Nonperforming exposures of Austrian banks – decomposing aggregate measures

Petra Bärnthaler,
Helmut Elsinger,
Pirmin Fessler,
Elisabeth Woschnagg[1]

Refereed by:
Petr Jakubik,
Charles University

We analyze bank-level loan data to better understand the development of aggregate nonperforming exposure measures of large Austrian banks. We employ quarterly data from Q3 2014 to Q4 2017 for all 18 commercial banks in Austria that apply the International Financial Reporting Standards as well as for all their foreign subsidiaries (this leads to slightly different results than provided in other publications). We focus on the distribution of nonperforming exposure measures across time and banks as well as across economic sectors and borrower types. We find large heterogeneity across banks, economic sectors and borrower types. If we take a closer look at what lies behind the aggregate NPL ratio of about 3.6%, we find that the 10th percentile of the NPL ratio is close to zero whereas the 90th percentile is still at about 8% in the fourth quarter of 2017. Higher NPL ratios across relevant economic sectors do not seem to be concentrated in larger sectors. With regard to borrower type, we find NPL ratios of 5.3% for nonfinancial corporations, 3.8% for households and 2.2% for other financial institutions. Subsidiaries record substantially higher NPL ratios than parent institutions, e.g. over 7% for exposures to nonfinancial corporations (under 5% at parent institutions) and about 5% for households (3% at parent institutions). This points toward higher financial vulnerability among nonfinancial corporations as well as indebted households in CESEE, the region mainly responsible for nonperforming loans in the portfolios of Austrian banks' subsidiaries.

JEL classification: E44, G21
Keywords: nonperforming loans, financial stability, banks, exposure

The financial crisis has left many banks with rather high levels of nonperforming loans (NPLs). At their peak, NPLs accumulated to over a trillion euro in the European Union. Banks displaying high levels of NPLs are hampered regarding their profitability and growth, because NPLs tie up more of those banks' financial resources (mostly capital), which are thus not available for new loan origination. This can further slow down recovery from a financial crisis or even produce a credit crunch on an aggregate level.

However, in recent years NPL ratios have fallen significantly in Europe. At the same time, significant differences between different banks as well as structural differences between European countries can be observed. NPLs in the consolidated portfolios of Austrian banks have fallen below the European average and display an above-average provisioning coverage, with NPLs concentrated in Austrian banks' subsidiaries in Central, Eastern and Southeastern Europe (CESEE). This holds true both for the samples observed by the European Banking Authority (EBA) as well as for those observed by the European Central Bank (ECB): in numerical terms, as of Q4 2017 the ECB – focusing on 111 significant institutions (SIs) in the euro area – reports an NPL ratio of 3.75% for Austrian SIs (this is below the euro area average of 4.92%)[2]. At the same time, the EBA – focusing on 190 significant as well as less significant institutions in the European Union – finds an NPL ratio of 3.7% for Austrian banks with a provisioning coverage (based on nonperforming

[1] *Oesterreichische Nationalbank, Supervision Policy, Regulation and Strategy Division, petra.baernthaler@oenb.at and elisabeth.woschnagg@oenb.at; Foreign Research Division, pirmin.fessler@oenb.at; Economic Studies Division, helmut.elsinger@oenb.at. Opinions expressed by the authors of studies do not necessarily reflect the official viewpoint of the Oesterreichische Nationalbank (OeNB) or of the Eurosystem. We want to thank the following persons for helpful discussions and providing data: Thomas Schin, Robert Bauer and Andreas Greiner (all OeNB).*

[2] *ECB Supervisory Banking Statistics. Fourth quarter 2017 (ECB, 2018a, p. 85). 111 SIs included in the sample.*

loans and advances) of 52.7%. European averages are 4.0% for NPL ratios and 44.5% for provisioning coverage[3].

While it is well known that the nonperforming exposures (NPE) ratio and the extent to which it is being reduced differ substantially across countries and banks, there is little evidence that shows what the decrease in NPLs looks like on more granular levels. In order to identify some risky pockets for Austrian banks, we argue that it is necessary to systematically decompose aggregate exposure statistics and analyze potential heterogeneity that may be obscured by them. To do so, we employ FINREP reporting data for Austrian banks to deconstruct different aggregate NPL measures and analyze their components on a more granular level. In addition to analyzing heterogeneity across banks, we also investigate NPE measures by borrower type (e.g. households, businesses, etc.) as well as by industrial sector (e.g. construction, trade, health, etc.). Furthermore, we analyze the role of subsidiaries in the aggregate NPL statistics of Austrian banks. This allows us to understand the transmission channels between macroeconomic risk drivers in the real economy and Austrian financial institutions. Identifying possible sources of credit risk, such as economic sectors, is moreover a valuable supplementary tool for ongoing supervisory work.

This article is structured as follows: Section 1 introduces the data and provides definitions of the measures we analyze. Section 2 deals with the heterogeneity across banks that may be obscured by aggregate NPL figures. Section 3 provides information on NPLs across borrower types and economic sectors. In section 4, we contrast the Austrian parent banks with their subsidiaries mostly located in CESEE countries. Section 5 addresses European initiatives to tackle NPLs, while section 6 delivers a short summary and policy conclusions.

1 Data and definitions

In this section, we describe the data we use, the definitions of nonperformance as well as aggregate measures and measures of dispersion around NPLs.

1.1 Financial reporting data

We use data from the financial reporting framework FINREP, which is a standardized reporting scheme originally introduced by the European Banking Authority (EBA) or, more accurately, its predecessor, the Committee of European Banking Supervisors (CEBS). The sample we use comprises 18 Austrian banks[4] that deliver quarterly reporting data on the highest level of consolidation based on International Financial Reporting Standards (IFRS). The sample covers data from the third quarter of 2014 to the fourth quarter of 2017 and roughly 80% of all loans and advances issued by Austrian banks.

