UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

FORM 20-F/A

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

For the fiscal year ended December 31, 2010

Commission file number 001-33159

AerCap Holdings N.V.

(Exact name of Registrant as specified in its charter)

The Netherlands

(Jurisdiction of incorporation or organization)

AerCap

AerCap House Stationsplein 965 1117 CE Schiphol The Netherlands + 31 20 655 9655

(Address of principal executive offices)

Wouter M. den Dikken, AerCap House, Stationsplein 965, 1117 CE Schiphol, The Netherlands, Telephone number: +31 20 655 9655, Fax number: +31 20 655 9100

(Name, Telephone, Email and/or Facsimile number and Address of Company Contact Person)

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

Title of each class	Name of each exchange on which registered	
Ordinary Shares	The New York Stock Exchange	

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

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: None

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

Ordinary Shares, Euro 0.01 par value

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

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

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 🗆

Yes 🗵 No 🗆

Yes 🛛 No 🗵

149,232,426

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.

Large accelerated filer 🗵	Accelerated filer	Non-accelerated filer \Box	Smaller reporting company \Box
-		(Do not check if a smaller	
		reporting company)	

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP 🗵

International Financial Reporting Standards as issued by Other D the International Accounting Standards Board D

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has

Item 17 🛛 Item 18 🗆

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes 🗆 No 🗵

Explanatory Note

This Amendment No. 1 to the Annual Report on Form 20-F for the fiscal year ended December 31, 2010 originally filed with the Securities and Exchange Commission on March 23, 2011 ("2010 Form 20-F"), is being filed solely for the purposes of furnishing Interactive Data File disclosure as Exhibit 101 in accordance with Rule 405 of Regulation S-T and updating the large accelerated filer and well-known seasoned issuer status. This Exhibit 101 was not previously filed.

Other than as expressly set forth above, this Form 20-F/A does not, and does not purport to, amend, update or restate the information in any other item of the 2010 Form 20-F, or reflect any events that have occurred after the 2010 Form 20-F was originally filed.

2

PART III

Item 19. Exhibits.

We have filed the following documents as exhibits to this annual report:

Exhibit Number	Description of Exhibit
101	The following financial information from AerCap Holdings N.V.'s Annual Report on Form 20-F for the year ended December 31, 2010, filed with the SEC on March 23, 2011, formatted in Extensible Business Reporting Language (XBRL):
	(1) Consolidated Balance Sheets as of December 31, 2010 and 2009:

(2) Consolidated Statements of Income for the years ended December 31, 2010, 2009 and 2008;

(3) Consolidated Statements of Cash Flows for the years ended December 31, 2010, 2009 and 2008;

(4) Consolidated Statements of Equity for the years ended December 31, 2010, 2009 and 2008; and

(5) Notes to Consolidated Financial Statements.

3

SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F/A and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

AERCAP HOLDINGS N.V.

By: <u>/s/ KLAUS HEINEMANN</u> Klaus Heinemann *Chief Executive Officer*

Date: April 20, 2011

4