

WILLIS LEASE FINANCE CORP

Form 10-K

March 16, 2017

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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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, 2016

Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Commission File Number: 001-15369

WILLIS LEASE FINANCE CORPORATION

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)

68-0070656
(IRS Employer Identification No.)

773 San Marin Drive, Suite 2215, Novato, CA
(Address of principal executive offices)

94998
(Zip Code)

Registrant's telephone number, including area code (415) 408-4700

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

Title of Each Class	Name of each exchange on which registered
Common Stock	NASDAQ

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

Indicate by check mark if the registrant is a well-known seasoned issuer as defined in Rule 405 of the Securities Act. 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 Act. Yes No

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. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes No

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

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Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The aggregate market value of voting stock held by non-affiliates of the registrant as of the last business day of the registrant's most recently completed second fiscal quarter (June 30, 2016) was approximately \$81.9 million (based on a closing sale price of \$22.23 per share as reported on the NASDAQ National Market).

The number of shares of the registrant's Common Stock outstanding as of March 6, 2017 was 6,399,767.

The Company's Proxy Statement for the 2017 Annual Meeting of Stockholders is incorporated by reference into Part III of this Form 10-K.

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WILLIS LEASE FINANCE CORPORATION
2016 FORM 10-K ANNUAL REPORT

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PART I

ITEM 1. BUSINESS

INTRODUCTION

Willis Lease Finance Corporation with its subsidiaries is a leading lessor and servicer of commercial aircraft and engines. Our principal business objective is to build value for our shareholders by acquiring commercial aircraft and engines and managing those assets in order to provide a return on investment, primarily through lease rent and maintenance reserve revenues, as well as through management fees earned for managing aircraft engines owned by other parties. As of December 31, 2016, we had a total lease portfolio consisting of 208 engines and related equipment, 11 aircraft and 5 spare parts packages with 80 lessees in 43 countries with an aggregate net book value of \$1,136.6 million. In addition to our owned portfolio, as of December 31, 2016, we managed a total lease portfolio of 542 engines and related equipment for other parties. We also seek, from time to time, to act as a leasing agent of engines for other parties.

In 2013, we launched Willis Aeronautical Services, Inc. (“Willis Aero”), a wholly-owned subsidiary, whose primary focus is the sale of aircraft engine parts and materials through the acquisition or consignment from third parties of aircraft and engines.

In 2016, we purchased, through our wholly owned subsidiary Willis Asset Management Limited (“Willis Asset Management”), the business and assets of Total Engine Support Limited (“TES”). TES has been the engine management and consulting business of the TES Aviation Group. Willis Asset Management has 502 engines under management as of December 31, 2016.

We are a Delaware corporation, incorporated in 1996. Our executive offices are located at 773 San Marin Drive, Suite 2215, Novato, California 94998. We transact business directly and through our subsidiaries unless otherwise indicated.

We maintain a website at www.willislease.com where our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports are available without charge, as soon as reasonably practicable following the time they are filed with or furnished to the SEC. You may read and copy any materials we file with the SEC at the SEC’s public reference room at 100 F Street, NE, Washington, DC 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0300. The SEC also maintains an electronic Internet site that contains our reports, proxies and information statements, and other

information at <http://www.sec.gov>.

We separate our business into two reportable segments, Equipment Leasing and Spare Parts Sales. Our business activities by reportable segment are described below.

Equipment Leasing

Our strategy is to lease aircraft engines and aircraft and provide related services to a diversified group of commercial aircraft operators and maintenance, repair and overhaul organizations (“MROs”) worldwide. Commercial aircraft operators need engines in addition to those installed on the aircraft that they operate. These spare engines are required for various reasons including requirements that engines be inspected and repaired at regular intervals based on equipment utilization. Furthermore, unscheduled events such as mechanical failure, Federal Aviation Administration (“FAA”) airworthiness directives or manufacturer-recommended actions for maintenance, repair and overhaul of engines result in the need for spare engines. Commercial aircraft operators and others in the industry generally estimate that the total number of spare engines needed is between 10% and 14% of the total number of installed engines. Today it is estimated that there are nearly 45,000 engines installed on commercial aircraft. Accordingly, we estimate that there are between 4,200 and 5,900 spare engines in the market, including both owned and leased spare engines.

Our engine portfolio consists of noise-compliant Stage III commercial jet engines manufactured by CFMI, General Electric, Pratt & Whitney, Rolls Royce and International Aero Engines. These engines generally may be used on

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one or more aircraft types and are the most widely used engines in the world, powering Airbus, Boeing, McDonnell Douglas, Bombardier and Embraer aircraft.

The Company acquires engines for its leasing portfolio in a number of ways. It enters into sale and lease back transactions with operators of aircraft and providers of engine maintenance cost per hour services. We also purchase both new and used engines that are subject to a lease when purchased and on a speculative basis (i.e. without a lease attached from manufacturers or other parties which own such engines).

Spare Parts Sales

Our wholly owned subsidiary Willis Aero primarily engages in the sale of aircraft engine parts and materials through the acquisition or consignment of engines from third parties. The launch of this business segment in November 2013 positioned our Company to provide end-of-life solutions for the growing supply of surplus aircraft and engines. With the establishment of Willis Aero, we are able to manage the full lifecycle of our lease assets, enhance the returns on our engine portfolio and create incremental value for our shareholders.

THE WEST II SECURITIZATION

Willis Engine Securitization Trust II, or “WEST II”, is a special-purpose, bankruptcy-remote, Delaware statutory trust that is wholly-owned by us and consolidated in our financial statements. We established WEST II in September 2012, when WEST II issued and sold \$390 million aggregate principal amount of Class 2012-A Term Notes (the “Notes”) and received \$384.9 million in net proceeds. We used these funds, net of transaction expenses and swap termination costs, together with our revolving credit facility, to pay off the prior Willis Engine Securitization Trust, or “WEST” notes totaling \$435.9 million. At closing, the net book values of 22 engines were pledged as collateral from WEST to the Company’s revolving credit facility, which provided the remaining funds to pay off the WEST notes. The assets and liabilities of WEST II will remain on the Company’s balance sheet. A portfolio of 58 commercial jet aircraft engines and leases thereof secures the obligations of WEST II.

WEST II’s obligations under these notes are serviced by revenues from the lease and disposition of its engines, and are secured by all of its assets, including all of its interests in its engines, its subsidiaries, restricted cash accounts, engine maintenance reserve accounts, all proceeds from the sale or disposition of engines, and all insurance proceeds. We have not guaranteed any obligations of WEST II and no assets outside of the WEST II trust secure such obligations.

We are the servicer and administrative agent for WEST II. Our annual fees for these services are 11.5% as servicer and 2.0% as administrative agent of the aggregate net rents actually received by WEST II on its engines, and such fees

are payable to us monthly. We are also paid a fee of 3.0% of the net proceeds from the sale of any engines. As WEST II is consolidated in our financial statements these fees eliminate in consolidation. Proceeds from engine sales will be used, at WEST II's election, to reduce WEST II's debt or to acquire other engines.

WEST II gives us the flexibility to manage the portfolio to adapt to changes in aircraft fleets and customer demand over time, benefiting both us and our investors. The asset-backed securitization is well suited to our engine leasing business as it provides long term capital in which debt maturity is better matched to our long term asset lives.