[3] *EBA Risk Dashboard – data as of Q4 2017 (EBA, 2018a, p. 30).*

[4] *The sample includes the following banks: Erste Group Bank AG, Raiffeisen Bank International AG, UniCredit Bank Austria AG, BAWAG P.S.K. Bank für Arbeit und Wirtschaft und Österreichische Postsparkasse Aktiengesellschaft, Raiffeisenlandesbank Oberösterreich Aktiengesellschaft, Österreichische Volksbanken-Aktiengesellschaft, RAIFFEISEN-HOLDING NIEDERÖSTERREICH-WIEN registrierte Genossenschaft mit beschränkter Haftung, Oberbank AG, Sberbank Europe AG, HYPO NOE Gruppe Bank AG, Hypo Vorarlberg Bank AG, Raiffeisen-Landesbank Steiermark AG, Bank für Tirol und Vorarlberg Aktiengesellschaft, Oberösterreichische Landesbank Aktiengesellschaft, BKS Bank AG, Hypo Tirol Bank AG, Addiko Bank AG, and HYPO-BANK BURGENLAND Aktiengesellschaft.*

1.2 Definitions of aggregate measures

The most common measure used for nonperforming credits is the notion of nonperforming loans. Although in practice (as well as in this article) the term "NPLs" is often used as a synonym for nonperforming exposures (NPEs), the two concepts differ. In line with the EBA's definition, NPLs include nonperforming loans and advances, while NPEs include debt securities in addition to loans and advances. The term "nonperforming assets" is frequently used to also include foreclosed assets. Moreover, off-balance-sheet items are not included in either the NPL ratio or the NPE ratio. Box 1 lists the exact criteria for qualifying outstanding amounts as nonperforming (independent of the types of credit included), defines all of the nonperforming credit measures we use, and explains their meaning.

Box 1

Qualification criteria for nonperformance

Nonperforming: loans, advances, debt securities or other off-balance-sheet debt are called "nonperforming" if either (1) the exposures are more than 90 days past due (DPD) or (2) the debtor is assessed as unlikely to pay (UTP) the credit obligations in full without realizing collateral, regardless of the existence of any past-due amount or the number of days past due.[1]

Measures relating to nonperformance

- ***NPL ratio:*** *The NPL ratio is defined as the sum of nonperforming loans and advances divided by total gross loans and advances.*[2]
- ***NPE ratio:*** *The NPE ratio is defined as the sum of outstanding nonperforming loans, advances and debt securities divided by all gross carrying amounts of loans, advances and debt securities.*
- ***Coverage ratio (provisions as a percentage of NPEs):*** *The coverage ratio is defined as the accumulated impairment and accumulated changes in fair value due to credit risk and provisions on nonperforming exposures divided by the sum of outstanding nonperforming loans, advances and debt securities.*[3]
- ***Collateralization ratio:*** *The collateralization ratio indicates collateral and financial guarantees received on nonperforming loans or exposures.*

[1] *See EBA Implementing Technical Standards on supervisory reporting on forbearance and nonperforming exposures (EBA, 2013). Note that (2) is assessed by banks on the basis of the EBA's Guidelines on the application of the definition of default (EBA, 2017) and leaves some room for discretion. Note also that in practice there are also secondary elements which have an impact on the volume of nonperforming loans such as the rule that once 20% of the exposure of a bank to a certain borrower is over 90 days past due all the exposure to this borrower has to be treated as nonperforming ("pulling effect"), as provided by the EBA (2013).*

[2] *Based on the FINREP template valid as of December 31, 2017, the following data points are used to compute the NPL ratio: Template F18.00, {row 70; column 60 + row 250, column 60} divided by Template F18.00, {row 70; column 10 + row 250, column 10}.*

[3] *Based on the FINREP template valid as of December 31, 2017, the following data points are used to compute the NPE ratio: Template F18.00, {row 330, column 60} divided by Template F18.00, {row 330, column 10}. The definitions can also be found in the statistical annex of the EBA Risk Dashboard (https://www.eba.europa.eu/documents/10180/2175405/EBA+Dashboard+-+Q4+2017.pdf/d429ed31-65ba-498b-9115-d0e4639112ac).*

As we have already introduced our data and defined the term "nonperforming loan," we will now take a look at what is typically presented as aggregate NPL statistics. Table 1 shows nonperforming exposures and nonperforming loans and advances and places these data in context with the total outstanding volume and the aggregate NPL ratio for our sample. Table 1 clearly shows the decrease in NPE and NPL ratios at the aggregate level. At the end of our sample period, both ratios

are less than half their amount at the beginning. One can also clearly see a downward shift in outstanding exposure in 2016. The disproportionate decrease in outstanding exposure and NPL ratios in 2016 is due to UniCredit Bank Austria's carve-out of Central and Eastern European subsidiaries into the Italian parent entity. As of year-end 2016, UniCredit Bank Austria subgroup's balance sheet (according to FINREP/IFRS) excluded the CESEE business for the first time.

The FINREP templates valid during the observation period do not permit a detailed analysis of the reasons why the NPL ratio rose or fell. New releases of the reporting templates will allow a more precise breakdown of inflows and outflows.

Table 1

Aggregate measures of nonperforming exposure

	Exposure			Loans and advances		
	Outstanding	Nonperforming	NPE ratio	Outstanding	Nonperforming	NPL ratio
	EUR billion		*%*	*EUR billion*		*%*
Q3 2014	723.9	47.4	6.6	596.5	47.1	7.9
Q4 2014	725.2	46.6	6.4	592.5	46.1	7.8
Q1 2015	742.1	47.5	6.4	608.2	47.0	7.7
Q2 2015	728.8	45.2	6.2	596.9	44.8	7.5
Q3 2015	719.9	43.4	6.0	591.5	42.9	7.3
Q4 2015	720.3	40.3	5.6	592.9	39.9	6.7
Q1 2016	730.9	38.9	5.3	603.0	38.6	6.4
Q2 2016	605.7	29.3	4.8	491.2	28.9	5.9
Q3 2016	596.6	27.7	4.6	484.6	27.4	5.7
Q4 2016	614.2	24.9	4.0	500.2	24.7	4.9
Q1 2017	654.2	24.3	3.7	541.0	24.1	4.5
Q2 2017	655.4	22.8	3.5	544.6	22.7	4.2
Q3 2017	659.6	21.4	3.2	551.7	21.3	3.9
Q4 2017	660.2	20.1	3.0	551.6	20.0	3.6

Source: OeNB (supervisory data of 18 IFRS banks).

1.3 Beyond the aggregate – dispersion measures

Note that the (aggregate) NPL ratio can be viewed from two perspectives. It is not only the simple mean but also the weighted mean of bank-level NPL ratios, where the weights represent bank-level exposure as a share of aggregate exposure. The aggregate ratio and the weighted mean describe the same statistical object (measured in different ways). However, there are many other interesting statistical objects we can describe using the bank-level exposure information provided by FINREP. We use the measures defined and explained in box 2.

