

RISK ASSESSMENT OF THE EUROPEAN BANKING SYSTEM

DECEMBER 2018

EBA

EUROPEAN
BANKING
AUTHORITY

print	ISBN 978-92-9245-492-0	ISSN 1977-9089	doi:10.2853/086271	DZ-AC-18-001-EN-C
epub	ISBN 978-92-9245-393-0	ISSN 1977-9097	doi:10.2853/34025	DZ-AC-18-001-EN-E
PDF	ISBN 978-92-9245-491-3	ISSN 1977-9097	doi:10.2853/906071	DZ-AC-18-001-EN-N
flip book	ISBN 978-92-9245-493-7	ISSN 1977-9097	doi:10.2853/21843	DZ-AC-18-101-EN-N

Luxembourg: Publications Office of the European Union, 2018

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Printed by the Publications Office in Luxembourg

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Abbreviations

AML	anti-money laundering	ICT	information and communication technology
APP	asset purchase programme	IFRS	International Financial Reporting Standard
AT1	additional tier 1	IMF	International Monetary Fund
BCI	Business Climate Indicator	IRB	internal ratings based
BIS	Bank for International Settlements	L1/L2/L3	level 1/2/3 assets or liabilities in the meaning of IFRS 13
bp	basis point	LCR	liquidity coverage ratio
CCP	central counterparty clearing house	LIBOR	London Interbank Offered Rate
CDS	credit default swap	LTRO	long-term refinancing operation
CET1	Common Equity Tier 1	MREL	minimum requirement for own funds and eligible liabilities
CRD	Capital Requirements Directive	NACE	Nomenclature des Activités Économiques dans la Communauté Européenne
CRE	commercial real estate	NFC	non-financial company/ corporate
CRR	Capital Requirements Regulation	NII	net interest income
EBA	European Banking Authority	NPL	non-performing loan
ECB	European Central Bank	OCI	other comprehensive income
ECL	expected credit loss	P&L	profit and loss
EDF	expected default frequency	PSD	Payments Services Directive
EEA	European Economic Area	PP	percentage point
EIB	European Investment Bank	RAQ	risk assessment questionnaire
EME	emerging market economy	RAR	risk assessment report
EMMI	European Money Markets Institute	RFR	risk-free rate
EONIA	euro overnight index average	RoE	return on equity
ESA	European Supervisory Authority	RWA	risk-weighted asset (corresponds to risk exposure amount (REA))
ESG	environmental, social and governance	SME	small and medium-sized enterprise
ESTER	euro short-term rate	SONIA	Sterling Overnight Index Average
EURIBOR	Euro Interbank Offered Rate	T2	Tier 2
FBL	forborne loan	TLAC	total loss-absorbing capacity
FINREP	financial supervisory reporting	TLTRO	targeted long-term refinancing operation
FinTech	financial technology	YoY	year on year
GDP	gross domestic product		
GDPR	General Data Protection Regulation		
IBOR	Interbank Offered Rate		

Country codes

AT	Austria	IE	Ireland
BE	Belgium	IT	Italy
BG	Bulgaria	LT	Lithuania
CY	Cyprus	LU	Luxembourg
CZ	Czech Republic	LV	Latvia
DE	Germany	MT	Malta
DK	Denmark	NL	Netherlands
EE	Estonia	PL	Poland
ES	Spain	PT	Portugal
FI	Finland	RO	Romania
FR	France	SE	Sweden
GB	United Kingdom	SI	Slovenia
GR	Greece	SK	Slovakia
HR	Croatia	US	United States
HU	Hungary		

Executive summary

The EU banking sector has continued to benefit from the positive macroeconomic developments in most European countries, which were also reflected in an increase in loans and advances in 2018. EU banks' total assets remained stable between June 2017 and June 2018, which is in contrast to a decreasing trend over the past years. Loans to non-financial corporates (NFCs) increased by 6%, mainly driven by exposures to small and medium-sized enterprises (SMEs, +8%) and commercial real estate (CRE, +9%). During the same period, loans and advances to households increased by 3%. However, the restart of lending was offset by the decline in debt securities, derivatives and equity instruments.

Since June 2017, transitional Common Equity Tier 1 (CET1) ratios have slightly increased, from 14.3% to 14.5%, despite rising risk-weighted assets (RWAs) during the last two quarters. The composition of capital keeps moving towards a greater reliance on retained earnings and other reserves, which together represent almost 70% of total common equity. Following a decline in previous quarters, RWAs have increased during the first two quarters this year, driven by credit and market risk. The increase in credit risk in the first half of 2018 reflects the growth in lending. The growth in market risk could be partially explained by increased volatility in financial markets during several periods this year.

Asset quality has further improved. The average non-performing loan (NPL) ratio of EU banks has decreased from 4.4% in June 2017 to 3.6% in June 2018. It is the lowest level since the NPL definition was harmonised across European countries in 2014, when the NPL ratio stood at 6.5%. NPL sales contributed significantly to these reductions. However, vulnerabilities from downside risks to economic growth, revival of protectionism and elevated political risk remain high, which might jeopardise banks' efforts to reduce NPLs.

Profitability has virtually not changed since last year with an average return on equity (RoE) of 7.2% as of June 2018. EU banks' net interest income (NII) has continued its declining trend in recent quarters (an almost 1% decrease since June 2017), despite growing lending volumes. This was driven by a decreasing net interest margin, due to repricing of new loans at lower interest rates and also in connection with increased competition within the sector and from financial technology (FinTech). At the same time, net fee and commission income has increased by almost 1%. EU banks' profitability has further benefited from decreasing impairments. Efficiency in the EU banking sector has not improved. Costs related to replacements as well as outages and failures of old legacy information and communication technology (ICT) systems, including costs related to IT migrations, and investments in new financial technology are further drags on profitability.

Customer deposits have increased since June 2017 by about 3%, whereas market-based funding has slightly decreased. In their market-based funding, banks partially compensate for decreasing volumes of unsecured instruments by increasing volumes of secured debt. These trends reflect several phases of elevated volatility in financial markets during the year. Replacing financing from central banks will be a key driver for banks' funding plans. Another driver is the issuance needs of instruments for meeting the minimum requirement for own funds and eligible liabilities (MREL). Both developments might become a concern for banks' funding, in particular if volatility in financial markets remains elevated.

Operational risks in EU banks are expected to increase. ICT-related risks are currently one of the main challenges for EU banks. At the same time, conduct and legal risks have been on the rise in 2018. This includes cases of banks' anti-money laundering (AML) failings this year.

Risks to and vulnerabilities of the global economy can potentially affect EU banks.

The uncertainty related to the UK's withdrawal from the EU (Brexit), political tensions in some European countries, the revival of protectionism among major economies and rising concerns about emerging market economies (EMEs) can undermine progress

in the banking sector and negatively affect financial stability. While European banks' exposures to EMEs have decreased since 2014, these exposures are still material for some banks. Financial market volatility and repricing of risk were also reflected in sovereign bond markets, in particular in Italy.



Introduction

This report describes the main developments and trends in the EU banking sector since the end of 2017 and provides the European Banking Authority's (EBA's) outlook on the main risks and vulnerabilities ⁽¹⁾. As in 2017, the December 2018 risk assessment report (RAR) is published along with the EU-wide 2018 transparency exercise.

The RAR is based on qualitative and quantitative information collected by the EBA. The report's data sources are the following:

- EU supervisory reporting,
- the EBA risk assessment questionnaire (RAQ), addressed to banks and market analysts,
- market data as well as microprudential qualitative information and supervisory college information.

The RAR builds on the supervisory reporting data submitted to the EBA on a quarterly basis by competent authorities for a sample of 187 banks from 25 European Economic Area (EEA) countries (150 banks at the highest EU level of consolidation). Based on total assets, this sample covers about 80% of the EU banking sector. The risk indicators are in general based on an unbalanced sample of banks, whereas charts related to the risk indicators' numerator and denominator trends are based on a balanced sample. The text and

charts in this report refer to weighted average ratios if not otherwise indicated ⁽²⁾.

The RAQ is conducted by the EBA on a semi-annual basis, with one questionnaire addressed to banks and another addressed to market analysts ⁽³⁾. Answers to the questionnaires were provided by 53 European banks (Annex I) and 15 market analysts in October 2018. The report also analyses information gathered by the EBA from informal discussions as part of the regular risk assessments and ongoing dialogue on risks and vulnerabilities of the EU banking sector. The cut-off date for the market data presented in the RAR was 31 October 2018, if not otherwise indicated.

The EBA is disclosing, in parallel with the RAR, bank-by-bank data as part of the 2018 EU-wide transparency exercise for two reference dates, December 2017 and June 2018. The transparency exercise is part of the EBA's ongoing efforts to foster transparency and market discipline in the EU internal market for financial services, and complements banks' own Pillar 3 disclosures, as set out in the EU's Capital Requirements Directive (CRD). The sample in the 2018 transparency exercise includes 130 banks at the highest EU level of consolidation, from 25 EEA countries ⁽⁴⁾. The EU-wide transparency exercise fully relies on supervisory reporting data.

⁽¹⁾ With this report, the EBA discharges its responsibility to monitor and assess market developments and provides information to other EU institutions and the general public, pursuant to Regulation (EU) No 1093/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Banking Authority), and amended by Regulation (EU) No 1022/2013 of the European Parliament and of the Council of 22 October 2013.

