
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 May 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

Other Events

On May 25, 2010, AerCap Holdings N.V. announced that it has signed an agreement to sell six A320 aircraft to Avolon and to establish a joint venture with Avolon to own three A330 aircraft.

Exhibits

99.1 AerCap Holdings N.V. Press Release

2

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: May 25, 2010

3

EXHIBIT INDEX

99.1 AerCap Holdings N.V. Press Release.

4



PRESS RELEASE

AerCap Signs Agreement to Sell Six A320 Aircraft to Avolon and Establishes Joint Venture With Avolon to Own Three A330 Aircraft

AMSTERDAM, The Netherlands, May 25, 2010 - AerCap Holdings N.V. ("AerCap," NYSE: AER) announced today that it has signed an agreement with Dublin-based aircraft leasing company Avolon for the sale of six A320s. Four of the aircraft are new (2010 manufactured) and are part of the AerVenture portfolio, a joint venture between AerCap and Abu Dhabi's investment holding company Waha Capital. The other two aircraft are owned by AerCap and were manufactured in 2008. All aircraft have been sold with leases attached.

In addition to the A320 sale, AerCap has established a joint venture with Avolon which owns three of AerCap's A330-200 aircraft on long-term leases with Aeroflot. AerCap and Avolon will each contribute 50% of the equity required for this joint venture. AerCap will continue to manage the aircraft and the related leases.

AerCap's CEO Klaus Heinemann said: "Investor demand for new aircraft has significantly increased over the last few months, especially when linked to long-term leases with prime airlines. This market environment has provided attractive opportunities for us to sell aircraft from our young, fuel-efficient portfolio and from our order positions in order to achieve our diversification objectives and further optimize our portfolio."

Domhnal Slattery, CEO of Avolon, added: "Following our successful US\$1.4 billion initial capital raise, we are pleased to announce this important transaction with AerCap and to welcome five new airline customers to Avolon. Our objective is to build Avolon into a leading player in the global aircraft leasing sector by deploying our capital effectively and in a manner which meets our airline customer requirements and our expected rates of return. Our primary focus will be on Airbus A320 and Boeing 737NG family aircraft but, as today's announcement demonstrates, we retain the capability to invest in long-haul aircraft which meet our risk and return criteria."

Headquartered in Ireland, with offices in New York, Hong Kong and Shanghai, Avolon provides aircraft leasing and lease management services. Earlier this month, Avolon successfully completed its initial capital raise of US\$1.4 billion including an equity commitment of US\$750 million from three private equity firms, Cinven, CVC Capital Partners and Oak Hill Capital Partners.

About AerCap Holdings N.V.

AerCap is the world's leading independent aircraft leasing company. AerCap also provides engine leasing, aircraft management services, aircraft maintenance, repair and overhaul services and aircraft disassemblies. AerCap is headquartered in The Netherlands and has offices in Ireland, the United States, China, Singapore and the United Kingdom.

This press release may contain forward-looking statements that involve risks and uncertainties. In most cases, you can identify forward-looking statements by terminology such as "may", "should", "expects", "plans", "anticipates", "believes", "estimates", "predicts", "potential" or "continue" or the negative of such terms or similar terminology. Such forward-looking statements are not guarantees of future

1

performance and involve significant assumptions, risks and uncertainties, and actual results may differ materially from those in the forward-looking statements.

Contact for Media:

Frauke Oberdieck
+31 20 655 9616
foberdieck@aercap.com

Contact for Investors:

Peter Wortel
+31 20 655 9658
pwortel@aercap.com

www.aercap.com

2