2 Heterogeneity across banks

Chart 1 shows the distribution of NPL ratios across time and banks. The weighted mean corresponds to the aggregate statistics usually analyzed in standard reports on NPLs like the data presented in table 1. The simple mean as well as the median are rather close to this weighted mean. This points to the facts that (1) banks with larger exposures do not seem to be different from those with smaller exposures and (2) the distribution of NPL ratios around the mean is rather symmetric. The

Box 2

Statistical objects beyond the aggregate and weighted mean

Most of the statistics used in this field are simple ratios, where the sum of a subset is divided by the sum of the full set. Depending on the different definitions (see box 1), different items are included in these sets. Based on this general description we can define:

- ***Aggregate / weighted mean:*** $NPE_{ratio} := \frac{\sum_i npe_i}{\sum_i e_i} = \sum_i \frac{npe_i}{e_i} \cdot w_i$, *where* $w_i = \frac{e_i}{\sum_i e_i}$. *The aggregate and weighted mean ratios reflect the overall nonperforming exposures of the sector. However, potentially large nonperforming exposures of banks with a small share in total exposures have an accordingly small share in the measure. In this way it delivers an exposure volume perspective.*
- ***Mean:*** $MNPE_{ratio} := \frac{1}{I}\sum_i \frac{npe_i}{e_i}$, *where I is the number of banks. The simple (as opposed to weighted) mean of bank-level ratios treats every bank with equal weight. In this way it delivers a bank-level perspective.*
- ***Median:*** *The median of bank-level ratios defines the point in the distribution where an equal number of banks have lower and higher ratios.*
- ***P10 and P90:*** *Analogously to the median, which refers to the 50th percentile of a distribution, one can calculate the 10th and 90th percentiles as points where 90% of observations – in our case ratios – lie above (P10) or below (P90).*

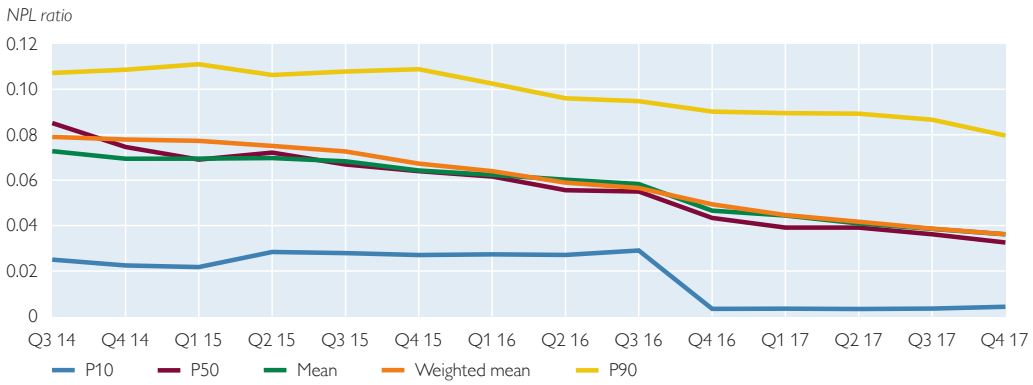
In our case, only 1 or 2 banks (depending on the quarter) lie below the 10th or above the 90th percentile. Thus the above statistics taken together provide us with an intuitive way to describe the heterogeneity of banks' NPL ratios, which may be obscured by the aggregate statistics. The above statistics also inform us about differences between larger banks with more exposure and smaller banks with less exposure (weighted versus simple mean) and the skewness of the underlying distribution (mean versus median).

10th and 90th percentiles of NPL ratios show a substantial spread of NPL ratios across the relevant Austrian banks.

Chart 2 shows an analogous graph for NPE ratios. In this case the weighted mean lies clearly below the simple mean. This may point toward pockets of risk. Banks with smaller outstanding exposures show higher shares of NPEs than larger ones. While the weighted mean is almost exactly the same as the simple mean in the case of NPL ratios, the simple mean is almost one percentage point higher than the weighted mean in the case of NPE ratios.

Chart 1

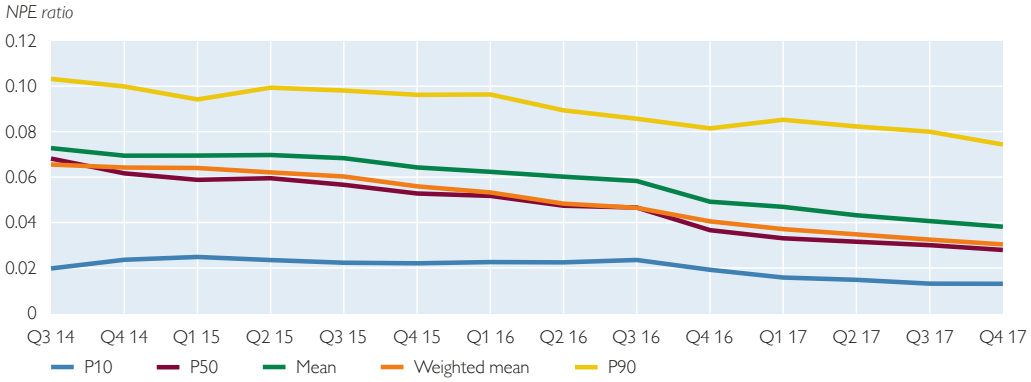
Distribution of NPL ratios across banks



Source: OeNB (supervisory data of 18 IFRS banks).

Chart 2

Distribution of NPE ratios across banks



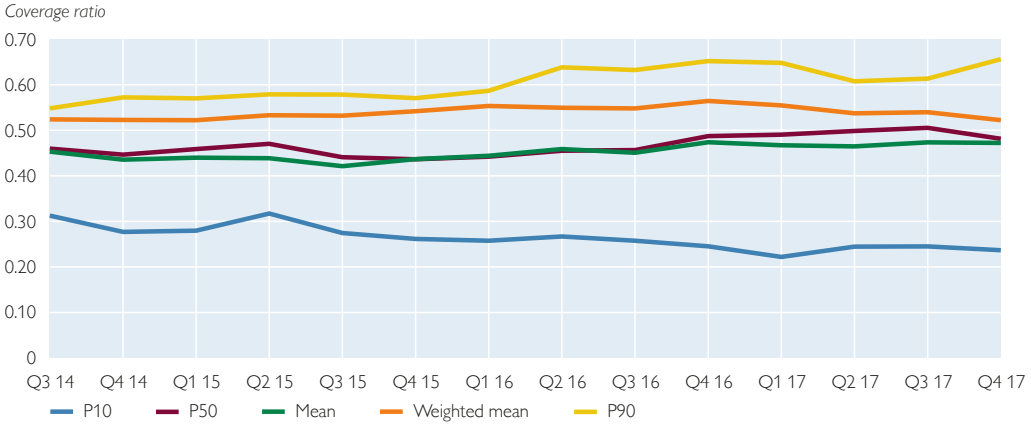
Source: OeNB (supervisory data of 18 IFRS banks).