⁽²⁾ There might be slight differences between some of the risk indicators covered in the Q2 2018 version of the risk dashboard, published on 8 October 2018, and this report as a result of data resubmissions by banks. The EBA risk dashboard is available online (<https://www.eba.europa.eu/risk-analysis-and-data/risk-dashboard>). The annex to the risk dashboard also includes a description of the risk indicators covered in this report and their calculation, and further descriptions are available in the EBA's guide to risk indicators (<http://www.eba.europa.eu/risk-analysis-and-data/risk-indicators-guide>).

⁽³⁾ The results of the RAQ are also published separately, together with the EBA's risk dashboard, on a semi-annual basis.

⁽⁴⁾ A list of banks covered by supervisory reporting, by the transparency exercise and by the RAQ is included in Annex I.

1. Macroeconomic environment and market sentiment

In 2018, the EU economy continued to benefit from overall supportive funding conditions, despite an announced gradual withdrawal of monetary stimulus in most EU countries. Improving household balance sheets, coupled with the rebound in house pricing and positive developments in labour markets ⁽⁵⁾ reinforced private consumption and shifted inflation expectations upwards. Gross domestic product (GDP) expansion in the EU has mainly been supported by private consumption and investment ⁽⁶⁾. On the other hand, net exports and industrial production slowed down in several major advanced economies in Europe, as concerns about global trade have weighed on confidence and affected growth ⁽⁷⁾.

Nevertheless, risks for the EU economy and for financial stability are implied by political tension in European countries, expected increases in risk premia, rising protectionism globally and unfavourable economic developments in EMEs. Uncertainties about the process of the withdrawal of the UK from the EU (Brexit) add to risks that might affect growth prospects beyond 2018.

Despite some moderation following the strong growth in 2017, the latest economic indicators and survey results overall confirm an ongoing broad-based growth in EU economies. However, the European Commission's Business Climate Indicator (BCI) has declined as the year went on, followed by a decrease in the Consumer Confidence Indicator in the third quarter ⁽⁸⁾. Mirroring the weaker than expected activity in the first half of the year, in July the European Commission revised its outlook for both the euro area and EU GDP growth in 2018 to 2.1%, down by 20 basis points (bps) compared with its spring

forecast, but keeping the projections for 2019 unchanged at 2% ⁽⁹⁾. In addition, in October the International Monetary Fund (IMF) reduced its growth outlook for the EU ⁽¹⁰⁾.

Levels of indebtedness in the EU are still elevated (Figure 1), although mild improvements have been noticed in the last few years. Private sector debt stood at 140.6% of GDP at the end of 2017 and government gross debt in the EU has decreased over the last 4 years, to 81.6% of GDP at the end of 2017 ⁽¹¹⁾.

Inflation in the EU edged up in 2018, with the Harmonised Index of Consumer Prices (HICP) reaching 2.2% at the end of September 2018, up from 1.8% a year earlier. The highest contribution to the annual inflation rate came, as in the previous year, from energy. The core inflation reached 1.1% this September, displaying an upwards sloping path with stable inflation expectations.

Monetary policy divergence between the EU and the US has widened further, with US Federal Reserve hiking its policy rate to 2.25% this September in the environment of a fading impulse from quantitative easing and rising inflationary pressures. On the other hand, the European Central Bank (ECB) and several other national central banks in Europe have maintained their accommodative monetary policy stance and low interest rates throughout 2018.

Low interest rates as well as more favourable economic growth prospects have contributed to increasing house prices. House prices increased by 4.3% in the EU in June 2018 compared with June 2017 ⁽¹²⁾. This marks an increase of 11% since 2010 and reflects con-

⁽⁵⁾ The EU unemployment rate in Q3 2018 stood at 6.8%, the lowest level since the end of 2008.

⁽⁴⁾ Eurostat Database, Quarterly National Accounts (<https://ec.europa.eu/eurostat/web/main>).

⁽⁷⁾ Eurostat, Eurostatistics, October 2018 (<https://ec.europa.eu/eurostat/web/euro-indicators/statistical-books>).

⁽⁸⁾ European Commission, Business and Consumer Survey results, October 2018 (https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/business-and-consumer-surveys/latest-business-and-consumer-surveys_en).

⁽⁹⁾ European Commission, European Economic Forecast, summer 2018 (Interim), Economic and Financial Affairs, Institutional paper 084, July 2018 (https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-forecasts_en).

⁽¹⁰⁾ International Monetary Fund, World Economic Outlook, Challenges to Steady Growth, October 2018 (<https://www.imf.org/en/Publications/WEO/Issues/2018/09/24/world-economic-outlook-october-2018>).

⁽¹¹⁾ Eurostat Database, General Government Gross Debt Statistics (<https://ec.europa.eu/eurostat/web/main>).

⁽¹²⁾ Eurostat, Euroindicators, News Release, October 2018

Figure 1: Debt of general governments and private sector debt as a percentage of GDP (end of 2017) ^[13]
 Source: OECD statistics, EBA calculations

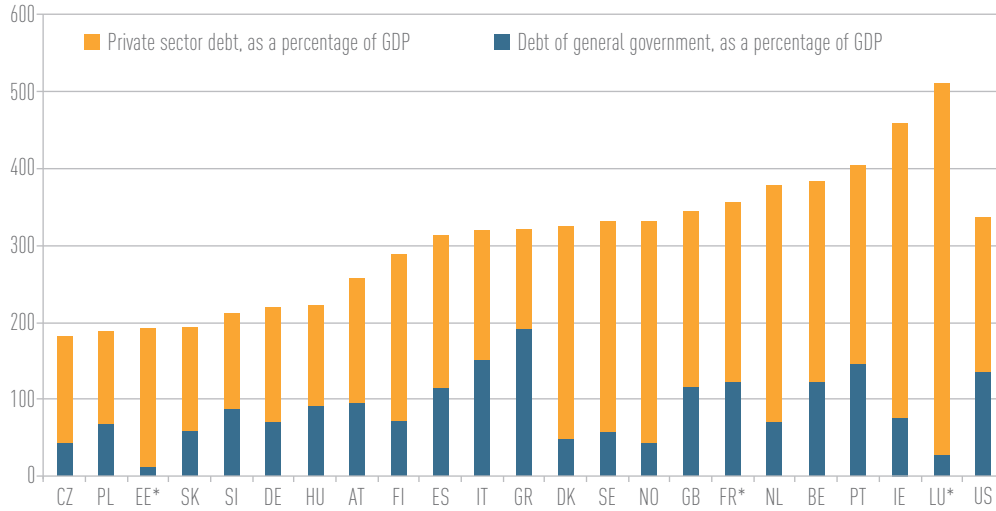
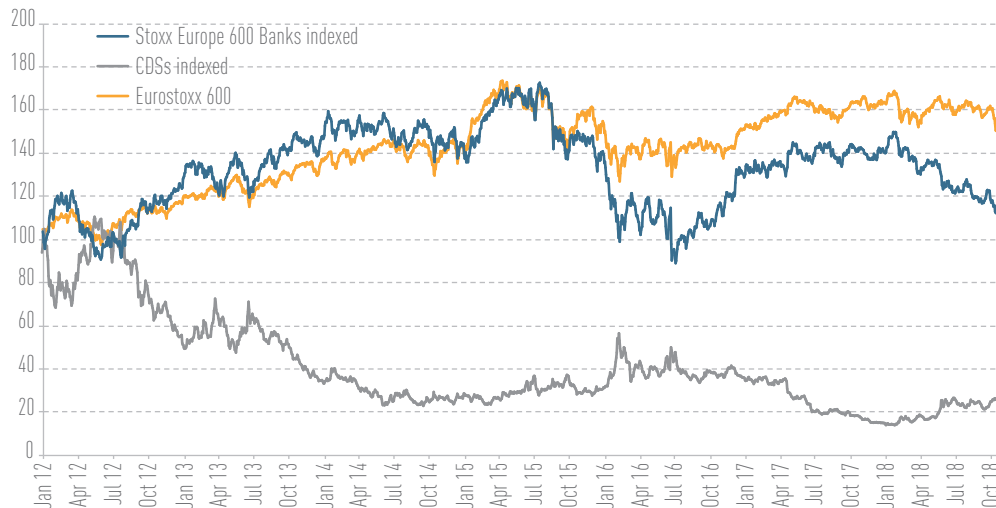


Figure 2: Stock index — STOXX® Europe 600, STOXX® Europe 600 banks' share price index and weighted average of EU bank CDS spreads by total assets (average December 2011 = 100)
 Source: Bloomberg, EBA calculations



cerns about possible asset price bubbles in several EU countries ^[14].

In spite of overall favourable macroeconomic conditions, share prices of listed European banks have been under pressure in 2018 amid a range of sector-specific and economic challenges, leading to lower valuation levels. The STOXX® Europe 600 banks' index

decreased in value by more than 23% between the beginning of the year and September, markedly underperforming the broader Eurostoxx 600 index (Figure 2).

Credit default swap (CDS) spreads in Europe have increased again reflecting mounting new risks for the European banking sector. Furthermore, the fall in banks' stock valuations is reflected in a sharp reverse in the price-to-book value this year, followed by a decrease in the price-to-earnings ratio (Figure 3).

^[13] For the countries marked with an asterisk, 2016 figures were used for either one or both of the variables. Further explanations on the statistics and data are available online: <https://data.oecd.org/gga/general-government-debt.htm> and http://stats.oecd.org/Index.aspx?DataSetCode=FIN_IND_FBS

^[14] At the end of 2016, the European Systemic Risk Board (ESRB) published a set of country-specific warnings on medium-term vulnerabilities in the residential real estate sector (<https://www.esrb.europa.eu/news/pr/date/2016/html/pr161128.en.html>).