INDUSTRY BACKGROUND - THE DEMAND FOR LEASED AIRCRAFT ENGINES

Historically, commercial aircraft operators owned rather than leased their spare engines. As engines become more powerful and technically sophisticated, they also become more expensive to acquire and maintain. In part due to cash constraints on commercial aircraft operators and the costs associated with engine ownership, commercial aircraft operators have become more cost-conscious and now utilize operating leases for a portion of their spare engines and are therefore better able to manage their finances in this capital-intensive business. Engine leasing is a specialized business that has evolved into a discrete sector of the commercial aviation market. Participants in this sector need access to capital, as well as specialized technical knowledge, in order to compete successfully.

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Growth in the spare engine leasing industry is dependent on two fundamental drivers:

- the number of commercial aircraft, and therefore engines, in the market; and
- the proportion of engines that are leased, rather than owned, by commercial aircraft operators.

We believe both drivers will increase over time.

Increased number of aircraft, and therefore engines, in the market

We believe that the number of commercial and cargo aircraft, and hence spare engines, will increase. Boeing estimates that there are roughly 23,000 aircraft as of 2015 and projects this will grow to approximately 45,000 aircraft by 2035. Aircraft equipment manufacturers have predicted such an increase in aircraft to address the rapid growth of both passenger and cargo traffic in the Asian markets, as well as demand for new aircraft in more mature markets.

Increased lease penetration rate

Spare engines provide support for installed engines in the event of routine or other engine maintenance or unscheduled removal. The number of spare engines needed to service any fleet is determined by many factors. These factors include:

- the number and type of aircraft in an aircraft operator's fleet;
- the geographic scope of such aircraft operator's destinations;
- the time an engine is on-wing between removals;
- average shop visit time; and
- the number of spare engines an aircraft operator requires in order to ensure coverage for predicted and unscheduled removals.

We believe that commercial aircraft operators are increasingly considering their spare engines as significant capital assets, where operating leases may be more attractive than capital leases or ownership of spare engines. Some believe that currently as many as 35% to 40% of the spare engine market falls under the category of leased engines. Industry analysts have forecast that the percentage of leased engines is likely to increase over the next 15 years as engine leasing follows the growth of aircraft leasing. We believe this is due to the increasing cost of newer engines, the anticipated modernization of the worldwide aircraft fleet and the significant cost associated therewith, and the emergence of new niche-focused airlines which generally use leasing in order to obtain their capital assets.

ENGINE LEASING

As of December 31, 2016, all of our leases to air carriers, manufacturers and MROs are operating leases as opposed to finance leases. Under operating leases, we retain the potential benefit and assume the risk of the residual value of the aircraft equipment, in contrast to capital or financing leases where the lessee has more of the potential benefits and risks of ownership. Operating leases allow commercial aircraft operators greater fleet and financial flexibility due to the relatively small initial capital outlay necessary to obtain use of the aircraft equipment, and the availability of short and long term leases to better meet their needs. Operating lease rates are generally higher than finance lease rates, in part because of the risks associated with the residual value.

We describe all of our current leases as “triple-net” operating leases. A triple-net operating lease requires the lessee to make the full lease payment and pay any other expenses associated with the use of the engines, such as maintenance, casualty and liability insurance, sales or use taxes and personal property taxes. The leases contain detailed provisions specifying the lessees’ responsibility for engine damage, maintenance standards and the required condition of

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the engine upon return at the end of the lease. During the term of the lease, we generally require the lessee to maintain the engine in accordance with an approved maintenance program designed to meet applicable regulatory requirements in the jurisdictions in which the lessee operates.

We try to mitigate risk where possible. For example, we make an analysis of the credit risk associated with the lessee before entering into any significant lease transaction. Our credit analysis generally consists of evaluating the prospective lessee's financial standing by utilizing financial statements and trade and/or banking references. In certain circumstances, we may require our lessees to provide additional credit support such as a letter of credit or a guaranty from a bank or a third party or a security deposit. We also evaluate insurance and expropriation risk and evaluate and monitor the political and legal climate of the country in which a particular lessee is located in order to determine our ability to repossess our engines should the need arise. Despite these guidelines, we cannot give assurance that we will not experience collection problems or significant losses in the future. See "Risk Factors" below.

At the commencement of a lease, we may collect, in advance, a security deposit normally equal to at least one month's lease payment. The security deposit is returned to the lessee after all lease return conditions have been met. Under the terms of some of our leases, during the term of the lease, the lessees pay amounts to us based on usage of the engine, which is referred to as maintenance reserves or use fees, which are designed to cover the expected future maintenance costs. For those leases in which the maintenance reserves are reimbursable to the lessee, maintenance reserves are collected and are reimbursed to the lessee when qualifying maintenance is performed. Under longer-term leases, to the extent that cumulative use fee billings are inadequate to fund expenditures required prior to return of the engine to us, the lessee is obligated to cover the shortfall. Recovery is therefore dependent upon the financial condition of the lessee.

During the lease period, our leases require that maintenance and inspection of the leased engines be performed at qualified maintenance facilities certified by the FAA or its foreign equivalent. In addition, when an engine becomes off-lease, it undergoes inspection to verify compliance with lease return conditions. Our management believes that our attention to our lessees and our emphasis on maintenance and inspection helps preserve residual values and generally helps us to recover our investment in our leased engines.

Upon termination of a lease, we will lease, sell or part out the related engines. The demand for aftermarket engines for either sale or lease may be affected by a number of variables, including:

- general market conditions;

- regulatory changes (particularly those imposing environmental, maintenance and other requirements on the operation of engines);

- changes in demand for air travel;
- fuel costs;
- changes in the supply and cost of aircraft equipment; and
- technological developments.

The value of particular used engines varies greatly depending upon their condition, the maintenance services performed during the lease term and, as applicable, the number of hours or cycles remaining until the next major maintenance is required. If we are unable to lease or sell engines on favorable terms, our financial results and our ability to service debt may be adversely affected. See “Risk Factors” below.

The value of a particular model of engine is heavily dependent on the status of the types of aircraft on which it is installed. We believe values of engines tend to be stable so long as the host aircraft for the engines as well as the engines themselves are still being manufactured. Prices will also tend to remain stable and even rise after a host aircraft is no longer manufactured so long as there is sufficient demand for the host aircraft. However, the value of an engine

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begins to decline rapidly once the host aircraft begins to be retired from service and/or parted out in significant numbers. Values of engines also may decline because of manufacturing defects that may surface subsequently.

As of December 31, 2016, we had a total lease portfolio of 208 aircraft engines and related equipment, 5 spare parts packages, 11 aircraft and various parts and other engine-related equipment with a net book value of \$1,136.6 million in our lease portfolio. As of December 31, 2015, we had a total lease portfolio of 201 aircraft engines and related equipment, 5 spare parts packages, 10 aircraft and various parts and other engine-related equipment with a net book value of \$1,109.2 million in our lease portfolio.

As of December 31, 2016, minimum future rentals under non-cancelable operating leases of these engines, parts and aircraft assets were as follows:

Year	(in thousands)
2017	\$ 89,119
2018	57,192
2019	43,979
2020	33,482
2021	16,930
Thereafter	23,466
	\$ 264,168

As of December 31, 2016, we had 80 lessees of commercial aircraft engines, aircraft, and other aircraft-related equipment in 43 countries. We believe the loss of any one customer would not have a significant long-term adverse effect on our business. We operate in a global market in which our engines are easily transferable among lessees located in many countries, which stabilizes demand and allows us to recover from the loss of a particular customer. As a result, we do not believe we are dependent on a single customer or a few customers, the loss of which would have a material adverse effect on our revenues.

