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# Best Practice Guide on Portfolio Data Requirements

## Overview

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The NPL Markets platform allows buyers and sellers to upload standard data files with loan-level data for validation, due diligence and pricing. The upload will succeed and will generate meaningful high-level valuation results if the uploaded data tape is in standard format and a minimum number of data fields are provided. Where data do not follow the standard of the EBA NPL template, data providers can use the data mapping tool of NPL Markets to create a standard data file. This best practice guide explains the data format and minimum data requirements of the platform. Data formats and requirement can change over time and we recommend checking our platform and website for further notices. The data standard implemented by the NPL Markets platform follows the EBA NPL template with some modifications. Importantly, we do not require all fields defined by EBA as critical to be delivered. In our experience, most existing portfolios meet our minimum requirements and a key benefit of the platform is to support the data preparation and to test the impact of additional information provided on pricing. We first describe the EBA NPL template. Second, we define the minimum data fields required to upload a transaction. Finally, we explain the important fields required for a meaningful initial valuation and comment on additional data that could improve the pricing further. Figure 1 summarizes the best practice step when delivering data to the platform.



Figure 1: Best practice guide on uploading data to NPL Markets.

## The EBA NPL data template

The European Banking Authority published a loan-level data template in late 2017 to facilitate transaction of non-performing loan (NPL) transactions and a slightly revised template in September 2018 (EBA 2018). The template was published to create a common data standard for the screening, due diligence and valuation of NPL transactions with the aim to make the secondary market for European NPL more efficient by overcoming information asymmetries between buyers and sellers.

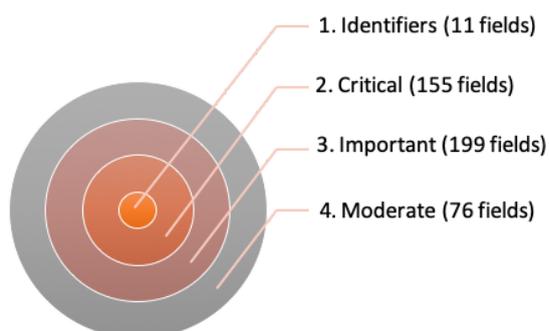


Figure 2: Importance of data fields in EBA NPL template

The EBA NPL template aims to cover most bank loan asset classes including residential and commercial mortgages, corporate loans and SME, unsecured consumer loans, leasing and asset-based finance as well as specialized finance. Across all asset classes, EBA has defined 441 fields of which 155 fields are deemed critical plus 11 identifiers (Figure 2). The use of the EBA NPL template is currently not mandatory. Figure 3 shows the 17 data tables of the EBA NPL template.

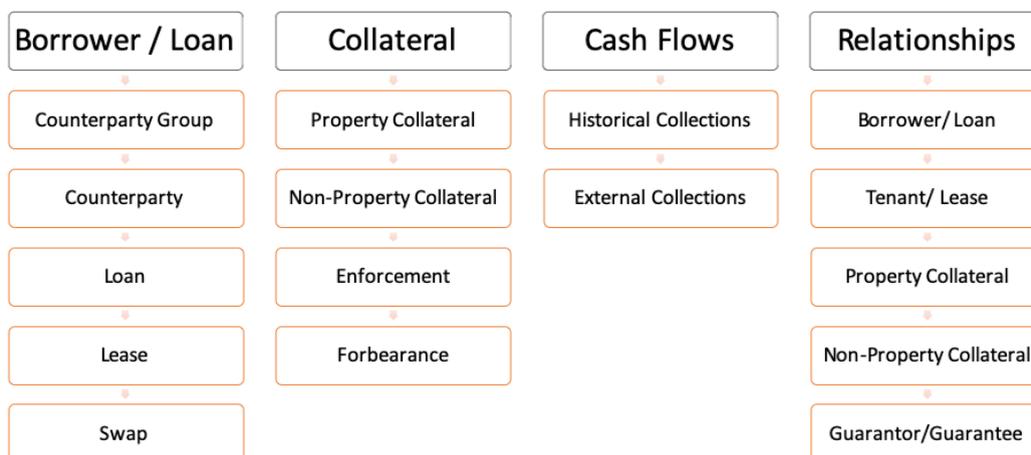


Figure 3: Data tables in the EBA NPL template.  
A table called Portfolio contains the name and cutoff date.