Driven by growing political tensions, vulnerabilities in EMEs and protectionism in international trade, stock market volatility surged over spring and autumn this year (reflected for instance in the VIX® index, see Figure 4), preceded by a sharp correction in February, as opposed to a calm 2017. Potential risks of

Figure 3: Price-to-earnings and price-to-book indices of EU banks
 Source: Bloomberg, EBA calculations

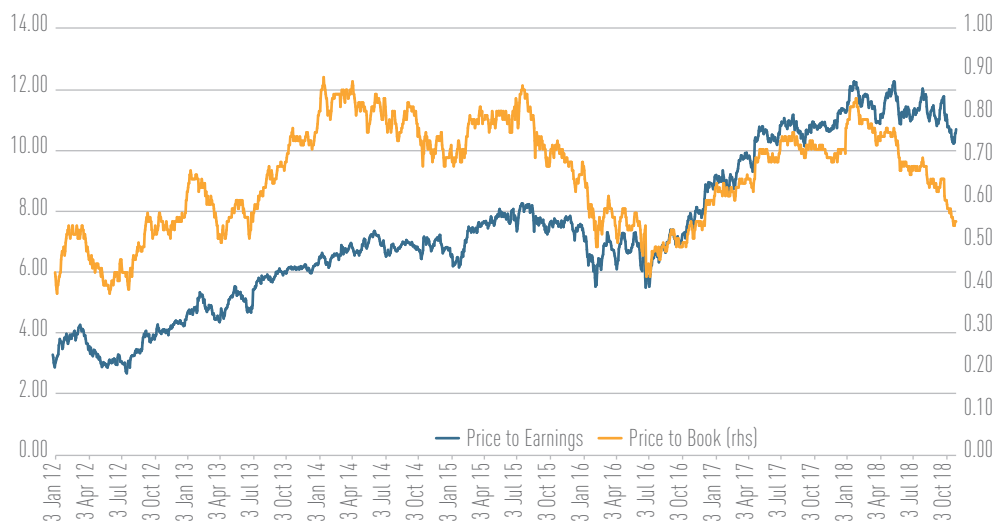
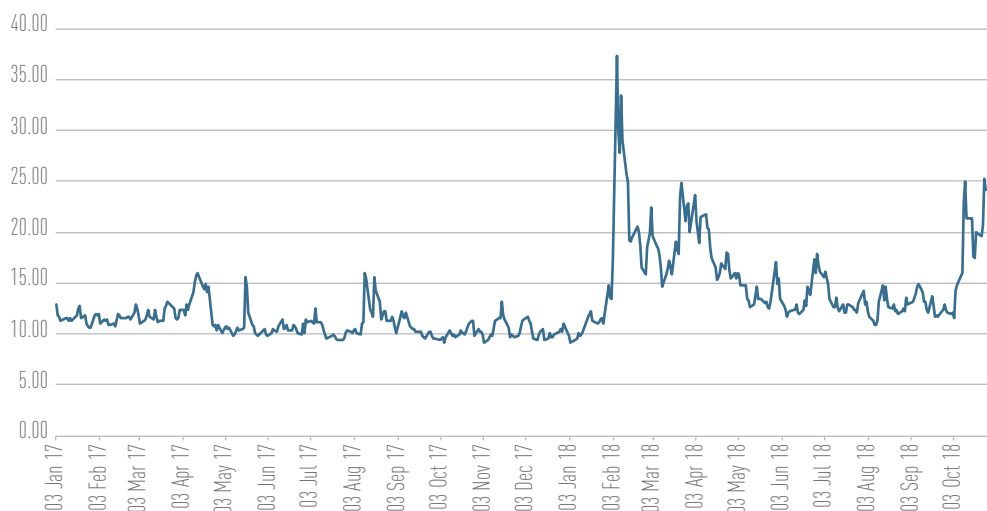


Figure 4: Volatility Index (VIX®) — daily prices
 Source: Bloomberg, EBA calculations



asset repricing is as such constantly on the rise.

Sovereign bond market conditions remained volatile over 2018 with, in particular, spreads of Italian sovereign bonds rising amid renewed political tensions. Government bond markets in other EU countries have also been affected, albeit to a lesser extent.

According to the responses to the EBA’s RAQ, market analysts perceive improved banks’

fundamentals and upcoming monetary policy normalisation as the factors that positively affect market sentiment. On the negative side, geopolitical risks and uncertainty outside the EU (including the resurgence of protectionism, currency tensions, elections, political tensions, conflicts or standstill in emerging and developed countries) are considered the main sources of concern for the overall market sentiment. This is followed by the risk of the re-emergence of tensions in the euro area.

UK withdrawal from the EU (Brexit): short-term financial stability risks and preparedness for a 'cliff-edge' scenario

The EBA has closely followed developments to understand the potential risks of a cliff edge scenario and highlighted the need for financial institutions to put in place appropriate mitigating measures amid ongoing Brexit discussions¹⁵. In its opinion published in June, the EBA outlined specific areas of concern (or risk channels) that financial institutions should duly consider in their contingency planning. They included access to financial market infrastructure; the ability to perform contractual obligations under the existing contracts, including performance of ancillary services or actions; access to funding markets; the transfer and storage of personal data; and the use of UK law in issuances of MREL-eligible instruments. Furthermore, the EBA stressed that financial institutions should identify and seek all necessary authorisations and regulatory permissions/approvals both in the UK and the EU-27 in order for them to be in place by March 2019.

The June opinion was prompted by the monitoring of institutions' contingency planning, which showed the lack of sufficient progress and the need to speed up preparations for a potential 'cliff-edge' scenario. In response to the opinion, financial institutions have made progress in some areas. More institutions are implementing contingency plans and the contingency plans themselves have advanced. In particular, more institutions are getting the necessary licences and relocating their businesses and claim to have made progress in diversifying access to funding, in-

troducing contractual bail-in clauses into newly issued MREL instruments and introducing contractual clauses to facilitate data transfers.

Concerns have focused on issues around a 'cliff edge' scenario and, in particular, on (1) cross-border clearing of derivatives where the UK-based central counterparty clearing houses (CCPs) play a crucial role, and (2) the ability to continue performing life-cycle events for over-the-counter derivatives. Both of these topics have been closely monitored by public authorities, and the European Commission has provided assurances that it will introduce time-limited and strictly conditional measures allowing access for EU-27 institutions to UK-based CCPs¹⁶. Furthermore, the European Supervisory Authorities (ESAs) have taken steps to facilitate novation of contracts from a counterparty established in the UK to a counterparty established in the EU¹⁷ to assist the process of re-papering.

While the main focus remains on financial stability and the continuity of wholesale markets, notably derivatives, the EBA is also concerned about the preparations of smaller and less sophisticated institutions and, in particular, payment and e-money institutions. The latter are of particular importance from an EU-27 perspective, because of the large volumes of payments business being offered by UK-based institutions through their cross-border passporting activities. For such institutions, contingency planning, including relocation, where appropriate, is needed, and effective communication with customers ex-ante to prepare for any disruption is vital.

^[15] See EBA/Op/2017/12 (<https://www.eba.europa.eu/documents/10180/1756362/EBA+Opinion+on+BREXIT+Issues+%28EBA-Op-2017-12%29.pdf>) and EBA/Op/2018/15 (<https://www.eba.europa.eu/documents/10180/2137845/EBA+Opinion+on+BREXIT+preparations+%28EBA-Op-2018-05%29.pdf>).

^[16] See: https://ec.europa.eu/info/sites/info/files/brexit_it_files/info_site/communication-preparing-withdrawal-brexit-preparedness-13-11-2018.pdf

^[17] See: <https://eba.europa.eu/-/esas-propose-to-amend-bilateral-margin-requirements-to-assist-brexit-preparations-for-otc-derivative-contracts>

2. Asset side

Total assets have remained stable, which may signal that there has been a potential turnaround in the deleveraging of the EU banking sector in recent years. Banks have been decreasing derivatives, equity instruments and debt securities, particularly in sovereign exposures, on the back of increasing loans and advances.

Banks' EME exposures do not represent on average a significant share of their total assets and have declined during recent years. However, these exposures are still material for some banks.

Asset quality has shown further improvements, especially in countries with high NPL ratios. This is due to banks' efforts to reduce legacy assets. As a result of higher provisions, increased supervisory pressure, improvements in the judicial systems and elevated investor demand, NPL sales transactions have grown in the past 2 years. Nevertheless, NPL ratios remain high when compared with other regions. NPL coverage ratios have slightly increased but there is still a wide dispersion across countries in the provisioning of Stage 2 and Stage 3 assets.