On May 25, 2011, we entered into an agreement with Mitsui & Co., Ltd. to participate in a joint venture formed as a Dublin-based Irish limited company — Willis Mitsui & Company Engine Support Limited (“WMES”) for the purpose of acquiring and leasing jet engines. Each partner holds a fifty percent interest in the joint venture. Our investment in the joint venture is \$32.5 million as of December 31, 2016.

On June 3, 2014 we entered into an agreement with China Aviation Supplies Import & Export Corporation (“CASC”) to participate in a joint venture named CASC Willis Engine Lease Company Limited (“CASC Willis”), a new joint venture

based in Shanghai, China. Each partner holds a fifty percent interest in the joint venture. In October 2014, we made a \$15.0 million initial capital contribution, representing our fifty percent, up-front funding contribution to the new joint venture. The company acquires and leases jet engines to Chinese airlines and concentrates on meeting the fast growing demand for leased commercial aircraft engines and aviation assets in the People's Republic of China. CASC Willis owned a lease portfolio of 3 engines with a net book value of \$49.1 million as of December 31, 2016. Our investment in the joint venture is \$12.9 million as of December 31, 2016. During 2016, CASC was reorganized, with portions of its partnership interest in CASC Willis being transferred to three Chinese airlines and another government-owned entity. The 2016 CASC reorganization resulted in no voting structure change to the joint venture.

AIRCRAFT LEASING

As of December 31, 2016, we owned and leased four Boeing 737 aircraft, four ATR72-202 turboprop, two Embraer E-190LR, and one Bombardier Challenger aircraft with an aggregate net book value of \$105.7 million.

Our aircraft leases are "triple-net" leases and the lessee is responsible for making the full lease payment and paying any other expenses associated with the use of the aircraft, such as maintenance, casualty and liability insurance, sales or use taxes and personal property taxes. In addition, the lessee is responsible for normal maintenance and repairs, engine and airframe overhauls, and compliance with return conditions of flight equipment on lease. Under the provisions of many leases, for certain engine and airframe overhauls, we reimburse the lessee for costs incurred up to but not

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exceeding maintenance reserves the lessee has paid to us. Maintenance reserves are designed to cover the expected maintenance costs. The lessee is also responsible for compliance with all applicable laws and regulations with respect to the aircraft. We require our lessees to comply with FAA requirements. We periodically inspect our leased aircraft. Generally, we require a deposit as security for the lessee's performance of obligations under the lease and the condition of the aircraft upon return. In addition, the leases contain extensive provisions regarding our remedies and rights in the event of a default by the lessee and specific provisions regarding the condition of the aircraft upon return. The lessee is required to continue to make lease payments under all circumstances, including periods during which the aircraft is not in operation due to maintenance or grounding.

SPARE PARTS SALES

The sale of spare parts is managed by the Company's wholly owned subsidiary, Willis Aero. Willis Aero primarily engages in the sale of aircraft engine parts and materials through the acquisition or consignment from third parties of aircraft and engines. The launch of this new business segment in November 2013 positioned our Company to provide end-of-life solutions for the growing supply of surplus aircraft and engines. With the establishment of Willis Aero, we are able to manage the full lifecycle of our lease assets, enhance the returns on our engine portfolio and create incremental value for our shareholders. As of December 31, 2016, spare parts inventory had a carrying value of \$25.4 million.

WILLIS ASSET MANAGEMENT LIMITED

In 2016, Willis Asset Management Limited ("Willis Asset Management"), a newly formed Welsh subsidiary, purchased the business and assets of TES, the consulting and asset management business of the TES Aviation Group. Willis Asset Management is an asset management, technical services and consultancy business. Willis Asset Management has 502 engines under management as of December 31, 2016.

OUR COMPETITIVE ADVANTAGES

We are uniquely positioned in the market and remain competitive, in part, due to the following advantages:

- We have an entrepreneurial culture and our size and independent ownership structure gives us a unique ability to move faster than our competition. We were founded in 1985 as a startup venture by our Chief Executive Officer, Charles F. Willis, IV, and we continue to foster an entrepreneurial attitude among our executives and employees. Unlike most other aircraft engine leasing companies, we are not tied to a particular manufacturer and are not part of a larger corporate entity. As a result, we can react more nimbly to customer demands and changes in the industry.
- Our independent ownership allows us to meet our customer needs without regard to any potentially conflicting affiliate demands to use their engines or services. Many of the aircraft engine leasing companies with which we

compete are owned in whole or part by aircraft engine manufacturers. As a result, these leasing companies are inherently motivated to sell to customers the aircraft equipment that is manufactured by their owners, regardless of whether that equipment best meets the needs of their customers. As an independent public company we have the ability to work with customers to correctly identify their needs and provide them with the engines, equipment and services that are best suited to those needs.

- We have significant technical expertise and experience. Our senior management, marketing and sales teams all have extensive experience in leasing aircraft engines and equipment. Our technical group makes up approximately half of our total company staff levels. As a result, we possess a deep knowledge of the technical details of commercial aircraft engines and maintenance issues associated with these engines that enables us to provide our customers with comprehensive and up to date information on the various engine types available for lease.

- We have extensive industry contacts/relationships—worldwide. We have developed long-standing relationships with aircraft operators, equipment manufacturers and aircraft maintenance organizations around the world. Our extensive network of relationships enables us to quickly identify new leasing

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opportunities, procure engines and equipment and facilitate the repair of equipment owned by us and equipment leased by our customers.

- We have a trusted reputation for quality engines and engine records. We have been an independent lessor of aircraft engines and engine equipment since 1985. Since that time we have focused on providing customers with high quality engines and engine records. As a result of our commitment to these high standards, a significant portion of our customer base consists of customers who have leased engines from us previously.
- We have a diverse lease portfolio by customer, geography and engine type. As of December 31, 2016, we had a total lease portfolio consisting of 208 engines and related equipment, 11 aircraft and 5 spare parts packages with 80 lessees in 43 countries and an aggregate net book value of \$1,136.6 million.
- We have a diverse lease product offering (by engine type and types of leases). We lease a variety of noise-compliant, Stage III commercial jet engines manufactured by CFMI, General Electric, Pratt & Whitney, Rolls Royce and International Aero Engines. These engines generally may be used on one or more aircraft types and are the most widely used engines in the world, powering Airbus, Boeing, McDonnell Douglas, Bombardier and Embraer aircraft. We offer short and long-term leases, sale/leaseback transactions and engine pooling arrangements where members of the pool have quick access to available spare engines from us or other pool members, which are typically structured as short-term leases.

COMPETITION

The markets for our products and services are very competitive, and we face competition from a number of sources. These competitors include aircraft engine and aircraft parts manufacturers, aircraft and aircraft engine lessors, airline and aircraft service and repair companies and aircraft and aircraft engine spare parts distributors. Many of our competitors have substantially greater resources than us. Those resources may include greater name recognition, larger product lines, complementary lines of business, greater financial, marketing, information systems and other resources. In addition, equipment manufacturers, aircraft maintenance providers, FAA certified repair facilities and other aviation aftermarket suppliers may vertically integrate into the markets that we serve, thereby significantly increasing industry competition. We can give no assurance that competitive pressures will not materially and adversely affect our business, financial condition or results of operations.

We compete primarily with aircraft engine manufacturers as well as with other aircraft engine lessors. It is common for commercial aircraft operators and MROs to utilize several leasing companies to meet their aircraft engine needs and to minimize reliance on a single leasing company.

