AerCap Holdings N.V. Form 424B4 December 03, 2014

> Filed Pursuant to Rule 424(b)(4) Registration No. 333-198517

PROSPECTUS SUPPLEMENT (To Prospectus Dated September 2, 2014)

14,923,305 Ordinary Shares

This prospectus supplement relates to an underwritten offering of an aggregate amount of 11,233,152 ordinary shares of AerCap Holdings N.V.

We have been advised that Waha AC Coöperatief U.A. (which we refer to as the selling shareholder), an investment vehicle affiliated with Waha Capital PJSC, is entering into funded collar transactions relating to our ordinary shares with each of Citibank N.A., London Branch, Deutsche Bank AG, London Branch and UBS AG, London Branch and/or their respective affiliates (each of which we refer to as a collar counterparty, and which collectively we refer to as the collar counterparties). We have been advised that, in order to hedge their obligations under the funded collar transactions, the collar counterparties will borrow an aggregate amount of 8,233,152 ordinary shares from the selling shareholder and the collar counterparties or their respective affiliates will sell those ordinary shares in an underwritten offering through Deutsche Bank Securities Inc., acting as underwriter. In addition, we have been advised that the selling shareholder will offer 3,000,000 ordinary shares for resale in an underwritten offering through the underwriter. We are not selling any shares in the underwritten offering and we are not a party to any of the funded collar transactions.

The underwriter proposes to offer our ordinary shares in the underwritten offering from time to time for sale in one or more transactions on the NYSE, in the over-the-counter market or in negotiated transactions, at market prices prevailing at the time of sale or at negotiated prices. See "Plan of Distribution."

This prospectus supplement also relates to an aggregate amount of 3,690,153 ordinary shares, which are also being borrowed by the collar counterparties from the selling shareholder. We have been advised that the collar counterparties or their affiliates or agents, which may include the underwriter or its affiliates, will sell these ordinary shares, from time to time, pursuant to block sales, on the NYSE, in the over-the-counter market or in negotiated transactions, at market prices prevailing at the time of sale or at negotiated prices. We have been advised that these ordinary shares will not be offered by the underwriter in the underwritten offering and will be offered by the collar counterparties or their affiliates or such agents in order to hedge the collar counterparties' obligations under the funded collar transactions. We have been advised by the collar counterparties that they expect that, over the same period when they or their affiliates or such agents sell those ordinary shares, they or their affiliates or such agents will purchase an equal number of ordinary shares in the open market. See "Plan of Distribution."

Our ordinary shares are listed on the NYSE under the symbol "AER". On November 28, 2014, the closing sale price of our ordinary shares on the NYSE was \$44.31 per share. You are urged to obtain current market quotations for our ordinary shares.

We will not receive any proceeds from sales of the ordinary shares offered hereby.

Investing in our ordinary shares involves risk. See "Risk Factors" beginning on page 3 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission or other regulatory body has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus supplement. Any representation to the contrary is a criminal offense.

The underwriter expects to deliver 11,233,152 ordinary shares sold in the underwritten offering against payment therefor in U.S. dollars in New York, New York on December 5, 2014.

Deutsche Bank Securities

Prospectus Supplement dated December 1, 2014

TABLE OF CONTENTS

Page

Prospectus Supplement

About This Prospectus Supplement	<u>11</u>
Forward Looking Statements	<u>ii</u>
Where You Can Find More Information; Incorporation by Reference	<u>iii</u>
Summary of the Offering	<u>1</u>
Risk Factors	<u>3</u>
Use of Proceeds	4
Selling Shareholder	<u>5</u>
Plan of Distribution	<u>6</u>
<u>Experts</u>	<u>12</u>
Legal Matters	<u>12</u>

ABOUT THIS PROSPECTUS SUPPLEMENT

We are responsible only for the information contained or incorporated by reference in this prospectus supplement or the accompanying prospectus. We have not authorized any other person to provide you with information that is different from that contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. The selling shareholder and the collar counterparties are not making an offer to sell, or seeking offers to buy, ordinary shares in any jurisdictions where offers or sales are not permitted. The information contained in this prospectus supplement and the accompanying prospectus is accurate only as of their respective dates, and any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of time of delivery of this prospectus supplement and the accompanying prospectus or of any sale of the securities.