## The modified NPL Markets data template

The NPL Markets template follows the EBA NPL standard with some modifications. We add a few data fields that are useful for investors to conduct their valuation. Examples of added fields include cash in court, mortgage type, the guarantee type or the percentage ownership of the property in case of shared ownership. The counterparty table in EBA includes counterparties that are borrowers, guarantors or tenants, respectively. We disentangle the counterparty table and create three separate tables for the three counterparty roles. We also extract guarantees from the Non-Property Collateral table, which is in line with current market practice and hence facilitates the delivery and mapping of existing non-standard data sets. These adjustments are done for convenience to help data providers map their existing data set. Data providers are free to adjust their own data format or submit data in the published EBA format. The user with our support can then map the data to the platform format prior to upload using the data mapping tool of NPL Markets.

The detailed data dictionary used by the NPL Markets is available for download on the platform. Tables and fields that are added to the EBA template are highlighted.

## Minimum data requirements of the NPL Markets platform

We do not adopt the EBA classification of fields as critical as we noticed too many critical fields missing in existing data sets. Meaningful initial valuation work can be done without some EBA critical fields. We do not advocate the use of sparse data sets as more information will result in better pricing, but users can work on the platform with their data at hand prior to completing their data collection and enrichment effort. Much of the information required in the EBA NPL template is not readily available in bank loan source systems. Hence, collecting additional data comes at a material cost. A meaningful indicative pricing exercise and feasibility study can be conducted with 50 to 80 data fields, i.e. a fraction of the number of fields EBA classifies as critical. The exact number of most important fields depends on the asset class with secured loans having additional information requirements on the collateral. The NPL Markets platform requires consistent identifiers and a legal claim amount to accept a loan on the platform. The barrier to entry is kept deliberately low so that data providers can check their existing data sets with the validation and valuation tools provided and can add data incrementally before deciding to publish a portfolio to investors.

We provide guidance as to which fields have the largest impact on pricing. Figures 4 and 5 show that a meaningful pricing exercise may only require around 50 data fields. An additional 140 fields are used in the valuation algorithms and hence can improve the pricing if available. The remaining 250 fields from EBA are still relevant and all

fields proposed by EBA add valuable insight. However, the platform will not be able to change the pricing based on those remaining fields at the current state of development. As the pricing algorithm improves and more countries are on-boarded we expect more data fields to be used. The remaining fields add value now as part of a qualitative expert assessment of the individual loan and borrower situation.