Our competitors compete with us in many ways, including pricing, technical expertise, lease flexibility, engine availability, supply reliability, customer service and the quality and condition of engines. Some of our competitors have greater financial resources than we do, or are affiliates of larger companies. We emphasize the quality of our

portfolio of aircraft engines, supply reliability and high level of customer service to our aircraft equipment lessees. We focus on ensuring adequate aircraft engine availability in high-demand locations, dedicate large portions of our organization to building relationships with lessees, maintain close day-to-day coordination with lessees and have developed an engine pooling arrangement that allows pool members quick access to available spare aircraft engines.

INSURANCE

In addition to requiring full indemnification under the terms of our leases, we require our lessees to carry the types of insurance customary in the air transportation industry, including comprehensive third party liability insurance and physical damage and casualty insurance. We require that we be named as an additional insured on liability insurance with ourselves and our lenders normally identified as the loss payee for damage to the equipment on policies carried by lessees. We monitor compliance with the insurance provisions of the leases. We also carry contingent physical damage and third party liability insurance as well as product liability insurance.

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GOVERNMENT REGULATION

Our customers are subject to a high degree of regulation in the jurisdictions in which they operate. For example, the FAA regulates the manufacture, repair and operation of all aircraft operated in the United States and equivalent regulatory agencies in other countries, such as the European Aviation Safety Agency (“EASA”) in Europe, regulate aircraft operated in those countries. Such regulations also indirectly affect our business operations. All aircraft operated in the United States must be maintained under a continuous condition-monitoring program and must periodically undergo thorough inspection and maintenance. The inspection, maintenance and repair procedures for commercial aircraft are prescribed by regulatory authorities and can be performed only by certified repair facilities utilizing certified technicians. The FAA can suspend or revoke the authority of air carriers or their licensed personnel for failure to comply with regulations and ground aircraft if their airworthiness is in question.

While our leasing and reselling business is not regulated, the aircraft, engines and related parts that we purchase, lease and sell must be accompanied by documentation that enables the customer to comply with applicable regulatory requirements. Furthermore, before parts may be installed in an aircraft, they must meet certain standards of condition established by the FAA and/or the equivalent regulatory agencies in other countries. Specific regulations vary from country to country, although regulatory requirements in other countries are generally satisfied by compliance with FAA requirements. With respect to a particular engine or engine component, we utilize FAA and/or EASA certified repair stations to repair and certify engines and components to ensure marketability.

Effective January 1, 2000, federal regulations stipulate that all aircraft engines hold, or be capable of holding, a noise certificate issued under Chapter 3 of Volume 1, Part II of Annex 16 of the Chicago Convention, or have been shown to comply with Stage III noise levels set out in Section 36.5 of Appendix C of Part 36 of the FAA Regulations of the United States if the engines are to be used in the continental United States. Additionally, much of Europe has adopted similar regulations. As of December 31, 2016, all of the engines in our lease portfolio are Stage III engines and are generally suitable for use on one or more commonly used aircraft.

We believe that the aviation industry will be subject to continued regulatory activity. Additionally, increased oversight will continue to originate from the quality assurance departments of airline operators. We have been able to meet all such requirements to date, and believe that we will be able to meet any additional requirements that may be imposed. We cannot give assurance, however, that new, more stringent government regulations will not be adopted in the future or that any such new regulations, if enacted, would not have a material adverse impact on us.

GEOGRAPHIC AREAS IN WHICH WE OPERATE

At December 31, 2016, approximately 86% of our on-lease engines, related aircraft parts, and equipment (all of which we sometimes refer to as “equipment”) by net book value are leased and operated internationally. All leases relating to

this equipment are denominated and payable in U.S. dollars, which is customary in the industry. Future leases may provide for payments to be made in euros or other foreign currencies. In 2016, we leased our equipment to lessees domiciled in eight geographic regions. We are subject to a number of risks related to our foreign operations. See “Risk Factors” below.

The following table displays the regional profile of our lease customer base for the years ended December 31, 2016, 2015 and 2014. The United States and China each accounted for more than 10% of our lease rent revenue in 2016. No country accounted for more than 10% of our lease rent revenue in 2015. The United States accounted for more than

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10% of our lease rent revenue in 2014. The tables include geographic information about our leased equipment grouped by the lessee's domicile (which does not necessarily indicate the asset's actual location):

	Years Ended December 31,		2015		2014				
	2016		2015		2014				
	Lease Rent	Percentage	Lease Rent	Percentage	Lease Rent	Percentage			
	Revenue		Revenue		Revenue				
	(dollars in thousands)								
Europe	\$ 44,650	37	%	\$ 43,703	41	%	\$ 37,850	37	%
Asia	34,524	29		31,569	29		21,658	21	
South America	11,504	10		9,688	9		9,907	10	
United States	13,395	11		9,177	8		11,880	12	
Mexico	6,251	5		6,886	6		7,771	8	
Canada	4,049	3		2,828	3		4,958	5	
Middle East	3,674	3		2,223	2		4,143	4	
Africa	1,848	2		1,972	2		3,264	3	
Total	\$ 119,895	100	%	\$ 108,046	100	%	\$ 101,431	100	%

FINANCING/SOURCE OF FUNDS

We, directly or through WEST II, typically acquire engines with a combination of equity capital and funds borrowed from financial institutions. In order to facilitate financing and leasing of engines, each engine is generally owned through a statutory or common law trust that is wholly-owned by us or our subsidiaries. We usually borrow 85% of an engine purchase price. Substantially all of our assets secure our related indebtedness. We typically acquire engines from airlines in a sale-lease back transaction, from engine manufacturers or from other lessors. From time to time, we selectively acquire engines prior to a firm commitment to lease or sell the engine, depending on the price of the engine and market demand with the expectation that we can lease or sell such engines in the future.

EMPLOYEES

As of December 31, 2016, we had 147 full-time employees (excluding consultants), in sales and marketing, technical service and administration. None of our employees are covered by a collective bargaining agreement and we believe our employee relations are satisfactory.

ITEM 1A.RISK FACTORS

The following risk factors and other information included in this Annual Report should be carefully considered. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations. If any of the following risks occur, our business, financial condition, operating results and cash flows could be materially and adversely affected.

RISKS RELATING TO OUR BUSINESS

We are affected by the risks faced by commercial aircraft operators and maintenance, repair and overhaul companies (“MROs”) because they are our customers.

Commercial aircraft operators are engaged in economically sensitive, highly cyclical and competitive businesses. We are a supplier to commercial aircraft operators and MROs. As a result, we are indirectly affected by all the risks facing commercial aircraft operators and MROs, that are beyond our control. Our results of operations depend, in part, on the financial strength of our customers and our customers’ ability to compete effectively in the marketplace and manage their risks. These risks include, among others:

- general economic conditions in the countries in which our customers operate, including changes in gross domestic product;

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- demand for air travel and air cargo shipments;
- increased competition;
- changes in interest rates and the availability and terms of credit available to commercial aircraft operators;
- concerns about security, terrorism, war, public health and political instability;
- inclement weather and natural disasters, including but not limited to volcanic eruptions;
- environmental compliance and other regulatory costs;
- labor contracts, labor costs and strikes or stoppages at commercial aircraft operators;
- aircraft fuel prices and availability;
- technological developments;
- maintenance costs;
- airport access and air traffic control infrastructure constraints;
- insurance and other operating costs;
- industry capacity, utilization and general market conditions; and
- market prices for aviation equipment.

To the extent that our customers are negatively affected by these risk factors, we may experience:

- a decrease in demand for some engine types in our portfolio;

- greater credit risks from our customers, and a higher incidence of lessee defaults and corresponding repossessions;
- an inability to quickly lease engines and aircraft on commercially acceptable terms when these become available through our purchase commitments and regular lease terminations; and
- shorter lease terms, which may increase our expenses and reduce our utilization rates.