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of the offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference herein and therein. The second part is the accompanying prospectus, which gives more general information, some of which may not apply to the offering. It is important for you to read and consider all information contained in this prospectus supplement and the accompanying prospectus in making your investment decision. To fully understand this offering, you should also read all of these documents, including those referred to under the caption "Where You Can Find More Information." Investors should carefully review the risk factors relating to us in the section captioned "Risk Factors" in Item 3 of our Annual Report on Form 20-F for the year ended December 31, 2013, filed with the SEC on March 18, 2014 and in Part II, Item 1 of our interim financial reports on Form 6-K for the quarters ended June 30, 2014 and September 30, 2014, filed with the SEC on August 28, 2014 and November 20, 2014, respectively. To the extent there is a conflict between the information contained or incorporated by reference in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus, on the other hand, the information contained or incorporated by reference in this prospectus supplement shall control. As used in this prospectus supplement and the accompanying prospectus, unless the context otherwise requires, references to "AerCap," "we," "us," "our" and "the Company" include AerCap Holdings N.V. and its subsidiaries as a combine entity.

FORWARD LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus include "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. We have based these forward looking statements largely on our current beliefs and projections about future events and financial trends affecting our business. Many important factors, in addition to those discussed in this prospectus supplement, could cause our actual results to differ substantially from those anticipated in our forward looking statements, including, among other things:

the availability of capital to us and to our customers and changes in interest rates,

the ability of our lessees and potential lessees to make operating lease payments to us,

our ability to successfully negotiate aircraft purchases, sales and leases, to collect outstanding amounts due and to repossess aircraft under defaulted leases, and to control costs and expenses,

decreases in the overall demand for commercial aircraft leasing and aircraft management services,

the economic condition of the global airline and cargo industry and the general economic and political situation,

competitive pressures within the industry,

the negotiation of aircraft management services contracts,

our ability to achieve the anticipated benefits of the recently completed acquisition of International Lease Finance Corporation from American International Group, and

ii

regulatory changes affecting commercial aircraft operators, aircraft maintenance, engine standards, accounting standards and taxes.

The words "believe", "may", "aim", "estimate", "continue", "anticipate", "intend", "expect" and similar words are intended to forward looking statements. Forward looking statements include information concerning our possible or assumed future results of operations, business strategies, financing plans, competitive position, industry environment, potential growth opportunities, the effects of future regulation and the effects of competition. Forward looking statements speak only as of the date they were made and we undertake no obligation to update publicly or to revise any forward looking statements because of new information, future events or other factors. In light of the risks and uncertainties described above, the forward looking events and circumstances described in this prospectus supplement might not occur and are not guarantees of future performance. The factors described above should not be construed as exhaustive and should be read in conjunction with the other cautionary statements and the risk factors that are included under "Risk Factors" herein, in our Annual Report on Form 20-F for the year ended December 31, 2013 incorporated by reference herein and in our interim financial reports on Form 6-K for the quarters ended June 30, 2014 and September 30, 2014 incorporated by reference herein. Except as required by applicable law, we do not undertake any obligation to publicly update or review any forward looking statement, whether as a result of new information, future developments or otherwise.

WHERE YOU CAN FIND MORE INFORMATION; INCORPORATION BY REFERENCE

We are subject to the information reporting requirements of the Exchange Act, as applicable to foreign private issuers. As a "foreign private issuer," we are exempt from the rules under the Exchange Act prescribing certain disclosure and procedural requirements for proxy solicitations, and our officers, directors and principal shareholders are exempt from the reporting and "short-swing" profit recovery provisions contained in Section 16 of the Exchange Act, with respect to their purchases and sales of shares. We file with the SEC an Annual Report on Form 20-F containing financial statements audited by an independent registered public accounting firm. We also file Quarterly Reports on Form 6-K containing unaudited interim financial information for the first three quarters of each fiscal year.