2.1. Asset volume developments

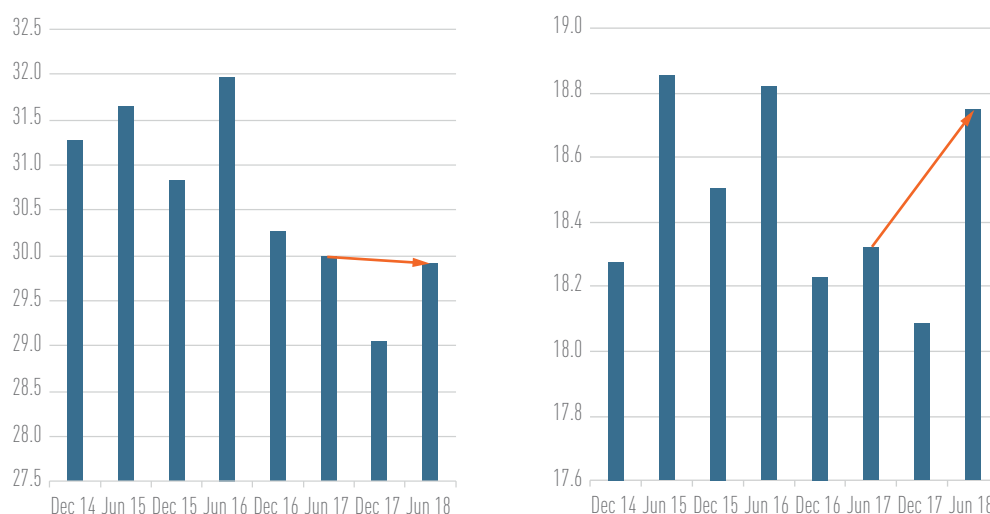
Assets have remained stable year on year, whereas loans and advances have increased in volume

Total assets of EU banks have remained stable, at EUR 29.9 tn year on year (YoY) (Figure 5). At the same time, total loans and advances have increased by more than EUR 420 bn (+2%), amounting to about EUR 18.7 tn in June 2018 (Figure 5). Such a trend may indicate a reversal in banks' previous deleveraging, as macroeconomic conditions have remained favourable, encouraging banks to further extend lending. By contrast, derivatives and equity instruments have decreased by 11% and 14% YoY, which corresponds to about EUR 300 bn and EUR 100 bn, respectively.

In June 2018, loans and advances accounted for roughly 63%, debt securities stood at 13%, cash balances at 9% and derivatives at 8% of total assets. The composition of the asset side has changed considerably in recent years, driven by the restructuring processes and the deleveraging effects in the EU banking sector.

Figure 5: Total asset (left) and loan (right) volumes (EUR tn)

Source: EBA supervisory reporting data



All asset classes have shown a decrease in volume since December 2014, with the exception of cash balances (around +90%), mainly at central banks ⁽¹⁸⁾, and loans and advances (around +3%). The decrease in derivatives assets (-45%) was particularly pronounced (Figure 6). This decline could be due to banks' risk reduction measures but also netting and compression services, or valuation effects.

Looking in more detail at the trends in EU banks' lending business (loans and advances) and debt securities, between June 2017 and June 2018 banks have increased their exposures to central banks ⁽¹⁹⁾ by 25%, to

NFCs by 6% – to SMEs (8%) and CRE (9%) – to households by 3% and to credit institutions by 2%. By contrast, banks have decreased their exposure to general governments by 2% (Figure 7).

The composition of exposures across countries was widely dispersed (Figure 8). The share of NFC and household exposures ranged between 30% and 80% of total loans and advances and debt securities. Some countries reported particularly high shares of exposures to central banks and general governments (e.g. Belgium, Czechia, Croatia, Hungary and Slovenia). Other countries re-

Figure 6: Total asset breakdown (EUR tn)
Source: EBA supervisory reporting data

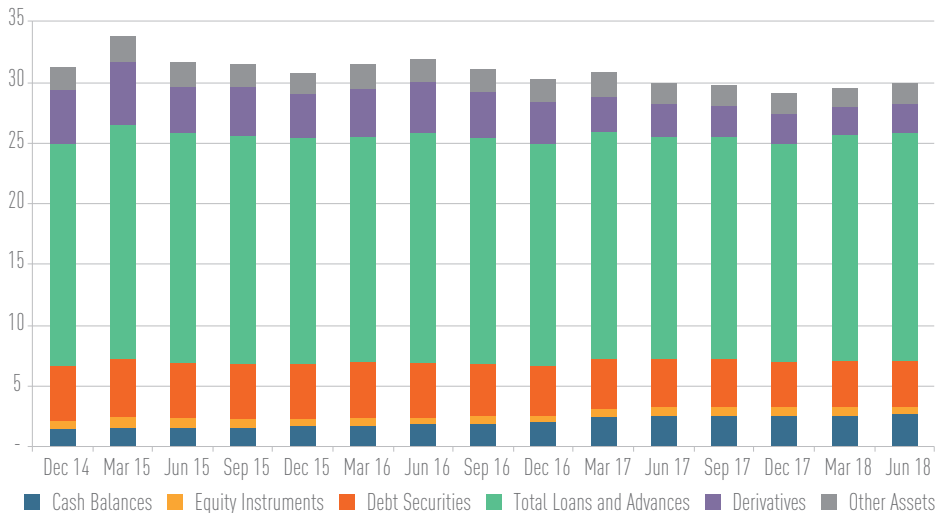
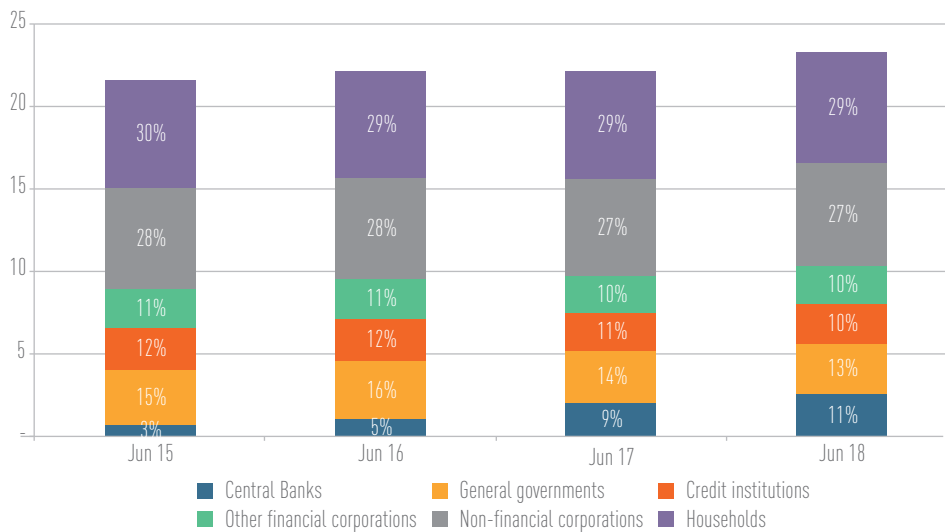


Figure 7: Evolution of breakdown of loans and advances and debt securities (EUR tn)
Source: EBA supervisory reporting data



⁽¹⁸⁾ Including ECB current accounts (covering the minimum reserve system).

⁽¹⁹⁾ Including ECB deposit facilities.

ported, by contrast, elevated shares of exposures to credit institutions and other financial corporations (e.g. Luxembourg, the UK, Germany and Malta).

Growth in SME lending has been particularly strong and is expected to continue

SME exposures have been a key driver for the growth in NFC exposures. In June 2018, banks' total SME exposures accounted for EUR 1.9 tn, up from EUR 1.75 tn a year before (Figure 9).

This is reflected in banks' plans for future growth. RAQ results show that around 90% of banks plan to increase their portfolios in SME lending. No bank plans to shrink its expo-

sure to SMEs. Other areas of growth include the retail sector (around 75% of banks plan to grow in this area) and corporates (nearly 70% of banks assume an increase), with only around 10% of banks planning to decrease these portfolios (Figure 10). The increase of lending is a trend to be monitored in the next quarters, also in light of economic and financial developments.

Similarly, analysts believe that banks will increase SME exposures in the next 12 months. However, they are more cautious than banks are in terms of other portfolios, as they expect deleveraging in various sectors such as CRE, sovereign and institutions, as well as in asset finance and trading portfolios (Figure 11).

Figure 8: Breakdown of loans and advances and debt securities by country and sector – June 2018 (%)

Source: EBA supervisory reporting data

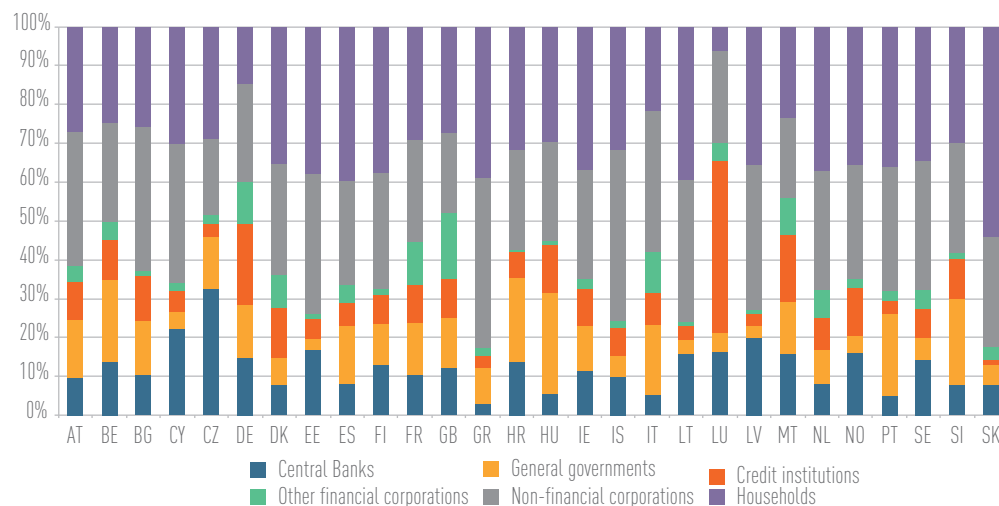


Figure 9: Total exposure to SMEs, trend over time (2014 = 100)

