
FORM 6 - - K
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

Report of Foreign Private Issuer
Pursuant to Rule 13a - 16 or 15d - 16 under
the Securities Exchange Act of 1934

For the month of March 2010

Commission File Number 001-33159

AERCAP HOLDINGS N.V.
(Translation of Registrant's Name into English)

Stationsplein 965, 1117 CE Schiphol Airport, The Netherlands, +31-20-655-9655
(Address of Principal Executive Office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F

Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)
(1):

Note: Regulation S-T Rule 101(b)(1) only permits the submission in paper of a Form 6-K if submitted solely to provide an attached annual report to security holders.

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)
(7):

Indicate by check mark whether the registrant by furnishing the information contained in this form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Act of 1934.

Yes

No

If "Yes" is marked, indicated below the file number assigned to the registrant in connection with Rule 12g3-2(b): 82 — N/A

Exhibits

99.1 AerCap Holdings N.V. and Genesis Lease Limited Press Release, dated March 25, 2010, entitled "AerCap and Genesis Lease Complete Merger in an All Share Transaction"

Other Events

AerCap Holdings N.V. ("AerCap") (NYSE: AER) and Genesis Lease Limited ("Genesis") (NYSE: GLS) completed the previously announced Agreement and Plan Amalgamation among AerCap, Genesis, and a wholly-owned subsidiary of AerCap, AerCap International Bermuda Limited ("AerCap International"). Pursuant to the agreement, Genesis has amalgamated with AerCap International in an all share-for-share transaction (the "Amalgamation"). As a result of the Amalgamation, former Genesis shareholders will receive one AerCap ordinary share for every Genesis common share they owned. The resulting amalgamated company will continue as a subsidiary of AerCap.

The Amalgamation was approved by the shareholders of Genesis at a special general meeting held on March 23, 2010 and became effective upon the filing of the related Certificate of Amalgamation with the Registrar of Companies in Bermuda on March 25, 2010.

A copy of the Press Release is attached to this Report on Form 6-K as Exhibit 99.1 and is incorporated herein by reference.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on

its behalf by the undersigned, thereunto duly authorized.

AERCAP HOLDINGS N.V.

By: /s/ Klaus Heinemann

Name: Klaus Heinemann

Title: Authorized Signatory

Date: March 25, 2010

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EXHIBIT INDEX

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PRESS RELEASE

FOR IMMEDIATE RELEASE

AerCap and Genesis Lease Complete Merger in an All Share Transaction

AerCap Has Become the World's Leading Independent Aircraft Leasing Company With Total Assets of Approximately \$8 Billion

Amsterdam, Netherlands/Shannon, Ireland; March 25, 2010 — AerCap Holdings N.V. ("AerCap") (NYSE: AER) and Genesis Lease Limited ("Genesis") (NYSE: GLS) announced today the completion of their amalgamation, previously announced on September 18, 2009, under which Genesis shareholders will receive one AerCap ordinary share for every Genesis common share they owned.

Under the amalgamation, Genesis became a wholly-owned subsidiary of AerCap and its shares ceased trading at the New York Stock Exchange. AerCap's CEO Klaus Heinemann and CFO Keith Helming will lead the combined company, which has retained the name AerCap. Three directors from Genesis will be nominated for election to the Board of Directors of AerCap at the 2010 annual general meeting to be held in May 2010.

Based on Genesis' balance sheet, the transaction has a value of \$1.76 billion and, based on the closing stock price for AerCap Holdings N.V. ordinary shares on Wednesday, March 24, 2010, the share-for-share consideration has a value of \$10.83 per Genesis ADS (each ADS representing one Genesis common share). As of March 25, 2010, Genesis shareholders own approximately 29% of the combined company.

The amalgamation follows receipt of all necessary regulatory authorizations, approval of the transaction by Genesis' shareholders on March 23, 2010, and satisfaction of all other closing conditions.

AerCap's CEO Klaus Heinemann commented, "The merger has strengthened our ability to expand our leading market position at a time when we see clear indications of increasing market recovery. This powerful combination, together with the enhanced cash generation capabilities of our combined companies, will enable us to pursue considerable further growth for the benefit of our shareholders. AerCap is now the world's leading independent aircraft

leasing company, with a strong franchise, a worldwide market reach, and a young, fuel-efficient portfolio with approximately \$10 billion in book value including our contracted aircraft orders."