Chart 3 shows the distribution of coverage ratios across banks, calculated on the basis of NPEs. Most banks show coverage ratios between about 25% and 65% (see P10 and P90 in Q4 2017). The weighted mean lies above 50% and both median and simple mean are close to 50%. The distribution of coverage ratios is therefore less symmetric than the distribution of NPL and NPE ratios. Some banks have comparably low coverage ratios while most banks and especially those with larger exposures (as the weighted mean is above the simple mean) show relatively large coverage ratios.

Chart 4 shows the total value of NPLs in EUR billion as well as the remaining value once provisioning coverage and collateral coverage are fully deducted (assuming that the provisions are attributed to the noncollateralized part of the exposure). This measure can be interpreted as a momentary lower bound of future losses under the assumption that the provisions booked refer to the uncollateralized part of the NPL and the collateral can be sold at its current value. Note that deductions were made at the individual bank level and were bounded at zero before aggregating the measure.

Chart 3

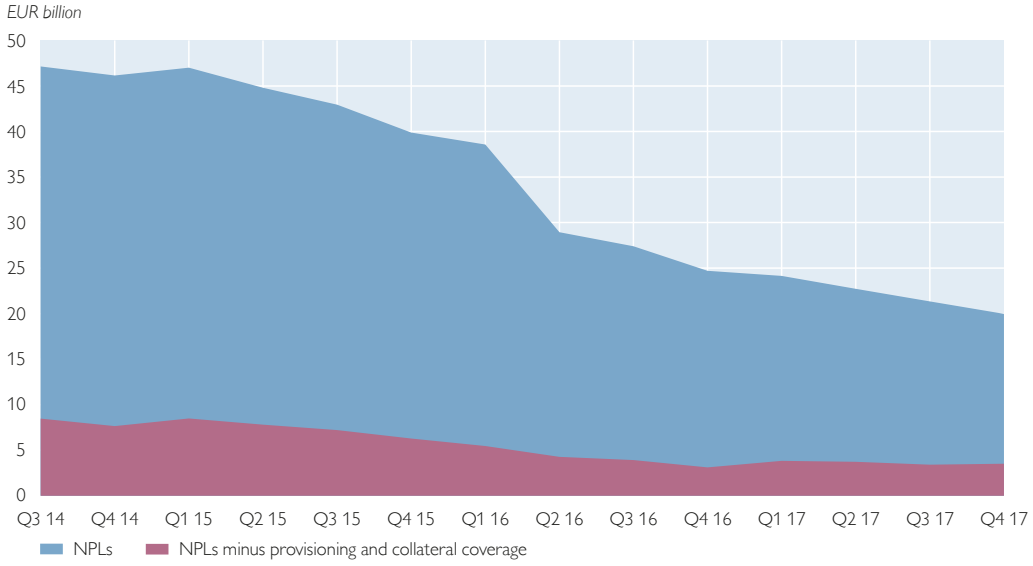
Distribution of coverage ratios across banks



Source: OeNB (supervisory data of 18 IFRS banks).

Chart 4

Nonperforming loans, provisioning and collateral coverage



Source: OeNB (supervisory data of 18 IFRS banks).

3 Borrower types, loan types and economic sectors

In this section we investigate the data at the level of economic sector and borrower type. This helps to better understand what is actually driving aggregate statistics. In subsection 3.1 we ask about borrower types. Which type of borrower is struggling the most to repay debt: households, other financial companies (besides banks) or nonfinancial corporations? Does this change over time? Do collateralized or consumer loans show higher NPL ratios? Are small companies the main contributor to high NPL ratios? At an even more disaggregated level, section 3.2 looks at nonfinancial corporations in specific economic sectors. Here we aim to identify whether companies in certain economic sectors bear particular responsibility for increasing or decreasing NPE measures (with nonperforming exposure exceeding their share of overall exposure).

3.1 Borrower types

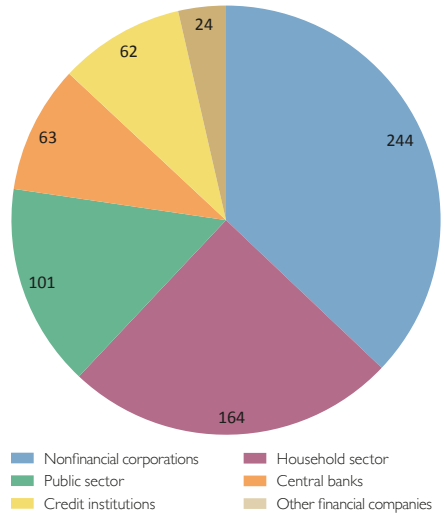
Chart 5 shows all outstanding exposures by borrower type for the fourth quarter of 2017. With about EUR 244 billion, nonfinancial corporations are by far the borrower type that accounts for the largest outstanding exposure. They are followed by households with EUR 164 billion and the public sector (which also includes local governments as well as certain funds and international organizations) with about EUR 101 billion. Central banks and credit institutes have liabilities of about EUR 63 billion and EUR 62 billion each, while other financial institutions such as insurance companies borrowed about EUR 24 billion.

As can be seen in chart 6, nonfinancial corporations also show the largest NPE ratios. About 5.3% of their debt is considered to be nonperforming. The NPE ratio is about 3.8% for households and 2.2% for other financial companies. Credit institutions and the public sector account for hardly any NPEs, and for central banks, the NPE ratio is naturally at zero.