Source: EBA supervisory reporting data



Figure 10: Portfolios considered by EU banks for increase and decrease in assets – December 2018 (%)

Source: EBA RAQ for banks

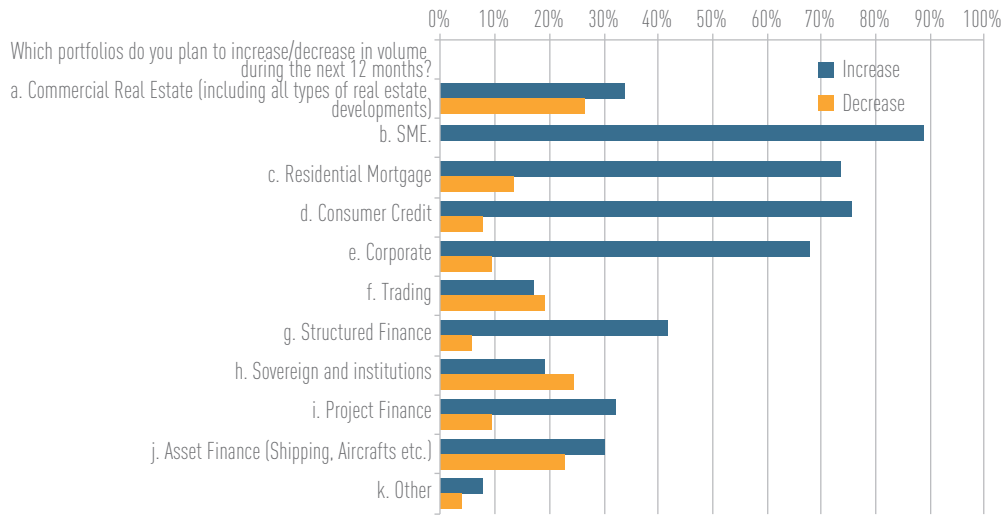
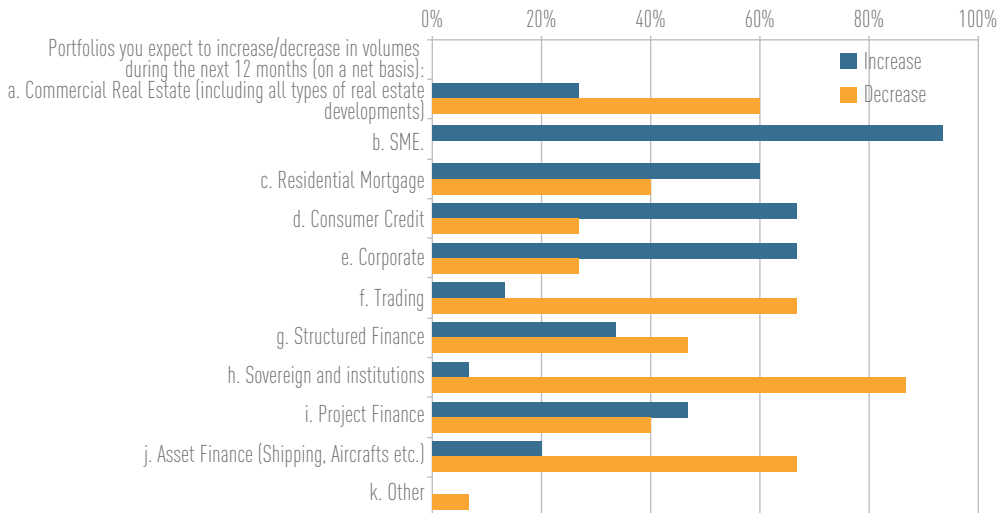


Figure 11: Portfolios considered by analysts for increase and decrease in assets – December 2018 (%)

Source: EBA RAQ for analysts



This broad-based expansion in loans and advances especially in particular sectors such as SMEs and the retail sector might lead to lower underwriting standards, as banks enter into increased competition and potentially increased pressure on spreads.

Banks are decreasing EME exposures amid elevated risks and vulnerabilities

EU banks have considerable exposures to non-EU countries (around 26% of total loans and advances and debt securities). Figure 12 shows EU banks’ exposures to the top 10 non-EU countries. EU banks have extended EUR 2.4 tn of loans and advances and debt securities to US counterparties as of June 2018. Counterparties from Japan and Hong Kong

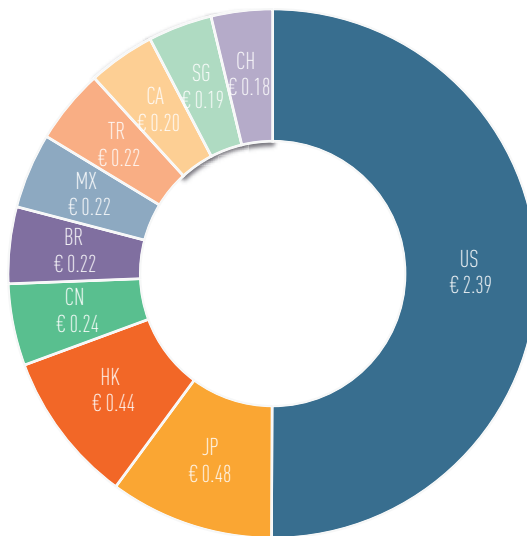
follow, with amounts of about EUR 0.48 tn and EUR 0.44 tn, respectively.

EU banks’ EME ⁽²⁰⁾ exposures in Q2 2018 stood at around EUR 1.8 tn, marking an 18% decrease from EUR 2.2 tn in 2014. The highest exposures were towards China (20%) ⁽²¹⁾, Turkey (14%), Brazil (14%) and Mexico (13%) (Figure 13). The bulk of EME borrowers were non-financial corporates (41% of total exposures), followed by sovereigns, credit institutions and the retail sector.

⁽²⁰⁾ EMEs include in the following analysis the following countries: Argentina, Bangladesh, Brazil, Chile, China, Colombia, India, Indonesia, Malaysia, Mexico, Pakistan, Peru, Philippines, Russian Federation, South Africa, Thailand, Turkey, Ukraine and Venezuela.

⁽²¹⁾ Values for China exclude Hong Kong.

Figure 12: Total loans and advances and debt securities to non- EEA countries (EUR tn, for the top 10 non-EAA countries of the counterparty)
 Source: EBA supervisory reporting data



Within the EU, more than 60% of total EME exposures was held by banks in the UK and Spain. The main market for UK banks was China, while Spanish banks had material exposure in Mexico, Brazil and Turkey.

EME exposures were also elevated relative to banks' total exposures for Hungary, Austria, Italy, the Netherlands, Cyprus and Belgium.

Figure 13: European banks' EME exposures in Q2 2018 (%) and trends in EME exposures over time (EUR bn)
 Source: EBA supervisory reporting data

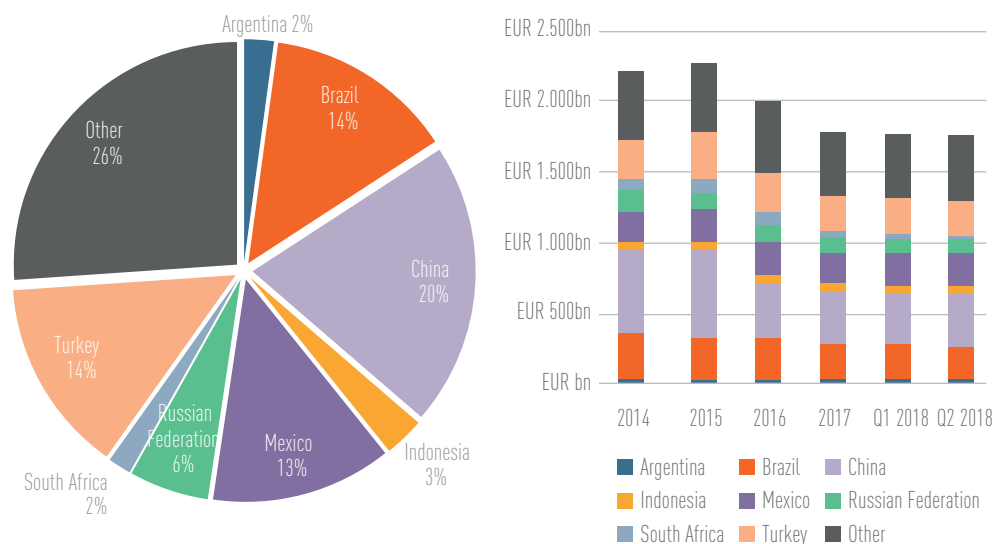
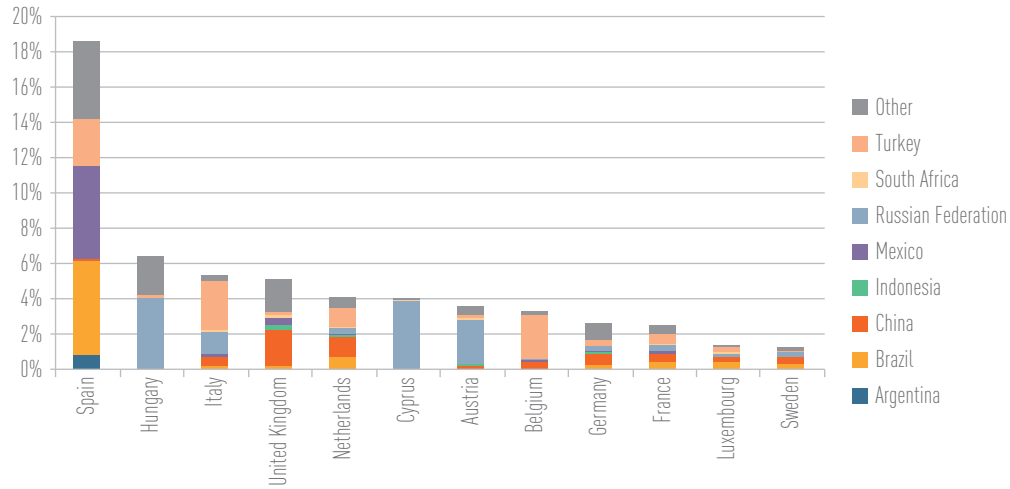