Our engine values and lease rates, which are dependent on the status of the types of aircraft on which engines are installed, and other factors, could decline.

The value of a particular model of engine depends heavily on the types of aircraft on which it may be installed and the supply of available engines. We believe values of engines tend to be relatively stable so long as there is sufficient demand for the host aircraft. However, we believe the value of an engine begins to decline rapidly once the host aircraft begins to be retired from service and/or used for spare parts in significant numbers. Certain types of engines may be used in significant numbers by commercial aircraft operators that are currently experiencing financial difficulties. If such operators were to go into liquidation or similar proceedings, the resulting over-supply of engines from these operators could have an adverse effect on the demand for the affected engine types and the values of such engines.

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Upon termination of a lease, we may be unable to enter into new leases or sell the engine or its parts on acceptable terms.

We own the engines that we lease to customers and bear the risk of not recovering our entire investment through leasing and selling the engines. Upon termination of a lease, we seek to enter a new lease or to sell or part-out the engine. We also selectively sell engines on an opportunistic basis. We cannot give assurance that we will be able to find, in a timely manner, a lessee or a buyer for our engines coming off-lease or for their associated parts. If we do find a lessee, we may not be able to obtain satisfactory lease rates and terms (including maintenance and redelivery conditions) or rates and terms comparable to our current leases, and we can give no assurance that the creditworthiness of any future lessee will be equal to or better than our current lessees. Jump Securities with Auto-Callable Feature due December 2, 2026

All Payments on the Securities Based on the Worst Performing of the S&P 500® Index, the NASDAQ-100 Index®, the Dow Jones Industrial AverageSM and the Russell 2000® Index

Principal at Risk Securities

Russell 2000® Index	High	Low	Period End
2013			
First Quarter	953.07	872.60	951.54
Second Quarter	999.99	901.51	977.48
Third Quarter	1,078.41	989.47	1,073.79
Fourth Quarter	1,163.64	1,043.46	1,163.64
2014			
First Quarter	1,208.65	1,093.59	1,173.03
Second Quarter	1,192.96	1,095.98	1,192.96
Third Quarter	1,208.15	1,101.67	1,101.67
Fourth Quarter	1,219.10	1,049.30	1,204.69
2015			
First Quarter	1,266.37	1,154.70	1,252.77
Second Quarter	1,295.79	1,215.41	1,253.94
Third Quarter	1,273.32	1,083.90	1,100.68
Fourth Quarter	1,204.15	1,097.55	1,135.88
2016			
First Quarter	1,114.02	953.71	1,114.02
Second Quarter	1,188.95	1,089.64	1,151.92
Third Quarter	1,263.43	1,139.45	1,251.64
Fourth Quarter	1,388.07	1,156.88	1,357.13
2017			
First Quarter	1,413.63	1,345.59	1,385.92
Second Quarter	1,425.98	1,345.24	1,415.35
Third Quarter	1,490.86	1,356.90	1,490.86
Fourth Quarter	1,548.92	1,464.09	1,535.51
2018			
First Quarter	1,610.70	1,463.79	1,529.42

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Second Quarter	1,706.985	1,492.531	1,643.069
Third Quarter	1,740.753	1,653.132	1,696.571
Fourth Quarter (through November 19, 2018)	1,672.992	1,468.698	1,496.541

The “Russell 2000[®] Index” is a trademark of FTSE Russell. For more information, see “Russell 2000[®] Index” in the accompanying index supplement.

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Principal at Risk Securities

Additional Terms of the Securities

Please read this information in conjunction with the summary terms on the front cover of this document.

Additional
Terms:

With respect to the SPX Index, S&P Dow Jones Indices LLC

Underlying
Index publisher:

With respect to the NDX Index, Nasdaq, Inc.

With respect to the INDU Index, S&P Dow Jones Indices LLC

With respect to the RTY Index, FTSE Russell

Downside
threshold level:

The accompanying product supplement refers to the downside threshold level as the “trigger level.”

Jump securities
with
auto-callable
feature:

The accompanying product supplement refers to these jump securities with auto-callable feature as the “auto-callable securities.”

Postponement of
fixed coupon
payment date:

If the scheduled fixed coupon payment date is not a business day, the fixed coupon will be paid on the next succeeding business day, and no adjustment will be made to the payment made on that postponed date.

Day count
convention:

30/360

Trustee:

The Bank of New York Mellon

Calculation
agent:

MS & Co.

Issuer notices to
registered
security holders,
the trustee and
the depository:

In the event that the early redemption date or the maturity date is postponed due to postponement of the relevant determination date, the issuer shall give notice of such postponement and, once it has been determined, of the date to which the early redemption date or the maturity date, as applicable, has been rescheduled (i) to the holder of this security by mailing notice of such postponement by first class mail, postage prepaid, to the holder’s last address as it shall appear upon the registry books, (ii) to the trustee by facsimile confirmed by mailing such notice to the trustee by first class

mail, postage prepaid, at its New York office and (iii) to The Depository Trust Company (the “depository”) by telephone or facsimile confirmed by mailing such notice to the depository by first class mail, postage prepaid. Any notice that is mailed to the holder of this security in the manner herein provided shall be conclusively presumed to have been duly given to such holder, whether or not such holder receives the notice. The issuer shall give such notice as promptly as possible, and in no case later than (i) with respect to notice of postponement of the early redemption date or the maturity date, as applicable, the business day immediately preceding the scheduled early redemption date or maturity date, as applicable, and (ii) with respect to notice of the date to which the early redemption date or the maturity date, as applicable, has been rescheduled, the business day immediately following the relevant determination date as postponed.

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Principal at Risk Securities

Additional Information About the Securities

Additional
Information:

Minimum
ticketing size: \$1,000 / 1 security

Tax considerations: Prospective investors should note that the discussion under the section called “United States Federal Taxation” in the accompanying product supplement does not apply to the securities issued under this document and is superseded by the following discussion.

The following is a general discussion of the material U.S. federal income tax consequences and certain estate tax consequences of the ownership and disposition of the securities. This discussion applies only to investors in the securities who:

- purchase the securities in the original offering; and
- hold the securities as capital assets within the meaning of Section 1221 of the Internal Revenue Code of 1986, as amended (the “Code”).

This discussion does not describe all of the tax consequences that may be relevant to a holder in light of the holder’s particular circumstances or to holders subject to special rules, such as:

- certain financial institutions;
- insurance companies;

- certain dealers and traders in securities or commodities;
- investors holding the securities as part of a “straddle,” wash sale, conversion transaction, integrated transaction or constructive sale transaction;
- U.S. Holders (as defined below) whose functional currency is not the U.S. dollar;
- partnerships or other entities classified as partnerships for U.S. federal income tax purposes;
- regulated investment companies;
- real estate investment trusts; or
- tax-exempt entities, including “individual retirement accounts” or “Roth IRAs” as defined in Section 408 or 408A of the Code, respectively.

If an entity that is classified as a partnership for U.S. federal income tax purposes holds the securities, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and the activities of the partnership. If you are a partnership holding the securities or a partner in such a partnership, you should consult your tax adviser as to the particular U.S. federal tax consequences of holding and disposing of the securities to you.

As the law applicable to the U.S. federal income taxation of instruments such as the securities is technical and complex, the discussion below necessarily represents only a general summary. The effect of any applicable state, local or non-U.S. tax laws is not discussed, nor are any alternative minimum tax consequences or consequences resulting from the Medicare tax on investment income. Moreover, the discussion below does not address the consequences to taxpayers subject to special tax accounting rules under Section 451(b) of the Code.