John McMahon, Chairman & CEO of Genesis added, "The Genesis board and management are grateful for the overwhelming support of our shareholders in favor of the merger transaction with AerCap. As a result, we believe that our shareholders are well positioned to benefit from the combined company's future contracted and funded growth as well as the opportunities that arise as the market recovers. We wish them, the board and management team of the combined company every success in the future."

The combined company has total assets of more than \$8 billion, and boasts a lease portfolio currently valued at nearly \$7 billion. AerCap also has \$3.6 billion of lease assets under purchase contract, ensuring further growth with new, fuel-efficient aircraft.

AerCap's total portfolio includes 345 commercial aircraft and 92 engines that are either owned, on order, under contract or letter of intent, or managed. The average age of its owned aircraft fleet is 6.2 years.

Advisors

Morgan Stanley and UBS acted as financial advisors and Milbank, Tweed, Hadley & McCloy LLP, NautaDutilh N.V., and Mello, Jones & Martin as legal advisors to AerCap. Citi acted as financial advisor and Weil, Gotshal & Manges LLP, Conyers Dill & Pearman and Houthoff Buruma N.V. as legal advisors to Genesis. Sonenshine Partners acted as a financial advisor to the board of Genesis.

About AerCap

AerCap is an integrated global aviation company with a leading market position in aircraft and engine leasing, trading and parts sales. AerCap also provides aircraft management services and performs aircraft maintenance, repair and overhaul services and aircraft disassemblies. AerCap is headquartered in The Netherlands and has offices in Ireland, the United States, Singapore, China and the United Kingdom.

Forward Looking Statements

This press release may contain certain statements, estimates and forecasts with respect to future performance and events. These statements, estimates and forecasts are intended to be covered by the safe harbor for “forward-looking statements” provided by the U.S. Private Securities Litigation Reform Act of 1995. In some cases, such forward-looking statements can be identified by the use of forward-looking terminology such as “may,” “might,” “will,” “should,” “expect,” “plan,” “intend,” “estimate,” “anticipate,” “believe,” “predict,” “potential” or “continue” or the negatives thereof or variations thereon or similar terminology. All forward-looking statements included in this press release are not statements of historical fact but are based on various underlying assumptions and expectations and are subject to known and unknown risks, uncertainties and assumptions, and may include projections of our future financial performance based on our growth strategies and anticipated trends in our business. These statements are only predictions based on our current expectations and projections about future events. There are important factors that could cause our actual results, level of activity performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied in any forward-looking statements. As a result, there can be no assurance that any forward-looking statements

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included in this press release will prove to be accurate or correct. In light of these risks, uncertainties and assumptions, the future performance or events described in any forward-looking statements in this press release might not occur. Among the factors that could cause actual results to differ materially from those described in any forward looking statements are AerCap’s ability to successfully combine the businesses of AerCap and Genesis and to realize expected synergies from the combination, and changes in global, political, economic, business, competitive, market and regulatory forces, as well as those factors described under the headings ‘Risk Factors’ in AerCap’s and Genesis’ annual reports on Form 20-F for the year ended December 31, 2009 and December 31, 2008, respectively, as filed with the US Securities and Exchange Commission (the “SEC”). Copies of such annual reports on Form 20-F are available online at <http://www.sec.gov> or on request from AerCap. Except for any obligation to disclose material information under federal securities laws, AerCap and Genesis do not undertake any obligation to, and will not, update any forward-looking statements, whether as a result of new information, future events or otherwise. Accordingly, you should not rely upon forward-looking statements as a prediction of actual results and AerCap and Genesis do not assume any responsibility for the accuracy or completeness of any of these forward-looking statements.

This press release does not constitute an offer to sell or the solicitation of an offer to buy any securities, nor shall there be any sale of securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. No offering of securities shall be made except by means of a prospectus meeting the requirements of the U.S. Securities Act of 1933, as amended, or an exemption therefrom.

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