You may read and copy any document we file with or furnish to the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You may also obtain copies of the documents at prescribed rates by writing to the Public Reference Section of the SEC at 100 F Street, N.E., Washington, DC 20549. Please call the SEC at 1-800-SEC-0330 to obtain information on the operation of the Public Reference Room. In addition, the SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. You can review our SEC filings, including the registration statement by accessing the SEC's Internet website at www.sec.gov. We will provide each person, including any beneficial owner, to whom a prospectus supplement is delivered, a copy of any or all of the information that has been incorporated by reference into this prospectus supplement but not delivered with this prospectus supplement upon written or oral request at no cost to the requester. Requests should be directed to: AerCap Holdings N.V., Stationsplein 965, 1117 CE Schiphol Airport, The Netherlands, or by telephoning us at +31 20 655 9655. Our website is located at www.aercap.com. The information contained on our website is not part of this prospectus supplement.

The following documents filed with the SEC by us are incorporated herein by reference:

our Annual Report on Form 20-F for the fiscal year ended December 31, 2013, as filed with the SEC on March 18, 2014; and

our Current Reports on Form 6-K, as filed with the SEC on March 18, 2014, April 22, 2014, May 6, 2014, May 14, 2014, July 11, 2014, August 28, 2014, September 2, 2014,

September 5, 2014, September 24, 2014, October 9, 2014 and November 20, 2014;

iii

the Annual Report of International Lease Finance Corporation ("ILFC") on Form 10-K for the year ended December 31, 2013, as filed with the SEC on March 5, 2014;

ILFC's Quarterly Report on Form 10-Q for the three months ended March 31, 2014, as filed with the SEC on May 2, 2014;

ILFC's Current Reports on Form 8-K, as filed with the SEC on March 7, 2014, April 3, 2014 and May 15, 2014; and

any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act until all of the securities offered by this prospectus supplement have been sold.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number: AerCap Holdings N.V., Stationsplein 965, 1117 CE Schiphol Airport, The Netherlands, +31 20 655 9655.

iv

SUMMARY OF THE OFFERING

Selling Shareholder:

Waha AC Coöperatief U.A., an investment vehicle affiliated with Waha Capital PJSC.

Total Ordinary Shares Offered:

We have been advised that, in order to hedge their obligations under the funded collar transactions, the collar counterparties will borrow 8,233,152 ordinary shares from the selling shareholder, and the collar counterparties or their respective affiliates will sell those ordinary shares in an underwritten offering through Deutsche Bank Securities Inc., acting as underwriter. In addition, we have been advised that the selling shareholder will offer 3,000,000 ordinary shares for resale in the underwritten offering through the underwriter. The underwriter proposes to offer our ordinary shares in the underwritten offering from time to time for sale in one or more transactions on the NYSE, in the over-the-counter market or in negotiated transactions, at market prices prevailing at the time of sale or at negotiated prices.

We have also been advised that the collar counterparties or their affiliates or agents, which may include the underwriter or its affiliates, will sell an aggregate amount of 3,690,153 ordinary shares, which are also being borrowed by the collar counterparties from the selling shareholder. We have been advised that the collar counterparties or their affiliates or such agents will sell these ordinary shares, from time to time, pursuant to block sales, on the NYSE, in the over-the-counter market or in negotiated transactions, at market prices prevailing at the time of sale or at negotiated prices. We have been advised by the collar counterparties that they expect, over the same period when they or their affiliates or such agents sell those ordinary shares, that they or their affiliates or such agents will purchase an equal number of ordinary shares in the open market.

See "Plan of Distribution."

Shares Outstanding Before and

After the Offering:

212,318,291 ordinary shares.

Use of Proceeds:

We will not receive any proceeds from sales of the ordinary shares offered hereby.