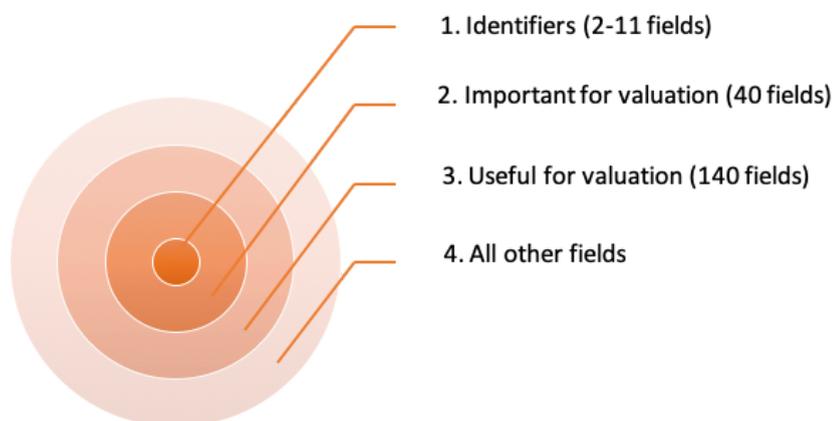


Figure 4: Importance of different data fields NPL Markets

Which information is most important? The identifiers (ID) are critical for the correct relational structure of the data. For example, if a loan is shown with a borrower X, then this borrower ID for X must be present in the counterparty table. If not, the portfolio will fail the validation tests and be prevented from upload to the platform. If certain numerical or choice fields have improper, unlikely or missing values, then the portfolio will not be rejected, but a warning or error message will be given in the validation log file. Hence, the NPL Platform will help the user to create the best possible data tape with the available information. The platform only rejects portfolios for manifest errors in the relational structures of the data. All other errors and warnings will be listed in the validation output, but a preliminary valuation will be technically possible for all pools that pass the validation.

Important portfolio value drivers are the existence, nature, location, rank and value of collateral and guarantees as well as the legal nature and location of the borrower and guarantors. Performing loans or loans subject to forbearance arrangements or payment plans require detailed cash flow information (e.g. interest rates and amortization schedules), whereas the originally contracted cash flows will not be as relevant where the loan is non-performing and has been terminated. Historical collections are important, but may not enter the valuation automatically. Please refer to our article on the collection of historical recovery data for more detail (NPL Markets 2019, Collecting historical recovery data). The nature, age and stage of the legal process and court location is important including the details of a court-auction driven foreclosures of property collateral.

Many fields are only important conditional on the situation. For instance, if a property is currently in preparation of the third auction, then the details of the first auction are

no longer important. The latest collateral value is more important than the initial value. Cross collateralization and cross default provisions may be important for large corporate borrower groups, but are rarely available or relevant for small company loans or loans to individuals. Third-party pari passu liens or detailed covenants are important for commercial real estate loans but are rarely available or relevant for residential mortgages. Figure 5 shows those fields that the platform deems most important for valuation. The list excludes the 140 additional fields that the platform currently uses for valuation.

In summary, most users find that uploading of their existing non-standard data sets meets the minimum data requirements of the platform resulting in meaningful online analytics and initial valuation estimates. Non-standard portfolios uploaded to our data mapping tools are not required to have the same table structure as that specified by EBA. The tool will generate the required table structure automatically. However, if certain data is provided at a different level of aggregation than that required by the template, a bespoke preprocessing of the data may be required. For instance, if property valuations are provided at a court-determined lot level, but the mortgage table relates loans to individual properties, then additional business rules are required to allocate the lot-level court values to individual properties. The NPL Markets platform currently provides the bespoke data preprocessing and standardization service free of charge subject to review and fair use restrictions.