Figure 14: Share of EME exposure to total exposures in Q2 2018 (per country of bank)
 Source: EBA supervisory reporting data



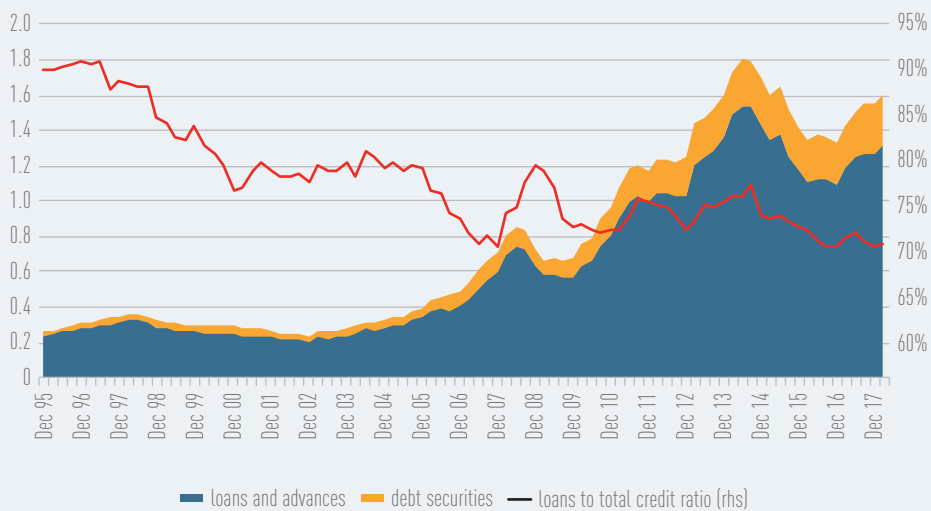
Emerging market vulnerabilities and implications for European banks

Financial conditions have tightened in EMEs amid increasing political tensions, rising interest rates and an intensification of trade tensions. Vulnerabilities have emerged after a period of benign and accommodative external financial conditions, denting the growth outlook through a stronger US dollar, higher credit spreads, underperforming equity prices and increasing domestic interest rates.

With monetary policy normalisation having gained pace in the US and other econ-

omies, EMEs might face a reduction in capital flows, with potentially increasing risk to renew maturing debt, and adverse impacts on productive investment. In addition, increasing US interest rates might have consequences for sovereign and corporate borrowers in EMEs with large external financing needs. Indeed, cross-border financing towards EMEs has increased markedly in the post-crisis years (Figure 15). Debt structure in post-crisis years has been characterised by a shift from bank loans to bond financing, accounting for a 27% share of total debt in Q1 2018, as opposed to 19% in 2008. This shift entails additional risks as bond investments can

Figure 15: Structure of EMEs' cross border debt ^[19]
 Source: Bank for International Settlements (BIS), EBA calculations



^[22] The data cover bank exposures to only the following EMEs: Argentina, Brazil, China, India, Russia and Turkey.

be disposed of more quickly, resulting in higher volatility in EMEs, which are subject to distressed episodes. Furthermore, according to BIS data, more than 50% of banks' cross-border exposures towards EMEs is denominated in US dollars, which increases vulnerabilities from interest and foreign exchange (FX) rate moves.

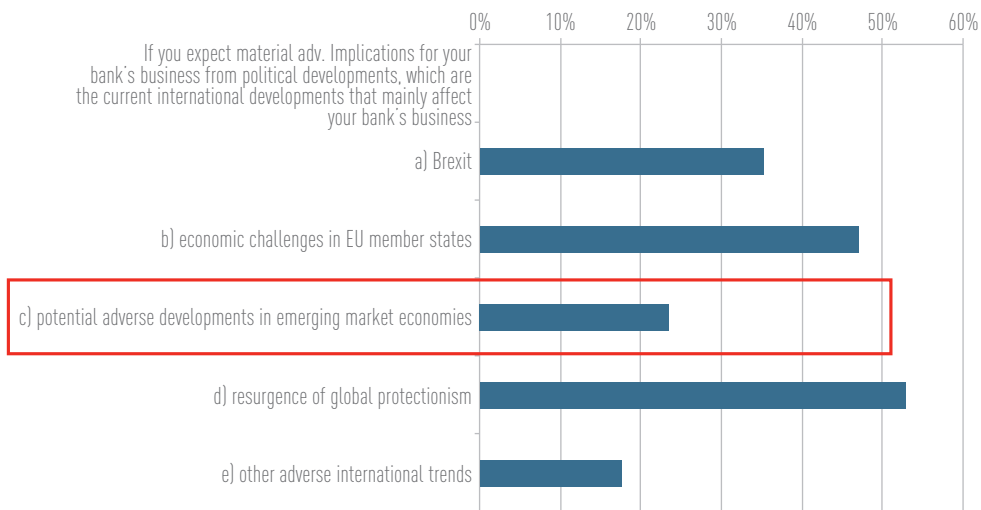
Against the backdrop of rising uncertainty related to EMEs, European banks with exposures towards these might face a deterioration in asset quality. In addition to direct exposures, another channel of contagion is profitability, for instance due to a decrease in loan growth, a surge in NPLs weighing on interest income, as well as fees and other sources of banks' income.

Despite these potential risks, the results of the RAQ for 2018 show that banks in general are not overly concerned by developments in EMEs. They are rather more concerned about potential headwinds from economic challenges in EU jurisdictions and a resurgence of global protectionism. Some of the factors that can explain their views on EMEs might include the fact that exposures are concentrated in only a few European banks, and potentially do not pose a large systemic and contagion risk from first round effects on financial stability in the EU. However, indirect effects might have significantly negative impacts on the EU banking sector.

Sovereign exposures have decreased but they are still material for many banks

Exposures to general governments have declined since June 2016. Total sovereign exposure of the EU banking sector stood at EUR 3.0 tn as of June 2018, a 2% decrease compared with June 2017 and a 10% decrease compared with 2 years ago (Figure 17). The largest share of sovereign exposures were measured at amortised cost (43%), followed by fair value through other comprehensive income (OCI) (31%) and fair value through profit and loss (P&L) (26%) (Figure 18). Even slightly elevated moves in spreads for such exposures might as such have significant negative impact on banks' capital ⁽²³⁾.

Figure 16: Adverse implications of EME developments on banks
 Source: EBA RAQ for banks



⁽²³⁾ If these exposures are recognised at amortised cost, any impact on the profitability and capital would depend on changes in the expected credit loss and their potential move into stage 2 or stage 3 according to IFRS 9 (for the stages, see the textbox 'Implementation of IFRS 9: distribution among stages and coverage ratios for stage 2 and 3 loans' in Chapter 2.2).

Figure 17: Evolution of total loans and advances and debt securities to general governments, trend over time (2014 = 100)

Source: EBA supervisory reporting data

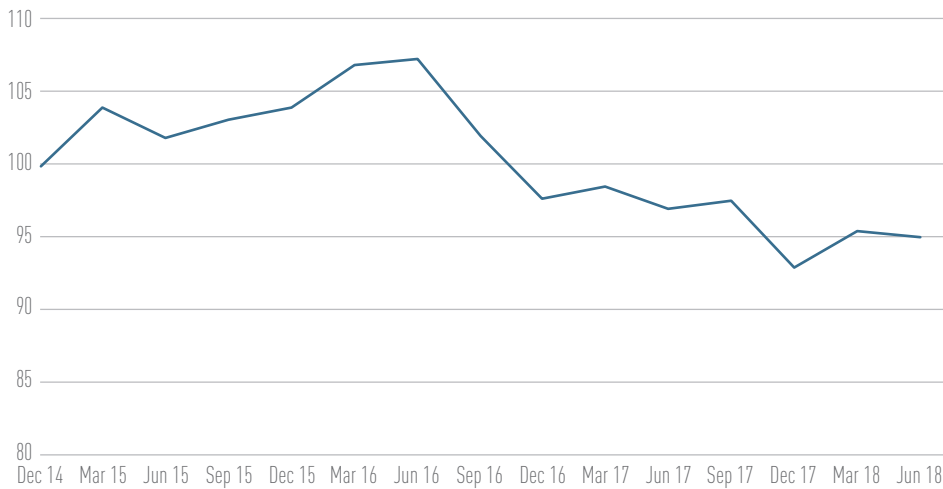
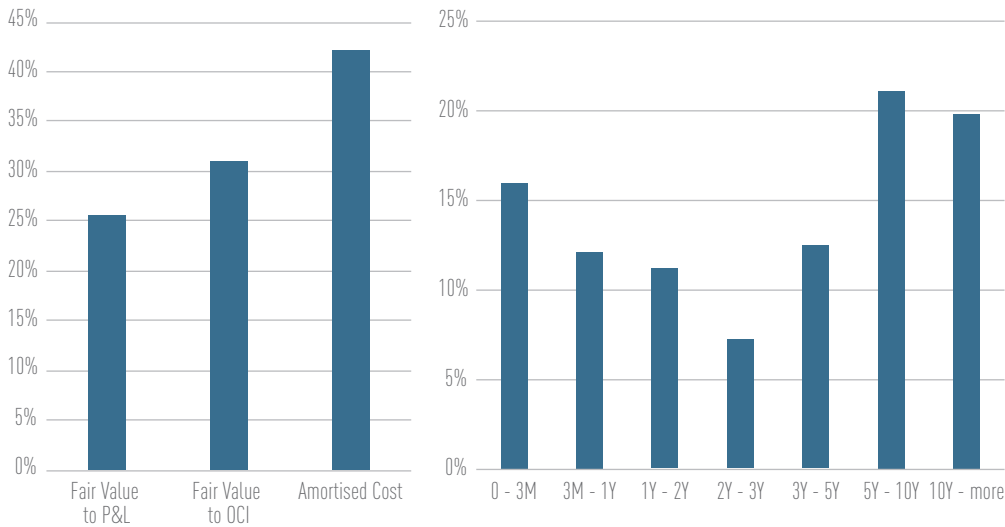