Lock-up:	We and the selling shareholder have agreed with the underwriter, subject to certain customary exceptions and except for the sales by the selling shareholder described in "Plan of Distribution", not to dispose of or hedge any of our ordinary shares during the period from the date of this prospectus supplement until the date that is 60 days thereafter, except with the prior written consent of the underwriter. The foregoing does not, however, apply to any employee benefit plans or to any of our directors or executive officers. See "Plan of Distribution".
Dividend Policy:	To date, we have not declared or paid any dividends on our ordinary shares. We intend to retain our future earnings to fund working capital and our growth and do not expect to pay dividends in the foreseeable future.
Funded Collar Transaction:	We are not a party to any of the funded collar transactions.
1	

We have been advised that the sale of the shares by the collar counterparties or their respective affiliates in the underwritten offering will establish their initial hedge positions with respect to the funded collar transactions, and that they or their affiliates may modify their hedge positions from time to time thereafter during the term of the funded collar transactions.

The effect of the funded collar transactions, including any purchases and sales of our ordinary shares by the collar counterparties or their affiliates or agents, which may include the underwriter or its affiliates, to establish or modify the collar counterparties' hedge positions from time to time during the term of the funded collar transactions, may variously have a positive, negative or neutral impact on the market price of our ordinary shares, depending on market conditions at such times. In addition, purchases of our ordinary shares in connection with the termination of any portion of the loan of our ordinary shares to the collar counterparties under the funded collar transactions, or cash settlement of any funded collar transaction, may have the effect of increasing, or limiting a decrease in, the market price of our ordinary shares during the relevant unwind period.

See "Plan of Distribution" and "Risk Factors—The effect of the borrowing of our ordinary shares pursuant to the funded collar transactions, including the sales of our ordinary shares by the collar counterparties or their affiliates to establish or modify their hedge positions, may have a negative effect on the market price of our ordinary shares" for more information.

Risk Factors:

See "Risk Factors" and the other information included or incorporated by reference in this prospectus supplement and the accompanying prospectus for a discussion of risks you should carefully consider before deciding to invest in our ordinary shares.

Underwriters:

Deutsche Bank Securities Inc.

New York Stock "AER" Exchange Symbol:

RISK FACTORS

Investing in our ordinary shares involves risk. Those risks are specified in the section captioned "Risk Factors" in Item 3 of our Annual Report on Form 20-F for the years ended December 31, 2013, filed with the SEC on March 18, 2014 and in Part II, Item 1 of our interim financial reports on Form 6-K for the quarters ended June 30, 2014 and September 30, 2014, filed with the SEC on August 28, 2014 and November 20, 2014. You should carefully consider those risks together with the other information contained or incorporated by reference in this prospectus supplement before deciding to invest in our ordinary shares. If any of those risks actually occur, our business, financial condition and results of operations could be materially and adversely affected. In that case, the trading price of our ordinary shares could decline, and you may lose all or part of your investment.

Risks Related to the Offering

The effect of the borrowing of our ordinary shares pursuant to the funded collar transactions and existing funded collar transactions, including the sales of our ordinary shares by the collar counterparties to such transactions or their affiliates to establish or modify their hedge positions, may have a negative effect on the market price of our ordinary shares.