Index	Data Categories	Unique Field Name	Field Type	EBA Importance	NPLM Importance	Target Format
1.000	Portfolio	Cut-off Date	Date	Critical	Critical	YYYY-MM-DD, YYYY/MM
1.001	Portfolio	Portfolio Identifier	Text	Identifier	Critical	
3.000	Counterparty	Counterparty Identifier	Text	Identifier	Critical	
3.004	Counterparty	Legal Type of Counterparty	Choice	Critical	Very Important	[List]Listed Corporate; Uni
3.012	Counterparty	Geographic Region of Residence	Choice	Important	Very Important	[Sheet]NUTS3
3.038	Counterparty	Geographic Region of Registered Locat	Choice	Important	Very Important	[Sheet]NUTS3
3.075	Counterparty	Name of Insolvency Or Restructuring Pr	Choice	Critical	Very Important	[List]Bankruptcy or insolve
3.080	Counterparty	Stage Reached in Insolvency Or Restru	Choice	Critical	Very Important	[List]Proceedings to be st
4.000	Relationship (Borrower - Loan)	Contract Identifier	Text	Identifier	Critical	
4.002	Relationship (Borrower - Loan)	Counterparty Identifier	Text	Identifier	Critical	
7.000	Loan	Contract Identifier	Text	Identifier	Critical	
7.015	Loan	Loan Currency	Choice	Critical	Very Important	[Sheet]Currency (ISO 421
7.017	Loan	Principal Balance	Number	Critical	Very Important	10000
7.022	Loan	Legal Balance	Number	Critical	Critical	10000
7.073	Loan	Date of Default	Date	Critical	Very Important	YYYY-MM-DD, YYYY/MM
11.000	Property Collateral	Property Identifier	Text	Identifier	Mandatory Conditional	
11.004	Property Collateral	Type of Property	Choice	Critical	Very Important	[List]Semi-detached house
11.010	Property Collateral	Geographic Region of Property	Choice	Critical	Very Important	[Sheet]NUTS3
11.036	Property Collateral	Latest Valuation Amount PC	Number	Critical	Very Important	10000
11.037	Property Collateral	Date of Latest Valuation PC	Date	Critical	Very Important	YYYY-MM-DD, YYYY/MM
11.039	Property Collateral	Type of Latest Valuation PC	Choice	Critical	Very Important	[List]Full Appraisal; Drive-t
12.000	Relationship - Property Collateral	Property Identifier	Text	Identifier	Very Important	
12.001	Relationship - Property Collateral	Contract Identifier	Text	Identifier	Very Important	
12.002	Relationship - Property Collateral	Mortgage Identifier	Text	Identifier	Very Important	
12.003	Relationship - Property Collateral	Mortgage Amount	Number	Critical	Very Important	10000
12.004	Relationship - Property Collateral	Lien Position IDPC	Number	Critical	Very Important	10000
12.005	Relationship - Property Collateral	Higher Ranking Loan IDPC	Number	Critical	Very Important	10000
14.000	Non-Property Collateral	Non-Property Identifier	Text	Identifier	Mandatory Conditional	
14.014	Non-Property Collateral	Latest Valuation Amount NPC	Number	Critical	Very Important	10000
14.015	Non-Property Collateral	Date of Latest Valuation NPC	Date	Critical	Very Important	YYYY-MM-DD, YYYY/MM
14.016	Non-Property Collateral	Type of Latest Valuation NPC	Choice	Critical	Very Important	[List]Full Appraisal; Drive-t
16.000	Enforcement Property	Property Identifier	Text	Identifier	Very Important	
16.007	Enforcement Property	Court Appraisal Amount EP	Number	Critical	Very Important	10000
16.008	Enforcement Property	Date of Court Appraisal EP	Date	Critical	Very Important	YYYY-MM-DD, YYYY/MM
16.013	Enforcement Property	Gross Sale Proceeds EP	Number	Critical	Very Important	10000
16.023	Enforcement Property	Sold Date EP	Date	Critical	Very Important	YYYY-MM-DD, YYYY/MM
16.026	Enforcement Property	Next Auction Date EP	Date	Critical	Very Important	YYYY-MM-DD, YYYY/MM
16.027	Enforcement Property	Court Auction Reserve Price for Next Au	Number	Critical	Very Important	10000
16.028	Enforcement Property	Last Auction Date EP	Date	Critical	Very Important	YYYY/MM/DD,
16.029	Enforcement Property	Court Auction Reserve Price for Last Au	Number	Critical	Very Important	10000
19.900	Relationship - (Guarantee - Loan)	Guarantee Identifier	Text	Identifier	Mandatory Conditional	
19.901	Relationship - (Guarantee - Loan)	Contract Identifier	Text	Identifier	Mandatory Conditional	
19.902	Relationship - (Guarantee - Loan)	Guarantee Amount IDGL	Number	Critical	Very Important	10000
20.900	Guarantor	Guarantor Identifier	Text	Identifier	Mandatory Conditional	
20.902	Guarantor	Legal Type of Counterparty GUA	Choice	Critical	Very Important	[List]Listed Corporate; Uni
20.912	Guarantor	Type of Guarantor GUA	Choice	Moderate	Very Important	[List]Personal; Corporate;

Figure 5: Main fields required for initial valuation work

To access our data mapping and validation tools and upload portfolios to the NPL Markets platform as part of a free trial, please contact us on <https://www.nplmarkets.com/contact>.

## Disclaimer

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