Chart 5

Outstanding exposures broken down by borrower type, Q4 17

EUR billion

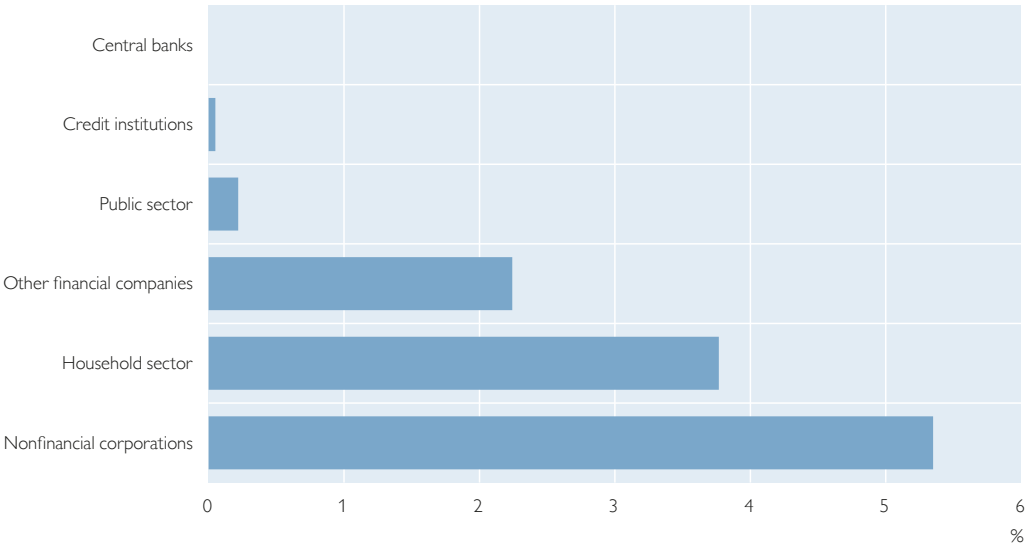


Source: OeNB (supervisory data of 18 IFRS banks).

Chart 7 presents similar more disaggregated information for nonfinancial corporations. Note that both categories, collateralized debt (formerly called commercial real estate)[5] as well as debt owed by small and medium-sized enterprises (SMEs), are subsets of overall debt owed by nonfinancial corporations.[6] Besides the unusual shift in exposure levels evident in the 2016 data, which is again attributable to the carve-out mentioned above, one can see that overall debt has been rising slightly since Q3 2016, while the share of nonperforming debt has declined sharply. The strongest decrease can be observed for collateralized debt, which started off at almost 16% in 2014 and came down to about 6% in Q4 2017. In line with European data, the NPL ratios for collateralized debt and SME debt are higher than the NPL ratios for the overall sector over the entire time period. This points toward rather low nonperforming exposure shares among larger companies using uncollateralized debt.

Chart 6

NPE ratios broken down by borrower type, Q4 17



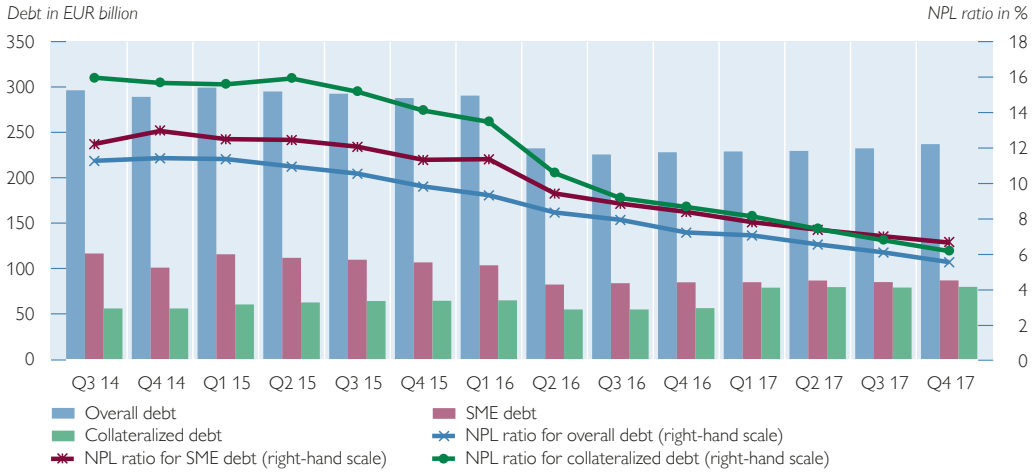
Source: OeNB (supervisory data of 18 IFRS banks).

[5] *Loans collateralized by residential immovable property.*

[6] *They do not add up to the sector's total outstanding debt but may overlap.*

Chart 7

Outstanding debt owed by nonfinancial corporations and NPL ratios broken down by debt type

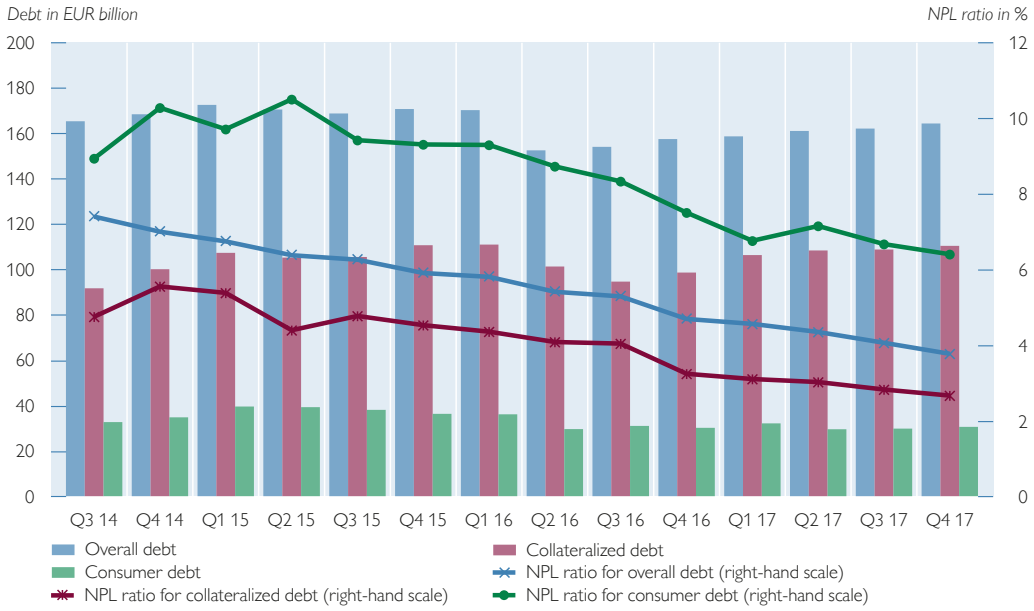


Source: OeNB (supervisory data of 18 IFRS banks).

Chart 8 takes a closer look at the household sector. It shows the total level of outstanding household debt as well as levels of collateralized and consumer debt[7]. From Q3 2014 to Q4 2017, lending to households was rather stable. Note that the shift in exposure level recorded between Q1 2016 and Q2 2016 is again due to a

Chart 8

Outstanding debt owed by the household sector and NPL ratios broken down by debt type



Source: OeNB (supervisory data of 18 IFRS banks).