We have been advised that the selling shareholder has agreed to lend to the collar counterparties an aggregate amount of 11,923,305 ordinary shares, which ordinary shares are being offered pursuant to this prospectus supplement. We have been advised by the collar counterparties that they or their respective affiliates intend to establish the collar counterparties' initial hedge positions in respect of the funded collar transactions by establishing short positions in our ordinary shares through an underwritten offering under this prospectus supplement of 8,233,152 of the ordinary shares the collar counterparties have borrowed from the selling shareholder by the underwriter. The establishment of such short positions could have the effect of decreasing, or limiting an increase in, the market price of our ordinary shares. We have also been advised that the selling shareholder previously entered into funded collar transactions (the "existing funded collar transactions") similar to the ones being entered into with the collar counterparties with certain counterparties thereto (the "existing collar counterparties"). The purchases and sales of our ordinary shares by the collar counterparties, the existing collar counterparties or their respective affiliates or agents, which may include the underwriter or its affiliates, to modify the collar counterparties' and the existing collar counterparties' respective hedge positions from time to time during the term of the funded collar transactions and the existing funded collar transactions may variously have a positive, negative or neutral impact on the market price of our ordinary shares, depending on market conditions at such times. In addition, purchases of our ordinary shares by the collar counterparties, the existing collar counterparties or their respective affiliates in connection with the termination by the selling shareholder of any portion of the loan of our ordinary shares to the collar counterparties under the funded collar transactions or to the existing collar counterparties under the existing funded collar transactions, as the case may be, or cash settlement of any funded collar transaction or existing funded collar transaction, may have the effect of increasing, or limiting a decrease in, the market price of our ordinary shares during the relevant unwind period. See "Plan of Distribution."

Table of Contents

USE OF PROCEEDS

We will not receive any proceeds from sales of the ordinary shares offered hereby.

SELLING SHAREHOLDER

The following table, which was prepared based on information provided to us by the selling shareholder, sets forth the number of ordinary shares that the selling shareholder beneficially owns before this offering, the 3,000,000 ordinary shares that the selling shareholder is offering for resale in the underwritten offering and the number of ordinary shares that the selling shareholder will beneficially own assuming sale of all the ordinary shares offered for resale in the underwritten offering. The ownership percentages indicated in the following table are based on 212,318,291 ordinary shares outstanding as of November 28, 2014.

We have determined beneficial ownership in accordance with the rules of the SEC. We understand, based on the information provided to us by the selling shareholder, that the selling shareholder named in the table below has shared voting and investment power with Waha Capital PJSC with respect to all ordinary shares that it beneficially owns. The ordinary shares offered by the selling shareholder were initially issued pursuant to exemptions from the registration requirements of the Securities Act. We have filed with the SEC, under the Securities Act, a Registration Statement on Form F-3 with respect to the offering of our ordinary shares from time to time by the selling shareholder, and this prospectus supplement forms a part of that registration statement.

Shares beneficially owned			Shares beneficially owned		
Name of selling shareholder	before the offering		after the o	after the offering	
	Number	%	Shares offer	ed Number	%
Waha AC Coöperatief U.A.	29,846,611(1)	14.1%	(1) 3,000,000	26,846,611	12.6%

⁽¹⁾On September 2, 2014, we filed a prospectus supplement under the registration statement of which this forms a part, relating to 14,923,306 of our ordinary shares held by the selling shareholder. We have been advised that the selling shareholder entered into funded collar transactions with respect to those ordinary shares. We have also been advised that, although the ordinary shares offered thereby have been borrowed or sold, the selling shareholder will remain the beneficial owner of those ordinary shares until settlement of those funded collar transactions.

PLAN OF DISTRIBUTION

The ordinary shares offered by this prospectus supplement include an aggregate amount of 11,923,305 ordinary shares that will be borrowed by the collar counterparties. We have been advised that an aggregate of 8,233,152 of such shares will be sold in an underwritten offering through the underwriter. In addition, we have been advised that the selling shareholder is offering 3,000,000 ordinary shares for resale in an underwritten offering through the underwriter. An aggregate amount of 11,233,152 ordinary shares are being offered for sale in the underwritten offering.

Funded Collar Transactions

We have been advised that this prospectus supplement will also be used in connection with the sale of an aggregate amount of 3,690,153 additional ordinary shares to be borrowed and sold by the collar counterparties or their affiliates or agents, which may include the underwriter or its affiliates from time to time, pursuant to block sales, on the NYSE, in the over-the-counter market or in negotiated transactions, at market prices prevailing at the time of sale or at negotiated prices. See "Additional Offering by the Collar Counterparties or their Affiliates" below for more information.