Figure 18: Breakdown by accounting treatment (left) and maturity (right) of exposures to general governments — June 2018 (%)

Source: EBA supervisory reporting data



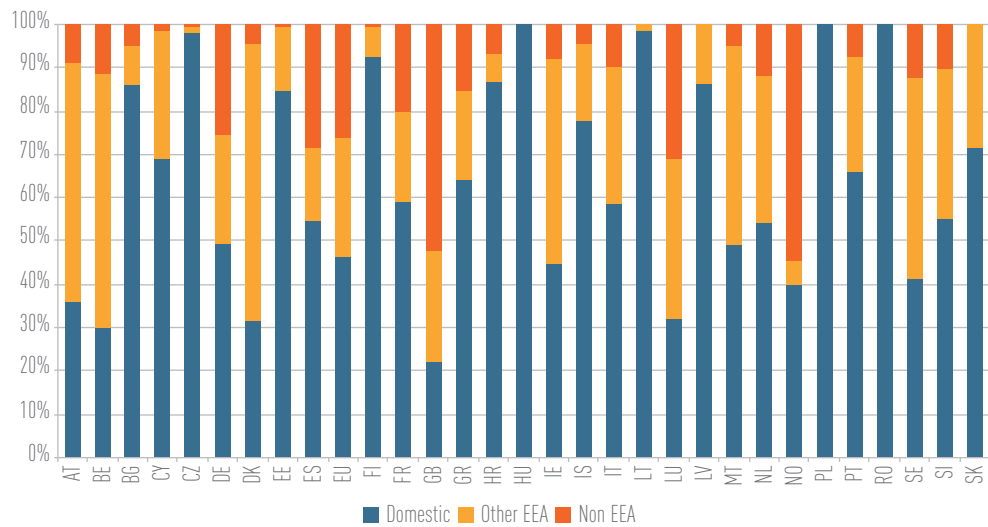
In terms of maturities, more than 40% of sovereign exposures have a maturity above 5 years, while 15% of them had a maturity within 3 months (Figure 18).

On EU average, nearly 50% of these exposures were towards domestic counterparties (June 2018), with significant dispersion across countries. For the vast majority of the countries, foreign sovereign exposures are mostly concentrated in EEA countries, with the exceptions of Norway and the UK,

where banks have at least 50% of their total exposures towards non-EEA countries (Figure 19).

Banks and analysts share the expectation that exposures to sovereign and financial institutions will further decrease (Figure 10 and Figure 11). This might in future further reduce the link between banks and sovereigns, and also banks' vulnerabilities to volatility in these markets for exposures recognised at fair value.

Figure 19: Country distribution of exposures to general governments by their domicile – June 2018 (domestic, other EEA and non-EEA)
 Source: EBA supervisory reporting data



Assets by sector: sustainable financing

In its action plan on financing sustainable growth published on 8 March 2018 ^[24], the European Commission set an EU strategy on sustainable finance. In particular, the European Commission has mandated the ESAs to reflect how sustainability considerations can be effectively taken into account in relevant EU financial services legislation and to help to identify existing gaps.

One of the main priorities highlighted in the proposal is to establish a unified EU classification system (taxonomy) of sustainable economic activities. It also defines how institutional investors should integrate environmental, social and governance (ESG) factors in their risk analysis processes. Finally, the proposal covers new disclosure requirements, the incorporation of ESG considerations into investment advice and the introduction of low-carbon and positive carbon impact benchmarks.

Risks for banks

Banks can be affected by climate change consequences through the materialisation of three main risks:

- *physical risk*: deriving from direct damage to property or trade disruption (e.g. the implications of rising sea levels or more extreme weather conditions),

- *transition risk*: financial risk arising from the transition to a low-carbon economy (e.g. the loss in value of carbon-intensive assets that become stranded in the transition to a low-carbon economy),
- *liability risk*: addressing responsibilities for the impact that will occur in the future and what this impact will be.

Transitional and physical climate shocks can affect credit, market and operational risks in different ways, directly and indirectly. *Physical risk* can lead to higher riskiness in banks' exposures. For instance, extreme weather events can cause significant losses for homeowners, reducing their ability to repay their loans and damaging the value of their properties. This increases the credit risk on their loan books, as both the probability of default and the loss given default increase and can also lead to a reduction in lending, at least if the respective risks are not insured ^[25].

Regarding *transition risk*, equity and bond portfolios in sectors that intensively use fossil fuels (which might include the transport sector, heavy industries, agriculture and energy), for instance, can be subject to a significant reduction in their value because of the implementation of policies designed to support the transition to a low-carbon economy. At the same time, credit exposures towards construction and loans backed by real estate that do not meet future climate standards

^[24] See http://europa.eu/rapid/press-release_IP-18-1404_en.htm

^[25] See <http://www.bancaditalia.it/pubblicazioni/qef/2018-0457/index.html?com.dotmarketing.htmlpage.language=1>

can potentially lose their value with a consequent increase in their risk level. Banks may also have credit exposures to companies with business models that are not aligned with the transition to a low-carbon economy, which therefore face a higher risk of reduced corporate earnings and business disruption. Finally, direct exposures in commodities directly affected by the transition, such as oil extraction and processing, can generate losses in banks' portfolios.

Data constraints

Without common definitions and metrics, trying to quantify the magnitude of the unsustainable exposures in banks' balance sheets remains a key challenge when using supervisory reporting data. This is also the reason why the development of a taxonomy is one of the main priorities on the European Commission's agenda.

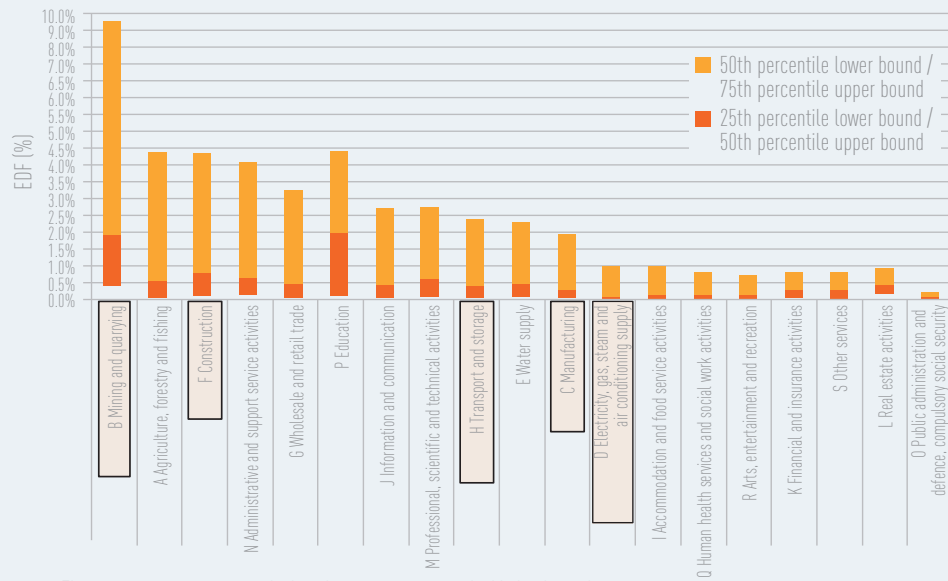
Table 1 shows the total exposures of EU banks towards those sectors that relatively likely include 'non-green' exposures. Even though the real share of such exposures is unknown, those figures could give an idea of a rough estimate. Manufacturing would represent the largest exposure by volume. However, it does not necessarily imply that the whole respective exposure would not be green. The exposure might even already include companies that work on a sustainable basis. It is similar for the other sectors, like transport and storage, construction, etc. However, for mining and quarrying, one might assume that, indeed, a large share of the exposure is not of a sustainable nature.

Looking at the riskiness of these sectors, measured by the expected default frequencies (EDFs) (Figure 20), mining and quarrying ranks first among potentially carbon-intensive sectors, followed by construction.