[7] *Note, however, that while they are both subsets of overall debt, collateralized and consumer debt do not add up to the total debt owed by the household sector but may overlap.*

change in ownership, as explained above. The rise since 2016 is mainly due to collateralized debt, while consumer debt has not been rising. While the NPL ratios are generally higher for consumer debt, they likewise fell from more than 10% in 2015 to slightly above 6% at the end of 2017. NPE ratios for collateralized debt also decreased from over 5% in 2014 to below 3% in 2017.

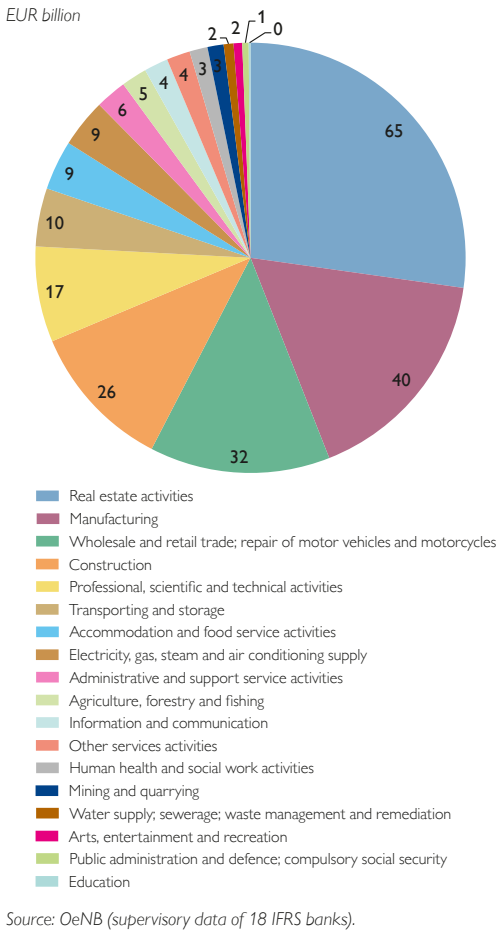
3.2 Economic sectors

Given the available data, we are able to decompose outstanding loans and advances by economic sector. Chart 9 shows Austrian banks' loans and advances toward 18 NACE sectors, i.e. A to S, excluding sector K (financial and insurance activities). Out of the total of about EUR 239 billon, the highest outstanding amounts are found for real estate activities (sector L) with EUR 65 billion, manufacturing (sector C) with EUR 40 billion, wholesale and retail trade (sector G) with EUR 32 billion, construction (sector F) with EUR 26 billion and professional, scientific and technical activities (sector M) with EUR 17 billion.

As can be seen in chart 10, out of the sectors that account for the largest loans and advances, only the wholesale and retail trade sector (sector G) is among those with a rather large share of NPLs. Over 8% of this sector's debt qualifies as nonperforming, and only two other sectors, i.e. accommodation and food service activities (sector I) and other services activities (sector S), show higher shares of nonperforming debt. The sector "other services activities," which shows the highest NPL ratio, accounts for an exposure of only EUR 4 billion. This economic sector includes activities of (political/religious) membership organizations, repair of computers and household goods as well as other personal service activities (washing, hairdressing, funerals).

Chart 9

Outstanding loans and advances broken down by economic sector, Q4 17



Source: OeNB (supervisory data of 18 IFRS banks).

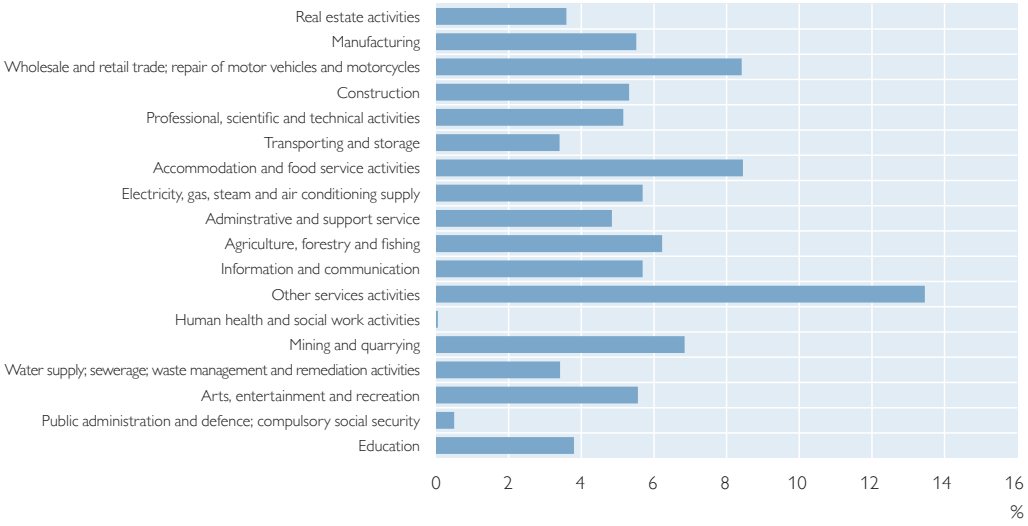
3.3 "Days past due" versus "unlikely to pay"

In this subsection, we look at the criteria based on which banks qualify exposures as nonperforming. As described in box 1, there are two options. Either debt is 90 days past due (DPD, a quantitative criterion) or the bank qualifies it as unlikely to be repaid (UTP, a qualitative criterion) even though it does not show any amounts over 90 days past due. Table 2 shows which share of exposures is classified as nonperforming based on the UTP criterion; the remaining NPL shares result from classi-

Chart 10

NPL ratios broken down by economic sector, Q4 17

(sorted in descending order according to debt owed by the respective sectors)



Source: OeNB (supervisory data of 18 IFRS banks).

fication as DPD. As the weighted mean shows, about half of the outstanding exposure (48.6%) is nonperforming because it is qualified as unlikely to be paid back. In general, the extent to which banks use UTP as a nonperformance criterion varies strongly. As the UTP criterion relies more on qualitative criteria, it is triggered sooner when implemented in a stricter manner. While there are banks where less than one-third of NPE is classified as UTP, there are other banks where UTP debt makes up over 90% of NPE. While UTP as a nonperformance criterion is broadly implemented in the corporate and SME segments, household exposures are usually less often classified as nonperforming based on UTP. Our data confirm this observation. UTP debt accounts for about 52% of total nonperforming debt owed by nonfinancial corporations. The fact that the simple mean lies at 58.2% points to a higher rate of UTP debt for nonfinancial corporations with lower outstanding debt, which might likely be smaller firms. In the case of households, UTP debt still amounts to 38% of all nonperforming debt, with even greater heterogeneity across banks. The household category also covers bullet loans which require repayments and interest payments only at the end of the loan term and where UTP is the only criterion that can trigger default. Cross-European comparisons show an above-average share of UTP nonperforming debt in Austria, which might indicate a more conservative approach in classifying debt as nonperforming compared with other countries.

