple Ridge Services Corporation, Apple Ridge Funding LLC, Realogy Group LLC, U.S. Bank National Association, the managing agents party to the Note Purchase Agreement dated December 14, 2011 and Crédit Agricole Corporate and Investment Bank. (Incorporated by reference to Exhibit 10.1 to the Registrants' Current Report on Form 8-K filed on June 12, 2015).
- 10.57 Tenth Omnibus Amendment, dated as of June 9, 2017, among Cartus Corporation, Cartus Financial Corporation, Apple Ridge Services Corporation, Apple Ridge Funding LLC, Realogy Group LLC, U.S. Bank National Association, the managing agents party to the Note Purchase Agreement dated December 14, 2011 and Crédit Agricole Corporate and Investment Bank. (Incorporated by reference to Exhibit 10.1 to the Registrants' Current Report on Form 8-K filed on June 13, 2017).
- 10.58 Eleventh Omnibus Amendment, dated as of June 8, 2018, among Cartus Corporation, Cartus Financial Corporation, Apple Ridge Services Corporation, Apple Ridge Funding LLC, Realogy Group LLC, U.S. Bank National Association, the managing agents party to the Note Purchase Agreement dated December 14, 2011 and Crédit Agricole Corporate and Investment Bank. (Incorporated by reference to Exhibit 10.1 to the Registrants'

Current Report on Form 8-K filed on June 11, 2018).

Form of Option Agreement for Independent Directors under 2007 Stock Incentive Plan (Incorporated by 10.59\*\* reference to Exhibit 10.51 to Realogy Group LLC's (f/k/a Realogy Corporation's) Form 10-K for the year ended December 31, 2007).

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Exhibit Description

- 10.60\*\* Amended and Restated Realogy Holdings Corp. 2012 Long-Term Incentive Plan (Incorporated by reference to Exhibit 10.1 to Realogy Holdings Corp.'s Current Report on Form 8-K filed on May 5, 2016).  
Amendment to the Amended and Restated Realogy Holdings Corp. 2012 Long-Term Incentive Plan
- 10.61\*\* (Incorporated by reference to Exhibit 10.5 to Realogy Holdings Corp.'s Form 10-Q for the three-month period ended September 30, 2017).  
Form of Stock Option Agreement under Amended and Restated 2012 Long-Term Incentive Plan
- 10.62\*\* (Incorporated by reference to Exhibit 10.50 to Registrants' Form 10-K for the year ended December 31, 2016).  
Form of Director Restricted Stock Unit Notice of Grant and Restricted Stock Unit Agreement under the
- 10.63\*\* Amended and Restated Realogy Holdings Corp. 2012 Long-Term Incentive Plan (Incorporated by reference to Exhibit 10.51 to Registrants' Form 10-K for the year ended December 31, 2016).  
Form of NEO Notice of Grant and Performance Share Unit Agreement under Amended and Restated Realogy
- 10.64\*\* Holdings Corp. 2012 Long-Term Incentive Plan (Incorporated by reference to Exhibit 10.2 to the Registrants' Form 10-Q for the three months ended March 31, 2016).  
Form of NEO Performance Restricted Stock Unit Notice of Grant and Performance Restricted Stock Unit
- 10.65\*\* Agreement under Amended and Restated Realogy Holdings Corp. 2012 Long-Term Incentive Plan (Incorporated by reference to Exhibit 10.1 to the Registrants' Form 10-Q for the three months ended March 31, 2016).
- 10.66\*\* Realogy Holdings Corp. 2018 Long-Term Incentive Plan (Incorporated by reference to Exhibit 10.1 to the Registrants' Registration Statement on Form S-8 filed on May 2, 2018).
- 10.67\*\* \* Form of Stock Option Agreement under 2018 Long-Term Incentive Plan.
- 10.68\*\* \* Form of Restricted Stock Unit Notice of Grant and Restricted Stock Unit Agreement under the 2018 Long-Term Incentive Plan.
- 10.69\*\* \* Form of Notice of Grant and Performance Share Unit Agreement under the 2018 Long-Term Incentive Plan.  
Form of Director Restricted Stock Unit Notice of Grant and Restricted Stock Unit Agreement under the 2018
- 10.70\*\* Long-Term Incentive Plan (Incorporated by reference to Exhibit 10.4 to the Registrants' Form 10-Q for the three months ended March 31, 2018).
- 10.71 Form of Indemnification Agreement (Incorporated by reference to Exhibit 10.79 to Realogy Holdings Corp.'s Registration Statement on Form S-1 (File No. 333-181988)).
- 10.72\*\* \* Letter Agreement dated February 23, 2019 between Realogy Holdings Corp. and Donald J. Casey.
- 21.1\* Subsidiaries of Realogy Holdings Corp. and Realogy Group LLC.
- 23.1\* Consent of PricewaterhouseCoopers LLP.
- 24.1\* Power of Attorney of Directors and Officers of the registrants (included on signature pages to this Form 10-K).
- 31.1\* Certification of the Chief Executive Officer of Realogy Holdings Corp. pursuant to Rules 13(a)-14(a) and 15(d)-14(a) promulgated under the Securities Exchange Act of 1934, as amended.
- 31.2\* Certification of the Chief Financial Officer of Realogy Holdings Corp. pursuant to Rules 13(a)-14(a) and 15(d)-14(a) promulgated under the Securities Exchange Act of 1934, as amended.
- 31.3\* Certification of the Chief Executive Officer of Realogy Group LLC pursuant to Rules 13(a)-14(a) and 15(d)-14(a) promulgated under the Securities Exchange Act of 1934, as amended.
- 31.4\* Certification of the Chief Financial Officer of Realogy Group LLC pursuant to Rules 13(a)-14(a) and 15(d)-14(a) promulgated under the Securities Exchange Act of 1934, as amended.
- 32.1\* Certification for Realogy Holdings Corp. pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.



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32.2\* Certification for Realogy Group LLC pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

101.INS ^ XBRL Instance Document.

101.SCH ^ XBRL Taxonomy Extension Schema Document.

101.CAL ^ XBRL Taxonomy Extension Calculation Linkbase Document.

101.DEF ^ XBRL Taxonomy Extension Definition Linkbase Document.

101.LAB ^ XBRL Taxonomy Extension Label Linkbase Document.

101.PRE ^ XBRL Taxonomy Extension Presentation Linkbase Document.

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\* Filed herewith.

\*\* Compensatory plan or arrangement.

^ Furnished electronically with this report.

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