We have been advised that 8,233,152 of the ordinary shares sold in the underwritten offering and the additional ordinary shares sold by the collar counterparties or their affiliates or agents, which may include the underwriter or its affiliates, are being sold in short sale transactions in order to hedge the collar counterparties' exposure under the funded collar transactions. We have been advised that the collar counterparties will set-off their obligation to return the ordinary shares borrowed from the selling shareholder against any delivery obligation to them under the funded collar transactions.

Although 11,923,305 of the ordinary shares offered by this prospectus supplement are being borrowed and sold as described herein, we have been advised that the selling shareholder retains the right to recall the borrowed ordinary shares from the collar counterparties, and that the selling shareholder will remain the beneficial owner of the ordinary shares until settlement of the funded collar transactions.

If the selling shareholder recalls ordinary shares borrowed by the collar counterparties, a corresponding portion of the funded collar transaction will be cash settled. Alternatively, the selling shareholder may retain or otherwise sell its ordinary shares (or other ordinary shares) in connection with a cash settlement of the funded collar transaction.

We are not a party to any of the funded collar transactions, are not selling any shares in the offering and will not receive any proceeds from the sales of the ordinary shares in this offering.

Underwritten Public Offering

Subject to the terms and conditions set forth in the registration agreement, the underwriter named below has agreed to purchase from the selling shareholder and the collar counterparties or their respective affiliates and sell the number of our ordinary shares set forth opposite its name below.

	Borrowed	Resale	Total
Underwriters	Shares	Shares	Shares
Deutsche Bank Securities Inc.	8,233,152	3,000,000	11,233,152
Total	8.233,152	3,000,000	11.233.152

The underwriter proposes to offer our ordinary shares in the underwritten offering from time to time for sale in one or more transactions on the NYSE, in the over-the-counter market or in negotiated transactions, at market prices prevailing at the time of sale or at negotiated prices, subject to receipt and acceptance by it and subject to its rights to reject any order in whole or in part. In connection with the underwritten offering, the underwriter may be deemed to have received compensation from the selling shareholder in the form of underwriting discounts. The underwriter may effect such transactions by selling shares to or through dealers, and such dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or purchasers of ordinary shares for whom they may act as agents or to whom they may sell as principal.

We have been advised that in the underwritten offering of 11,233,152 of the ordinary shares, the underwriter has agreed to purchase such shares at a purchase price of \$41.23 per share.

Table of Contents

The registration agreement provides that the obligations of the underwriter to purchase the ordinary shares offered hereby pursuant to the underwritten public offering are subject to certain conditions precedent and that the underwriter will purchase all of such ordinary shares if any of such ordinary shares are purchased.

We have agreed to indemnify the underwriter, the collar counterparties and the selling shareholder against certain liabilities, including liabilities under the Securities Act, or to contribute payments that may be required to be made in respect of any of these liabilities.

The underwriter is offering the shares, subject to prior sale, when, as and if accepted by them, subject to approval of legal matters by their counsel, including the validity of the ordinary shares, and other conditions contained in the registration agreement, such as the receipt by the underwriter of officer's certificates and legal opinions. The underwriter reserves the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

We will not receive any of the proceeds from the sales of the ordinary shares offered hereby.

We estimate that our share of the total expenses of this offering will be approximately \$290,000.

No Sales of Similar Securities

We and the selling shareholder have each agreed for a period of 60 days from the date of this prospectus supplement not to (i) offer, pledge, sell, contract to sell, sell any option or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, or file with the SEC a registration statement under the Securities Act relating to, any ordinary shares or any ordinary shares or any securities convertible into or exercisable or exchangeable for ordinary shares, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing, or (ii) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the ordinary shares or any such other securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of ordinary shares or such other securities, in cash or otherwise, without the prior written consent of the underwriters and the collar counterparties, other than, in the case of the selling shareholder, the funded collar transactions described herein or the ordinary shares to be sold hereunder and, in our case, any shares of our ordinary shares issued upon the exercise of options granted under terms of any employee plan, benefit or compensation arrangement or employment agreement described in the registration statement and this prospectus supplement.