4 Parents and subsidiaries

In this section, we use unconsolidated bank-level FINREP data from the subsidiaries of Austrian banks to tease out the respective contributions of Austrian parent banks and their subsidiaries to NPL measures. This is especially helpful in understanding differences in the vulnerabilities of loans granted by Austrian banks versus loans granted by foreign (mostly CESEE) banks. It is important to note that in this

Table 2

Exposures classified as nonperforming based on the "unlikely to pay" criterion

	Overall	Households	Nonfinancial corporations
	Share in %		
P10	32.1	15.1	31.7
P50	49.8	39.5	54.9
Mean	53.6	41.0	58.2
Weighted mean	48.6	37.8	52.0
P90	91.0	96.5	90.2

Source: OeNB (supervisory data of 18 IFRS banks).

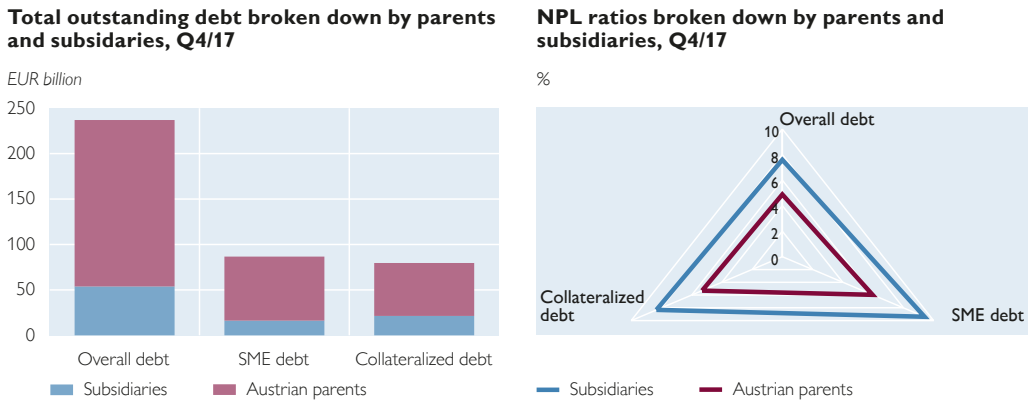
section, "country" refers to the country of origination of the loan and not to the location of the borrower. Thus, it is possible that potentially significant direct cross-border lending has been ignored.

Chart 11 depicts outstanding debt (left-hand panel) and corresponding NPL ratios (right-hand panel) for Austrian parent banks and their foreign subsidiaries. The chart shows that a large share of loans granted to nonfinancial corporations are issued by Austrian parent banks, which holds true both for loans to SMEs and for collateralized loans (as mentioned above, these two categories can overlap and do not sum up to the total exposure to nonfinancial corporations). At the same time, NPL ratios are markedly higher for foreign subsidiaries, regardless of the subcategory observed.

Chart 12 shows that outstanding household loans in general and collateralized household loans in particular were granted predominantly by Austrian parent banks (mostly to Austrian households), while the larger share of consumer loans was granted by foreign subsidiaries. The right panel shows that, in the categories of collateralized household debt and overall household debt, NPL ratios are markedly higher for subsidiaries than for the Austrian parent banks; this drives up the consolidated NPL ratios of Austrian banks shown in the previous sections. It should be noted that collateralized household debt overlaps to a large extent with

Chart 11

Subsidiary vs. parent bank exposures: nonfinancial corporations

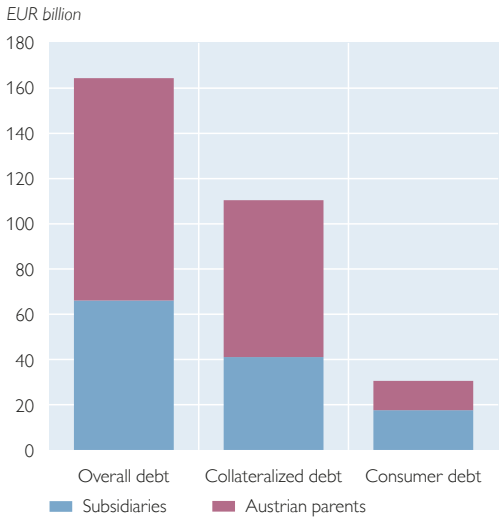


Source: OeNB (supervisory data of IFRS banks).

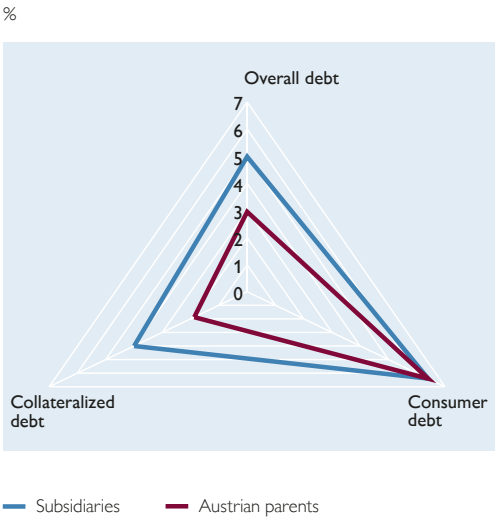
Chart 12

Subsidiary vs. parent bank exposures: household sector

Total outstanding debt broken down by parents and subsidaries, Q4/17



NPL ratios broken down by parents and subsidiaries, Q4/17



Source: OeNB (supervisory data of IFRS banks).

the residential real estate segment, although the classifications are not identical. NPL ratios for consumer loans are similarly high at over 6%.

The reporting data were also used to perform a breakdown of outstanding debt and NPL ratios according to the home country of subsidiaries. However, this breakdown is not depicted here because it would allow inferences to be drawn for individual banks. Summarizing qualitatively, the countries that account for the largest exposures are the Czech Republic, Slovakia and Romania, where NPL ratios are rather low to moderate. Exposures in Croatia, Hungary and Poland are also non-negligible and show somewhat higher NPL ratios.