This discussion is based on the Code, administrative pronouncements, judicial decisions and final, temporary and proposed Treasury regulations, all as of the date hereof, changes to any of which subsequent to the date hereof may affect the tax consequences described herein. Persons considering the purchase of the securities should consult their tax advisers with regard to the application of the U.S. federal income tax laws to their particular situations as well as any tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction.

General

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Due to the absence of statutory, judicial or administrative authorities that directly address the treatment of the securities or instruments that are similar to the securities for U.S. federal income tax purposes, no assurance can be given that the IRS or a court will agree with the tax treatment described herein. We intend to treat a security for U.S. federal income tax purposes as a single financial contract that provides for a fixed coupon that will be treated as gross income to you at the time received or accrued in accordance with your regular method of tax accounting. In the opinion of our counsel, Davis Polk & Wardwell LLP, this treatment of the securities is reasonable under current law; however, our counsel has advised us that it is unable to conclude affirmatively that this treatment is more likely than not to be upheld, and that alternative treatments are possible.

You should consult your tax adviser regarding all aspects of the U.S. federal tax consequences of an investment in the securities (including possible alternative treatments of the securities). Unless otherwise stated, the following discussion is based on the treatment of each security as described in the previous paragraph.

Tax Consequences to U.S. Holders

This section applies to you only if you are a U.S. Holder. As used herein, the term “U.S. Holder” means a beneficial owner of a security that is, for U.S. federal income tax purposes:

- a citizen or individual resident of the United States;

- a corporation, or other entity taxable as a corporation, created or organized in or under the laws of the United States, any state thereof or the District of Columbia; or

· an estate or trust the income of which is subject to U.S. federal income taxation regardless of its source.

Tax Treatment of the Securities

Assuming the treatment of the securities as set forth above is respected, the following U.S. federal income tax consequences should result.

Tax Basis. A U.S. Holder's tax basis in the securities should equal the amount paid by the U.S. Holder to acquire the securities.

Tax Treatment of the Fixed Coupon Payment. The fixed coupon payment on the securities should be taxable as ordinary income to a U.S. Holder at the time received or accrued, in accordance with the U.S. Holder's regular method of accounting for U.S. federal income tax purposes.

Sale, Exchange or Settlement of the Securities. Upon a sale, exchange or settlement of the securities, a U.S. Holder should recognize gain or loss equal to the difference between the amount realized on the sale, exchange or settlement and the U.S. Holder's tax basis in the securities sold, exchanged or settled. For this purpose, the amount realized does not include any coupon paid at settlement and may not include sale proceeds attributable to an accrued coupon, which may be treated as a coupon payment. Any such gain or loss recognized should be long-term capital gain or loss if the U.S. Holder has held the securities for more than one year at the time of the sale, exchange or settlement, and should be short-term capital gain or loss otherwise. The ordinary income treatment of the fixed coupon payment, in conjunction with the capital loss treatment of any loss recognized upon the sale, exchange or settlement of the securities, could result in adverse tax consequences to holders of the securities because the deductibility of capital losses is subject to limitations.

Possible Alternative Tax Treatments of an Investment in the Securities

Due to the absence of authorities that directly address the proper tax treatment of the securities, no assurance can be given that the IRS will accept, or that a court will uphold, the treatment described above. In particular, the IRS could seek to analyze the U.S. federal

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income tax consequences of owning the securities under Treasury regulations governing contingent payment debt instruments (the “Contingent Debt Regulations”). If the IRS were successful in asserting that the Contingent Debt Regulations applied to the securities, the timing and character of income thereon would be significantly affected. Among other things, a U.S. Holder would be required to accrue into income original issue discount on the securities every year at a “comparable yield” determined at the time of their issuance, adjusted upward or downward to reflect the difference, if any, between the actual and the projected amount of any contingent payments on the securities. Furthermore, any gain realized by a U.S. Holder at maturity or upon a sale, exchange or other disposition of the securities would be treated as ordinary income, and any loss realized would be treated as ordinary loss to the extent of the U.S. Holder’s prior accruals of original issue discount and as capital loss thereafter. The risk that financial instruments providing for buffers, triggers or similar downside protection features, such as the securities, would be recharacterized as debt is greater than the risk of recharacterization for comparable financial instruments that do not have such features.

Other alternative federal income tax treatments of the securities are possible, which, if applied, could significantly affect the timing and character of the income or loss with respect to the securities. In 2007, the U.S. Treasury Department and the IRS released a notice requesting comments on the U.S. federal income tax treatment of “prepaid forward contracts” and similar instruments. The notice focuses on whether to require holders of “prepaid forward contracts” and similar instruments to accrue income over the term of their investment. It also asks for comments on a number of related topics, including the character of income or loss with respect to these instruments; whether short-term instruments should be subject to any such accrual regime; the relevance of factors such as the exchange-traded status of the instruments and the nature of the underlying property to which the instruments are linked; whether these instruments are or should be subject to the “constructive ownership” rule, which very generally can operate to recharacterize certain long-term capital gain as ordinary income and impose an interest charge; and appropriate transition rules and effective dates. While it is not clear whether instruments such as the securities would be viewed as similar to the prepaid forward contracts described in the notice, any Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the tax consequences of an investment in the securities, possibly with retroactive effect. U.S. Holders should consult their tax advisers regarding the U.S. federal income tax consequences of an investment in the securities, including possible alternative treatments and the issues presented by this notice.

Backup Withholding and Information Reporting

Backup withholding may apply in respect of the fixed coupon payment on the securities and the payment of proceeds from a sale, exchange or other disposition of the securities, unless a U.S. Holder provides proof of an applicable exemption or a correct taxpayer identification number and otherwise complies with applicable requirements of the backup withholding rules. The amounts withheld under the backup withholding rules are not an additional tax and may be refunded, or credited against the U.S. Holder's U.S. federal income tax liability, provided that the required information is timely furnished to the IRS. In addition, information returns will be filed with the IRS in connection with the fixed coupon payment on the securities and the payment of proceeds from a sale, exchange or other disposition of the securities, unless the U.S. Holder provides proof of an applicable exemption from the information reporting rules.

Tax Consequences to Non-U.S. Holders

This section applies to you only if you are a Non-U.S. Holder. As used herein, the term "Non-U.S. Holder" means a beneficial owner of a security that is for U.S. federal income tax purposes:

- an individual who is classified as a nonresident alien;
- a foreign corporation; or
- a foreign estate or trust.

The term "Non-U.S. Holder" does not include any of the following holders:

- a holder who is an individual present in the United States for 183 days or more

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in the taxable year of disposition and who is not otherwise a resident of the United States for U.S. federal income tax purposes;

- certain former citizens or residents of the United States; or
- a holder for whom income or gain in respect of the securities is effectively connected with the conduct of a trade or business in the United States.

Such holders should consult their tax advisers regarding the U.S. federal income tax consequences of an investment in the securities.

Although significant aspects of the tax treatment of each security are uncertain, we intend to withhold on the fixed coupon paid to a Non-U.S. Holder generally at a rate of 30% or at a reduced rate specified by an applicable income tax treaty under an “other income” or similar provision. We will not be required to pay any additional amounts with respect to amounts withheld. In order to claim an exemption from, or a reduction in, the 30% withholding tax, a Non-U.S. Holder of the securities must comply with certification requirements to establish that it is not a U.S. person and is eligible for such an exemption or reduction under an applicable tax treaty. If you are a Non-U.S. Holder, you should consult your tax adviser regarding the tax treatment of the securities, including the possibility of obtaining a refund of any withholding tax and the certification requirement described above.