Additional Offering by the Collar Counterparties or their Affiliates

Additionally, the collar counterparties or their affiliates or agents, which may include the underwriter or its affiliates, will offer for sale an aggregate amount of 3,690,153 additional ordinary shares using this prospectus supplement. The additional ordinary shares will not be included in the underwritten offering.

The collar counterparties or their affiliates or agents, which may include the underwriter or its affiliates, propose to offer the additional ordinary shares from time to time after the underwritten offering, pursuant to block sales, on the NYSE, in the over-the-counter market or in negotiated transactions, at market prices prevailing at the time of sale or at negotiated prices. In connection with the sale of these shares, the collar counterparties or their affiliates or such agents may effect such transactions by selling the shares to or through dealers, and these dealers may receive compensation in the form of discounts, concessions or commissions from those affiliates and/or from purchasers of shares for whom the dealers may act as agents or to whom they may sell as principals. Over the same period that the collar counterparties or their affiliates or such agents sell the additional ordinary shares, they or their affiliates or such agents expect to purchase at least an equal number of ordinary shares in the open market.

Table of Contents

Price Stabilization, Short Positions and Penalty Bids

In connection with the underwritten offering, the underwriters may purchase and sell shares of our ordinary shares in the open market. These transactions may include short sales, purchases to cover positions created by short sales and stabilizing transactions. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in this offering. The underwriters must close out such naked short position by purchasing shares in the open market. A naked short position is more likely to be created if underwriters are concerned that there may be downward pressure on the price of the shares in the open market prior to the completion of the underwritten offering. Stabilizing transactions consist of various bids for or purchases of our ordinary shares made by the underwriters in the open market prior to the completion of the underwritten offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the other underwriters a portion of the underwriting discount received by it because the underwriters have repurchased shares sold by or for the account of that underwriter in stabilizing or short covering transactions.

Purchases to cover a short position and stabilizing transactions may have the effect of preventing or slowing a decline in the market price of our ordinary shares. Additionally, these purchases, along with the imposition of the penalty bid, may stabilize, maintain or otherwise affect the market price of our ordinary shares. As a result, the price of our ordinary shares may be higher than the price that might otherwise exist in the open market. These transactions may be effected on the New York Stock Exchange, in the over-the-counter market or otherwise.

New York Stock Exchange Listing

The shares have been approved for listing on the New York Stock Exchange, subject to notice of issuance, under the symbol "AER."

Electronic Offer, Sale and Distribution of Shares

Certain of the underwriters or securities dealers may distribute prospectus supplements and accompanying prospectuses by electronic means, such as e-mail. A prospectus supplement and accompanying prospectus in electronic format is being made available on Internet web sites maintained by one or more of the underwriters and may be made available on web sites maintained by other underwriters. Other than the prospectus supplement and accompanying prospectus in electronic format, the information on any underwriter's web site and any information contained in any other web site maintained by an underwriter is not part of the prospectus supplement or accompanying prospectus or the registration statement of which the prospectus supplement or accompanying prospectus forms a part.

Stamp Taxes

Purchasers of our ordinary shares offered by this prospectus supplement may be required to pay stamp taxes and other charges under the laws and practices of the country of purchase, in addition to the offering price. Accordingly, we urge you to consult a tax advisor with respect to whether you may be required to pay those taxes or charges, as well as any other tax consequences that may arise under the laws of the country of purchase.

Other Relationships

Some of the underwriters and their affiliates have engaged in, and may in the future engage in, investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. They have received, or may in the future receive, customary fees and commissions for these transactions.