5 European initiatives to tackle NPLs

Especially since NPLs peaked in 2014, considerable effort has been made to reduce NPL stocks and to prevent a new buildup of NPLs. While banking supervision and banking regulation can make a significant contribution in this regard, other players at both the national and European level have key legal competencies that can aid efforts to reduce NPLs, e.g. through legislation on insolvency proceedings. To this end, various European initiatives have been launched to reduce the volume of NPLs on bank balance sheets.

Important milestones include the following: In 2014, the European Banking Authority (EBA) established a definition of NPLs and NPEs for reporting purposes. This was followed by a comprehensive assessment (including an asset quality review) by the Single Supervisory Mechanism (SSM), which took up operations in late 2014. In September 2016, the SSM (ECB, 2016) published a "Stocktake of national supervisory practices and legal frameworks related to NPLs," followed by the "Guidance to banks on non-performing loans" in March 2017 (ECB, 2017a), which addresses the qualitative management of NPLs in SIs. The guidance was supplemented by the "Addendum to the ECB Guidance to banks on nonperforming

loans: supervisory expectations for prudential provisioning of nonperforming exposures" in March 2018 (ECB, 2018b), which relates to exposures that turn nonperforming from April 1, 2018. In parallel, the European Commission in March 2018 published an analogous proposal regarding the provisioning of loans issued after March 14, 2018 (European Commission, 2018). The proposed regulation also intends to place the definition of nonperforming loans in a level 1 text.

In order to put all of these European initiatives into a unified context, in July 2017, the European Council (2017) published conclusions on the "Action plan to tackle nonperforming loans in Europe." Several of the tasks mandated by the Council are currently being carried out, such as the finalization of the EBA's draft "Guidelines on management of non-performing and forborne exposures" and the development of EBA guidelines on banks' loan origination, monitoring and internal governance. Complementing these mainly regulatory initiatives with supervisory activities, the SSM engages with banks in the context of regular supervisory interaction and places a particular focus on bank strategies to manage and reduce NPL stocks. Such strategies cover a broad range of NPL reduction measures such as sales, securitizations and cures, provisioning, write-offs, etc. Finally, banks' actual performance in reducing their NPL stocks is measured against initial targets on an on-going basis.

6 Concluding remarks

The share of nonperforming exposures in banks' total exposures can be affected by many factors. It is important to identify these factors and to understand what drives changes in the aggregate shares of nonperforming exposures. Disaggregating the totals makes it possible to more clearly identify potential risk factors and to differentiate between systemic and idiosyncratic risk drivers. Moreover, it helps us to understand the riskiness of certain business models and to identify more lenient lending practices among banks.

This paper shows that since Q3 2014 the volume as well as the ratio of nonperforming loans and exposures has declined by more than half to a volume of around EUR 20 billion. Consequently, Austrian banks' NPL ratios have fallen below the European average. At the same time, coverage ratios have remained stable at a comparably high level and are above the European average. Out of this EUR 20 billion, loans totaling at least EUR 5 billion are neither collateralized nor provisioned.

As of Q4 2017 the largest exposures by borrower type are toward nonfinancial corporations (EUR 244 billion) and households (EUR 164 billion).

Since Q3 2017 exposures to both nonfinancial corporations as well as households have decreased, while the associated NPL ratios have fallen by roughly half to 5.3% and 3.8%, respectively. If we take a closer look at debt owed by nonfinancial corporations, the NPL ratios for collateralized debt (formerly called commercial real estate) and SME debt are higher than the NPL ratios for the overall debt over the entire period. In the area of household debt, NPL ratios for consumer loans consistently declined but remained higher than the NPL ratios for collateralized household loans.

Austrian parent banks account for the major part of the outstanding amounts (except in the case of consumer loans), while NPL ratios are driven mainly by their subsidiaries' exposures.

Disaggregation by economic sector shows that the only sector with both elevated NPL ratios and exposure levels is "wholesale and retail trade." The nonperformance criterion "unlikely to pay" is cited more frequently for nonfinancial corporations, while the main criterion for classifying household debt as nonperforming is "days past due" (90+ days).

In this paper, we illustrated that it is worthwhile to go beyond the aggregate figures usually used to analyze nonperforming exposures and instead explore more disaggregated perspectives and distributions across banks. We find that there is no evidence for extraordinary risk concentrations or immediate threats to financial stability originating from the loan breakdowns that we observed.

References

Bärnthaler, P., A. Punk and E. von Pföstl. 2016. Der Non Performing Exposures Begriff – EU und Basel. In: Österreichisches Bankarchiv 9/16. 659–662.

Barisitz, S. 2013. Nonperforming Loans in CESEE – An Even Deeper Definitional Comparison. In: Focus on European Economic Integration Q3/13. Vienna: OeNB. 67–84.

EBA. 2013. EBA Implementing Technical Standards on supervisory reporting on forbearance and non-performing exposures under article 99(4) of Regulation (EU) No 575/2013.

EBA. 2017. Guidelines on the application of the definition of default under Article 178 of Regulation (EU) No 575/2013.

EBA. 2018a. Risk Dashboard – data as of Q4 2017. https://www.eba.europa.eu/risk-analysis-and-data/risk-dashboard

EBA. 2018b. Consultation Paper on Draft Guidelines on management of non-performing and forborne exposures. https://www.eba.europa.eu/regulation-and-policy/credit-risk/guidelines-on-management-of-non-performing-and-forborne-exposures

ECB. 2016. Stocktake of national supervisory practices and legal frameworks related to NPLs. https://www.bankingsupervision.europa.eu/legalframework/publiccons/pdf/npl/stock_taking.en.pdf

ECB. 2017a. Guidance to banks on non-performing loans. https://www.bankingsupervision.europa.eu/ecb/pub/pdf/guidance_on_npl.en.pdf

ECB. 2017b. Stocktake of national supervisory practices and legal frameworks related to NPLs. https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.stock_taking2017.en.pdf

ECB. 2018a. Supervisory Banking Statistics. Fourth quarter 2017. https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.supervisorybankingstatistics_fourth_quarter_2017_201804.en.pdf

ECB. 2018b. Addendum to the ECB Guidance to banks on non-performing loans: supervisory expectations for prudential provisioning of non-performing exposures. https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.npl_addendum_201803.en.pdf

European Commission. 2018. Proposal for a Regulation of the European Parliament and of the Council on amending Regulation (EU) No 575/2013 as regards minimum loss coverage for non-performing exposures. https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2017-5467253_en

European Council. 2017. Council conclusions on Action plan to tackle non-performing loans in Europe. http://www.consilium.europa.eu/en/press/press-releases/2017/07/11/conclusions-non-performing-loans/