Section 871(m) Withholding Tax on Dividend Equivalents

Section 871(m) of the Code and Treasury regulations promulgated thereunder (“Section 871(m)”) generally impose a 30% (or a lower applicable treaty rate) withholding tax on dividend equivalents paid or deemed paid to Non-U.S. Holders with respect to certain financial instruments linked to U.S. equities or indices that include U.S. equities (each, an “Underlying Security”). Subject to certain exceptions, Section 871(m) generally applies to securities that

substantially replicate the economic performance of one or more Underlying Securities, as determined based on tests set forth in the applicable Treasury regulations (a “Specified Security”). However, pursuant to an IRS notice, Section 871(m) will not apply to securities issued before January 1, 2021 that do not have a delta of one with respect to any Underlying Security. Based on our determination that the securities do not have a delta of one with respect to any Underlying Security, our counsel is of the opinion that the securities should not be Specified Securities and, therefore, should not be subject to Section 871(m).

Our determination is not binding on the IRS, and the IRS may disagree with this determination. Section 871(m) is complex and its application may depend on your particular circumstances, including whether you enter into other transactions with respect to an Underlying Security. If Section 871(m) withholding is required, we will not be required to pay any additional amounts with respect to the amounts so withheld. You should consult your tax adviser regarding the potential application of Section 871(m) to the securities.

U.S. Federal Estate Tax

Individual Non-U.S. Holders and entities the property of which is potentially includible in such an individual’s gross estate for U.S. federal estate tax purposes (for example, a trust funded by such an individual and with respect to which the individual has retained certain interests or powers) should note that, absent an applicable treaty exemption, the securities may be treated as U.S.-situs property subject to U.S. federal estate tax. Prospective investors that are non-U.S. individuals, or are entities of the type described above, should consult their tax advisers regarding the U.S. federal estate tax consequences of an investment in the securities.

Backup Withholding and Information Reporting

Information returns will be filed with the IRS in connection with the fixed coupon payment and may be filed with the IRS in connection with the payment at maturity on the securities and the payment of proceeds from a sale, exchange or other disposition. A Non-U.S. Holder may be subject to backup withholding in respect of amounts paid to the Non-U.S. Holder, unless such Non-U.S. Holder complies with certification procedures to establish that it is not a U.S. person for U.S. federal income tax purposes or otherwise establishes an exemption. The amount of

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any backup withholding from a payment to a Non-U.S. Holder will be allowed as a credit against the Non-U.S. Holder's U.S. federal income tax liability and may entitle the Non-U.S. Holder to a refund, provided that the required information is timely furnished to the IRS.

FATCA

Legislation commonly referred to as "FATCA" generally imposes a withholding tax of 30% on payments to certain non-U.S. entities (including financial intermediaries) with respect to certain financial instruments, unless various U.S. information reporting and due diligence requirements have been satisfied. An intergovernmental agreement between the United States and the non-U.S. entity's jurisdiction may modify these requirements. FATCA generally applies to certain financial instruments that are treated as paying U.S.-source interest or other U.S.-source "fixed or determinable annual or periodical" income ("FDAP income"). Withholding (if applicable) applies to payments of U.S.-source FDAP income and, for dispositions after December 31, 2018, to payments of gross proceeds of the disposition (including upon retirement) of certain financial instruments treated as providing for U.S.-source interest or dividends. While the treatment of the securities is unclear, you should assume that the fixed coupon payment with respect to the securities will be subject to the FATCA rules. It is also possible in light of this uncertainty that an applicable withholding agent will treat gross proceeds of a disposition (including upon retirement) of the securities after 2018 as being subject to the FATCA rules. If withholding applies to the securities, we will not be required to pay any additional amounts with respect to amounts withheld. Both U.S. and Non-U.S. Holders should consult their tax advisers regarding the potential application of FATCA to the securities.

The discussion in the preceding paragraphs, insofar as it purports to describe provisions of U.S. federal income tax laws or legal conclusions with respect thereto, constitutes the full opinion of Davis Polk & Wardwell LLP regarding the material U.S. federal tax consequences of an investment in the securities.

Use of proceeds and hedging: The proceeds from the sale of the securities will be used by us for general corporate purposes. We will receive, in aggregate, \$1,000 per security issued, because, when we enter into hedging transactions in order to meet our obligations under the securities, our hedging counterparty will reimburse the cost of the agent's commissions. The costs of the securities borne by you and

described beginning on page 3 above comprise the agent's commissions and the cost of issuing, structuring and hedging the securities.

On or prior to the pricing date, we will hedge our anticipated exposure in connection with the securities by entering into hedging transactions with our affiliates and/or third party dealers. We expect our hedging counterparties to take positions in the stocks constituting the underlying indices, in futures and/or options contracts on the underlying indices or the component stocks of the underlying indices listed on major securities markets, or positions in any other available securities or instruments that they may wish to use in connection with such hedging. Such purchase activity could potentially increase the initial index value of an underlying index, and, as a result, increase (i) the level at or above which such underlying index must close on the determination dates so that the securities are redeemed prior to maturity for the early redemption payment (depending also on the performance of the other underlying indices) and (ii) the downside threshold level for such underlying index, which is the level at or above which such underlying index must close on the final determination date so that you are not exposed to the negative performance of the worst performing underlying index at maturity (depending also on the performance of the other underlying indices). These entities may be unwinding or adjusting hedge positions during the term of the securities, and the hedging strategy may involve greater and more frequent dynamic adjustments to the hedge as the final determination date approaches. Additionally, our hedging activities, as well as our other trading activities, during the term of the securities could potentially affect the value of any underlying index on the determination dates, and, accordingly, whether we redeem the securities prior to maturity and the amount of cash you will receive at maturity, if any. For further information on our use of proceeds and hedging, see "Use of Proceeds and Hedging" in the accompanying product supplement.

**Benefit plan
investor
considerations:**

Each fiduciary of a pension, profit-sharing or other employee benefit plan subject to Title I of the Employee Retirement Income Security Act of 1974, as amended ("ERISA") (a "Plan"), should consider the fiduciary standards of ERISA in the context of the Plan's particular circumstances before authorizing an investment in the securities. Accordingly, among other

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factors, the fiduciary should consider whether the investment would satisfy the prudence and diversification requirements of ERISA and would be consistent with the documents and instruments governing the Plan.

In addition, we and certain of our affiliates, including MS & Co., may each be considered a “party in interest” within the meaning of ERISA, or a “disqualified person” within the meaning of the Internal Revenue Code of 1986, as amended (the “Code”), with respect to many Plans, as well as many individual retirement accounts and Keogh plans (such accounts and plans, together with other plans, accounts and arrangements subject to Section 4975 of the Code, also “Plans”). ERISA Section 406 and Code Section 4975 generally prohibit transactions between Plans and parties in interest or disqualified persons. Prohibited transactions within the meaning of ERISA or the Code would likely arise, for example, if the securities are acquired by or with the assets of a Plan with respect to which MS & Co. or any of its affiliates is a service provider or other party in interest, unless the securities are acquired pursuant to an exemption from the “prohibited transaction” rules. A violation of these “prohibited transaction” rules could result in an excise tax or other liabilities under ERISA and/or Section 4975 of the Code for such persons, unless exemptive relief is available under an applicable statutory or administrative exemption.