Table of Contents

In addition, in the ordinary course of their business activities, the underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Selling Restrictions

Notice to Prospective Investors in the European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State"), each underwriter has represented and agreed that with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the "Relevant Implementation Date") it has not made and will not make an offer of shares to the public in that Relevant Member State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Directive, except that it may, with effect from and including the Relevant Implementation Date, make an offer of shares to the public in that Relevant Member State at any time:

- (a) to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- (b) to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150 natural or legal persons (other than qualified investors, as defined in the Prospectus Directive) subject to obtaining the prior consent of the representative for any such offer; or
- (c) in any other circumstances which do not require the publication by us of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer of shares to the public" in relation to any shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms for the offer and the shares to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State, the expression Prospectus Directive means Directive 2003/71/EC (and amendments thereto, including the PD 2010 Amending Directive to the extent implemented in the Relevant Member State) and includes any relevant implementing measure in each Relevant Member State, and the expression 2010 PD Amending Directive means Directive 2010/73/EU.

Notice to Prospective Investors in the United Kingdom

This prospectus and any other material in relation to the shares described herein is only being distributed to, and is only directed at, persons in the United Kingdom that are qualified investors within the meaning of Article 2(1)(e) of the Prospective Directive ("qualified investors") that also (i) have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, or the Order, (ii) who fall within Article 49(2)(a) to (d) of the Order or (iii) to whom it may otherwise lawfully be communicated (all such persons together being referred to as "relevant persons"). The shares are

only available to, and any invitation, offer or agreement to purchase or otherwise acquire such shares will be engaged in only with, relevant persons. This prospectus and its contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other person in the United Kingdom. Any person in the United Kingdom that is not a relevant person should not act or rely on this prospectus or any of its contents.

Table of Contents

Notice to Prospective Investors in Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (the "SIX") or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this prospectus nor any other offering or marketing material relating to the offering, the issuer, the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this prospectus will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA (the "FINMA"), and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes (the "CISA"). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Notice to Prospective Investors in the Dubai International Financial Centre

This prospectus relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority (the "DFSA"). This prospectus is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus nor taken steps to verify the information set forth herein and has no responsibility for this prospectus. The shares to which this prospectus relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus you should consult an authorized financial advisor.

Notice to Prospective Investors in Hong Kong

The shares may not be offered or sold by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap. 32, Laws of Hong Kong), or (ii) to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a "prospectus" within the meaning of the Companies Ordinance (Cap. 32, Laws of Hong Kong), and no advertisement, invitation or document relating to the shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder.

Notice to Prospective Investors in Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the

"SFA"), (ii) to a relevant person, or any person pursuant to Section 275(1A), and in accordance with the conditions, specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Table of Contents

Where the shares are subscribed or purchased under Section 275 by a relevant person which is: (a) a corporation (which is not an accredited investor) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary is an accredited investor, shares, debentures and units of shares and debentures of that corporation or the beneficiaries' rights and interest in that trust shall not be transferable for six months after that corporation or that trust has acquired the shares under Section 275 except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person, or any person pursuant to Section 275(1A), and in accordance with the conditions, specified in Section 275 of the SFA; (2) where no consideration is given for the transfer; or (3) by operation of law.

Notice to Prospective Investors in the Netherlands

The ordinary shares may only be offered to legal entities which are qualified investors as defined in the Prospectus Directive.

Table of Contents

EXPERTS

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this prospectus by reference to the Annual Report on Form 20-F for the year ended December 31, 2013 have been so incorporated in reliance on the report of PricewaterhouseCoopers Accountants N.V., an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

The consolidated financial statements of International Lease Finance Corporation which appears in the Current Report on Form 6-K of AerCap Holdings N.V. dated May 14, 2014 incorporated by reference in this prospectus supplement for the year ended December 31, 2013 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report incorporated herein.

LEGAL MATTERS

Certain legal matters in connection with the effectiveness of the registration statement will be passed upon for us by Cravath, Swaine & Moore LLP, New York, New York, and certain legal matters in connection with the ordinary shares offered hereby will be passed upon for us by NautaDutilh N.V., The Netherlands. Certain legal matters relating to the offering and the funded collar transactions will be passed upon for the underwriters by Davis Polk & Wardwell LLP, New York, New York and Paul Hastings LLP, New York, New York and for the selling shareholder by Latham & Watkins LLP.