CONVERTING DATA INTO MARKET TRUST.

EUROPEAN DATAWAREHOUSE



DATA TIMING AND TIMELINESS

TIMING OF DATA UPLOADS

Data timeliness, as measured by the difference between the loan-level data (LLD) upload timestamp and the pool cut-off date (PCD) of the data, is key to our data users. In this paper, we measure the observed timeliness for the data submitted to our database and see how it has evolved. We found that:

- The average reporting lag from PCD to timestamp is approximately 34 days
- There are important differences in timeliness depending on the country and asset class
- Data timeliness has not changed significantly since we started collecting data

Three dates are relevant to our data users:

- The PCD, which is the "as of" date of the data
- The Interest Payment Date (IPD), which should be after the PCD

• The timestamp date, the date on which the data is uploaded

The ECB defines timeliness as part of their eligibility criteria. It specifies that following the IPD, the data provider has one month to upload the data. Furthermore, the reporting frequency should be at least quarterly, deals with monthly IPDs should report monthly, the data in the loan level data (LLD) should match that of the investor report and there should be no more than four months between two uploads.¹ As a result, the LLD is typically provided to our website after the IPD, whereas the investor reports are usually made available before the IPD. As a result, there is typically a first lag from the PCD to the IPD and another from the IPD to the upload timestamp.

Exhibit 1 shows the average reporting lag for the various markets (defined as a combination of country and asset class) as the sum of two components, the lag from PCD to IPD and the

¹ See ECB Eligibility Requirements as well as FAQ on reporting frequency.

lag from IPD to upload. We find an average overall reporting lag of 34 days.² The "PCD to IPD" lag is on average 19 days, whereas the "IPD to timestamp" lag is 15 days. There are substantial differences across markets. The total average lag for UK RMBS deals is 26 days, and 46 days for Italian RMBS. The average IPD-to-upload delay is in all cases as expected, less than or equal to one month. We also find that the delay between two uploads is indeed less than four months in more than 99.5% of all cases.

Exhibit 1: Average Data Timeliness as the Sum of "PCD to IPD" Lag and "IPD to Timestamp" Lag (Days)



Source: European DataWarehouse

The timeliness for data uploads varies across jurisdictions. Exhibit 2 shows that 70% of UK RMBS uploads happen within four weeks of the PCD, whereas for Italy, it is less than 10% (for the other markets, please refer to Appendix 1). Exceptionally long lags as observed in Exhibit 2 can happen for various reasons. For instance, given that data providers have up to a month after the IPD to publish the data, they may decide to prioritise other tasks prior to upload, such as amending data quality issues.



Exhibit 2: PCD to Upload Lag for RMBS Deals (in Week as % of Uploads)

Source: European DataWarehouse

Exhibit 3 shows the evolution of the average "PCD to Upload" lag overtime for RMBS deals (for other markets see Appendix 2). We can see no identifiable improvement in data timeliness since data was first uploaded to our database in 2013. Clearly though, data is consistently more punctual in some markets than in others (again, UK RMBS data is timelier than Italian RMBS data).





Source: European DataWarehouse

For any given deal, one can find differences in reporting lag from one period to the next. Events affecting the data providers can account for some of this lag, such as vacation, change in internal priorities, IT problems, the need to amend data or even the departure of key employees. It is also possible that two submissions are uploaded during the same period. Such a re-upload can happen for instance if the content of the first upload was not satisfactory. For data analysis, one would prefer to use the second "amended" file for a given PCD. Also, in some cases, data providers have resubmitted amended data to our database many months after having submitted the first "incorrect" LLD. For these cases, the submission dates can be long after the PCD.

This has implications for data users. When producing time series, quarterly information is therefore the least common denominator across deals, given that even deals with semi-annual IPDs should at a minimum report quarterly. This invites the data user to decide what LLDs to take into consideration for a given period, depending on the intended use of the data. Disregarding the upload frequency may lead to the triple counting of data for deals reporting monthly. If data is uploaded monthly, a solution can be to select the LLD corresponding to the end of a natural quarter (March, June, September, December) and for the deals that upload quarterly, take the file uploaded for that quarter, remembering that the file with a mid-January PCD may be more representative of Q4 of the previous year than a file with a PCD from March of the new year.

Of the three dates available to the data user, the PCD (the "as of date" of the data) is likely to be the more useful. Additionally, the PCD is more likely to refer to the end of a month, as per our Exhibit 4 below, whereas interest payments tend to be in the third week of the month. Data uploads are generally distributed throughout the month and do not show a clear correlation.



Exhibit 4: PCD, IPD and Day of Timestamp

Source: European DataWarehouse

APPENDIX 1: REPORTING LAG BY MARKET



Exhibit 5 a: PCD to Upload Lag for SME Deals (in Week as % of Uploads)





Exhibit 5 c: PCD to Upload Lag for Leasing Deals (in Week as % of Uploads)





Exhibit 5 d: PCD to Upload Lag for Credit Cards Deals (in Week as % of Uploads)





Source: European DataWarehouse

APPENDIX 2: EVOLUTION OF THE AVERAGE REPORTING LAG

Exhibit 6 a: Average Reporting Lag per Asset Class and Country (SME)



Exhibit 6 b: Average Reporting Lag per Asset Class and Country (Leasing)



Exhibit 6 c: Average Reporting Lag per Asset Class and Country (Credit Cards)











Source: European DataWarehouse

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APPENDIX 3: METHODOLOGY

For the purpose of this study, we selected:

- 1. The EDcode
- 2. The pool cut-off date (PCD)
- 3. The submission timestamp for all the LLD uploads to our database for the main asset classes, excluding private deals.

PCD and IPD are fields populated by the data providers, and the timestamp is automatically captured when data is uploaded to our database. Because the PCD and the IPD are fields³ that are provided as part of the data uploads, they are vulnerable to data quality issues. As part of the data preparation for this study, we therefore eliminated the observations reporting implausible/dummy values for these fields as follows:

 When there are several LLDs for the same IPD, we take the last LLD for that IPD. For instance, it is possible that for a deal with quarterly IPDs, data is provided monthly, more often than required. If the next IPD is due for the 15th April, and data is provided with PCDs as of 31th January, 29th February, and 31th March, we would take the data as of 31th March for our calculations. Using also the other earlier uploads for our statistics would give the impression that the data is supplied "well in advance" compared to the IPD.

- All observations where any of the PCD, IPD or timestamp were either greater than 2020 or earlier than 2012 were discarded as probable errors. Not filtering out these cases could have led to severe distortions of our averages, particularly when the IPD is a dummy value (like "9999-12-31" or "1900").
- The LLD as of the PCD is supposed to provide data for the calculations relevant to the upcoming IPD. The observations where the IPD is before the PCD were therefore also discarded.
- LLD may be re submitted with amended data, sometimes long after the first submission (for a given PCD). We thus selected only the first data upload for a given EDcode/PCD.

3 For instance, in the RMBS taxonomy, the PCD is field AR1 and the interest Payment date is field BR27.

DISCLAIMER

IMPORTANT DISCLOSURES

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THE SECURITISATION DATA REPOSITORY FOR EUROPE

CORPORATE ADDRESS

European DataWarehouse GmbH Walther-von-Cronberg-Platz 2 60594 Frankfurt am Main

www.eurodw.eu enquiries@eurodw.eu +49 (0) 69 50986 9017

For further queries, please contact any of the following analysts or send an email to <u>enquiries@eurodw.eu</u>

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