The U.S. Department of Labor has issued five prohibited transaction class exemptions (“PTCEs”) that may provide exemptive relief for direct or indirect prohibited transactions resulting from the purchase or holding of the securities. Those class exemptions are PTCE 96-23 (for certain transactions determined by in-house asset managers), PTCE 95-60 (for certain transactions involving insurance company general accounts), PTCE 91-38 (for certain transactions involving bank collective investment funds), PTCE 90-1 (for certain transactions involving insurance company separate accounts) and PTCE 84-14 (for certain transactions determined by independent qualified professional asset managers). In addition, ERISA Section 408(b)(17) and Code Section 4975(d)(20) provide an exemption for the purchase and sale of securities and the related lending transactions, *provided* that neither the issuer of the securities nor any of its affiliates has or exercises any discretionary authority or control or renders any investment advice with respect to the assets of the Plan involved in the transaction and *provided further* that the Plan pays no more, and receives no less, than “adequate consideration” in connection with the transaction (the so-called “service provider” exemption). There can be no assurance that any of these class or statutory exemptions will be available with respect to transactions involving the securities.

Because we may be considered a party in interest with respect to many Plans, the securities may not be purchased, held or disposed of by any Plan, any entity whose underlying assets include “plan assets” by reason of any Plan’s investment in the entity (a “Plan Asset Entity”) or any person investing “plan assets” of any Plan, unless such purchase,

holding or disposition is eligible for exemptive relief, including relief available under PTCEs 96-23, 95-60, 91-38, 90-1, 84-14 or the service provider exemption or such purchase, holding or disposition is otherwise not prohibited. Any purchaser, including any fiduciary purchasing on behalf of a Plan, transferee or holder of the securities will be deemed to have represented, in its corporate and its fiduciary capacity, by its purchase and holding of the securities that either (a) it is not a Plan or a Plan Asset Entity and is not purchasing such securities on behalf of or with “plan assets” of any Plan or with any assets of a governmental, non-U.S. or church plan that is subject to any federal, state, local or non-U.S. law that is substantially similar to the provisions of Section 406 of ERISA or Section 4975 of the Code (“Similar Law”) or (b) its purchase, holding and disposition of these securities will not constitute or result in a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code or violate any Similar Law.

Due to the complexity of these rules and the penalties that may be imposed upon persons involved in non-exempt prohibited transactions, it is particularly important that fiduciaries or other persons considering purchasing the securities on behalf of or with “plan assets” of any Plan consult with their counsel regarding the availability of exemptive relief.

The securities are contractual financial instruments. The financial exposure provided by the securities is not a substitute or proxy for, and is not intended as a substitute or proxy for, individualized investment management or advice for the benefit of any purchaser or holder of the securities. The securities have not been designed and will not be administered in a manner intended to reflect the individualized needs and objectives of any purchaser or holder

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Principal at Risk Securities

of the securities.

Each purchaser or holder of any securities acknowledges and agrees that:

(i) the purchaser or holder or its fiduciary has made and shall make all investment decisions for the purchaser or holder and the purchaser or holder has not relied and shall not rely in any way upon us or our affiliates to act as a fiduciary or adviser of the purchaser or holder with respect to (A) the design and terms of the securities, (B) the purchaser or holder's investment in the securities, or (C) the exercise of or failure to exercise any rights we have under or with respect to the securities;

(ii) we and our affiliates have acted and will act solely for our own account in connection with (A) all transactions relating to the securities and (B) all hedging transactions in connection with our obligations under the securities;

(iii) any and all assets and positions relating to hedging transactions by us or our affiliates are assets and positions of those entities and are not assets and positions held for the benefit of the purchaser or holder;

(iv) our interests are adverse to the interests of the purchaser or holder; and

(v) neither we nor any of our affiliates is a fiduciary or adviser of the purchaser or holder in connection with any such assets, positions or transactions, and any information that we or any of our affiliates may provide is not intended to be impartial investment advice.

Each purchaser and holder of the securities has exclusive responsibility for ensuring that its purchase, holding and disposition of the securities do not violate the prohibited transaction rules of ERISA or the Code or any Similar Law. The sale of any securities to any Plan or plan subject to Similar Law is in no respect a representation by us or any of our affiliates or representatives that such an investment meets all relevant legal requirements with respect to investments by plans generally or any particular plan, or that such an investment is appropriate for plans generally or any particular plan. In this regard, neither this discussion nor anything provided in this document is or is intended to be investment advice directed at any potential Plan purchaser or at Plan purchasers generally and such purchasers of these securities should consult and rely on their own counsel and advisers as to whether an investment in these securities is suitable.

Additional considerations:

However, individual retirement accounts, individual retirement annuities and Keogh plans, as well as employee benefit plans that permit participants to direct the investment of their accounts, will not be permitted to purchase or hold the securities if the account, plan or annuity is for the benefit of an employee of Morgan Stanley, Morgan Stanley Wealth Management or a family member and the employee receives any compensation (such as, for example, an addition to bonus) based on the purchase of the securities by the account, plan or annuity. Client accounts over which Morgan Stanley, Morgan Stanley Wealth Management or any of their respective subsidiaries have investment discretion are not permitted to purchase the securities, either directly or indirectly. Selected dealers, which may include our affiliates, and their financial advisors will collectively receive from the agent a fixed sales commission of \$ for each security they sell.

Supplemental information regarding plan of distribution; conflicts of interest:

MS & Co. is an affiliate of MSFL and a wholly owned subsidiary of Morgan Stanley, and it and other affiliates of ours expect to make a profit by selling, structuring and, when applicable, hedging the securities. When MS & Co. prices this offering of securities, it will determine the economic terms of the securities, including the early redemption payment amounts, such that for each security the estimated value on the pricing date will be no lower than the minimum level described in “Investment Summary” beginning on page 3.

MS & Co. will conduct this offering in compliance with the requirements of FINRA Rule 5121 of the Financial Industry Regulatory Authority, Inc., which is commonly referred to as FINRA, regarding a FINRA member firm’s distribution of the securities of an affiliate and related conflicts of interest. MS & Co. or any of our other affiliates may not make sales in this offering to any discretionary account. See “Plan of Distribution (Conflicts of Interest)” and “Use of Proceeds and Hedging” in the accompanying product supplement for auto-callable securities.

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Contact: Morgan Stanley clients may contact their local Morgan Stanley branch office or our principal executive offices at 1585 Broadway, New York, New York 10036 (telephone number (866) 477-4776). All other clients may contact their local brokerage representative. Third-party distributors may contact Morgan Stanley Structured Investment Sales at (800) 233-1087. Morgan Stanley and MSFL have filed a registration statement (including a prospectus, as supplemented by the product supplement for auto-callable securities and the index supplement) with the Securities and Exchange Commission, or SEC, for the offering to which this communication relates. You should read the prospectus in that registration statement, the product supplement for auto-callable securities, the index supplement and any other documents relating to this offering that Morgan Stanley and MSFL have filed with the SEC for more complete information about Morgan Stanley, MSFL and this offering. You may get these documents without cost by visiting EDGAR on the SEC web site at www.sec.gov. Alternatively, Morgan Stanley, MSFL, any underwriter or any dealer participating in the offering will arrange to send you the prospectus, the product supplement for auto-callable securities and the index supplement if you so request by calling toll-free 1-(800)-584-6837.

Where you can find more information: You may access these documents on the SEC web site at www.sec.gov as follows:

[Product Supplement for Auto-Callable Securities dated November 16, 2017](#)

[Index Supplement dated November 16, 2017](#)

[Prospectus dated November 16, 2017](#)

Terms used but not defined in this document are defined in the product supplement for auto-callable securities, in the index supplement or in the prospectus.