Table 1: EU banks total exposures towards potentially non-green NACE sectors – June 2018 (EUR m)
 Source: EBA supervisory reporting data

NACE code	Sector	Exposure
C	Manufacturing	947,454
H	Transport and storage	369,268
F	Construction	349,180
D	Electricity, gas, steam and air conditioning supply	274,320
B	Mining and quarrying	108,814
	Total	2,049,037

Figure 20: EDFs by NACE sectors (1st, 2nd and 3rd quartile and weighted average) ⁽²⁶⁾
 Source: Moody's Analytics – CreditEdge, EBA calculations



⁽²⁶⁾ EDF cut-off date was 1 November 2018.

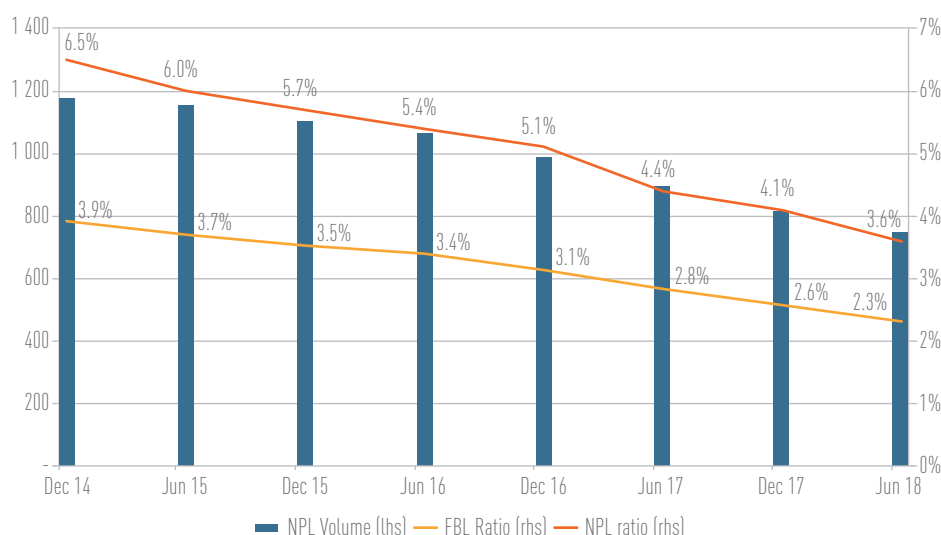
2.2. Asset quality trends

In the second quarter of 2018, the gross carrying amount of NPLs in the EU was EUR 746 bn (Figure 21), which corresponded to an NPL ratio of 3.6%, the lowest since the NPL definition was harmonised across European countries in 2014. Although the EU NPL ratio has improved notably since December 2014 (6.5%, EUR 1 174 bn), it remains elevated compared with other regions: the NPL ratios for Japan and the US are only 1.2% and 1.1%, respectively [27].

As of June 2018, 39% of the NPLs were unlikely to pay and were less than 90 days past due. Twelve per cent were past due for between 90 days and 1 year. Around one third

were past due for between 1 and 5 years and the rest (17%) were past due for more than 5 years. Countries with lower NPL ratios have a rather larger share in NPLs being past due for less than 1 year, including unlikely to pay. This is in contrast to countries with higher NPL ratios, which have a larger share in the higher past-due buckets of 1 year and more (Figure 22). This indicates that early acknowledgement of problematic loans and appropriate intervention measures contribute to effectively addressing NPLs and to keeping NPL levels low. It might also reflect that reducing NPLs that are more than 1 year past due is more difficult than reducing those that have only recently moved into the non-performing status (see the impediments to dealing with NPL Figure 28 and accompanying textbox).

Figure 21: EU banking sector NPLs (EUR bn) and ratios of NPLs and forborne loans (%)
Source: EBA supervisory reporting data



[27] The NPL ratios for Japan and the US are based on World Bank data ('World Development Indicators'), extracted on 23 October 2018, as of year end 2017. These ratios are not fully comparable with the ones reported in the EU, as there has been no common definition of NPLs applicable at that time (on global harmonisation of NPL disclosure and reporting see the Basel Committee on Banking Supervision's guidelines 'Prudential treatment of problem assets – definitions of non-performing exposures and forbearance', <https://www.bis.org/bcbs/publ/d403.pdf>).

Figure 22: Unlikely to pay and days past due bands of NPLs: volumes per country by past-due time bands (EUR bn) and EU distribution (%) and NPL ratios (%), rhs) – June 2018 ⁽²⁸⁾

Source: EBA supervisory reporting data

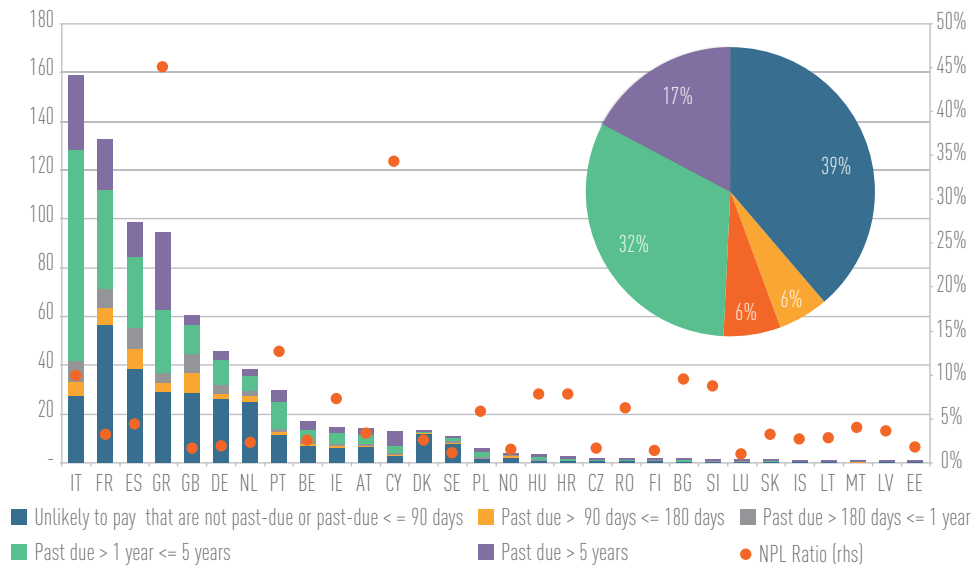
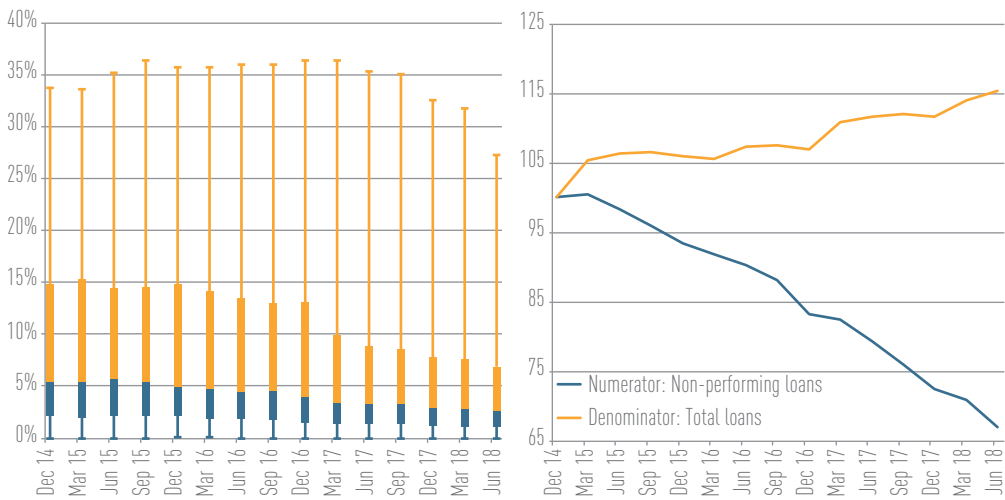


Figure 23: NPL ratio – 5th and 95th percentiles, interquartile range and median; numerator and denominator trends (2014 = 100)

Source: EBA supervisory reporting data



Asset quality has steadily improved

Compared YoY, the NPL ratio had decreased by 0.8 percentage points (pp) in June 2018, from 4.4% 1 year before. The decrease in the ratio was mainly driven by a decrease in the numerator (NPLs), but has also been supported by a rising denominator (total loans) (Figure 23). NPL volumes have decreased by around 15% since June 2017. Despite its decline, the dispersion of the NPL ratio among different jurisdictions has remained wide (Figure 23).

Nearly all countries have decreased their NPL ratios since June 2017 (Figure 24), with

the exception of only three countries with low NPL ratios that have experienced a marginal increase (Estonia, Latvia and Sweden). The largest decrease in NPL ratio was in Cyprus (-8.6 pp) followed by Portugal (-5 pp), Ireland and Slovenia (-4.8pp).

By sector, the highest NPL ratio was the one for exposures towards SMEs as of June 2018 (9.8% EU average). This compares with an average NPL ratio of 13.5% in June 2017. SMEs are the sector in which banks have reduced their NPLs the most. The EU average NPL ratio for large corporates in June 2018 was 5.0% (6.2% in June 2017) and 3.7% for households (4.3% in June 2017) (Figure 25).

⁽²⁸⁾ Sorted by NPL ratio (descending).

Figure 24: NPL ratio — weighted average by country (%)
 Source: EBA supervisory reporting data

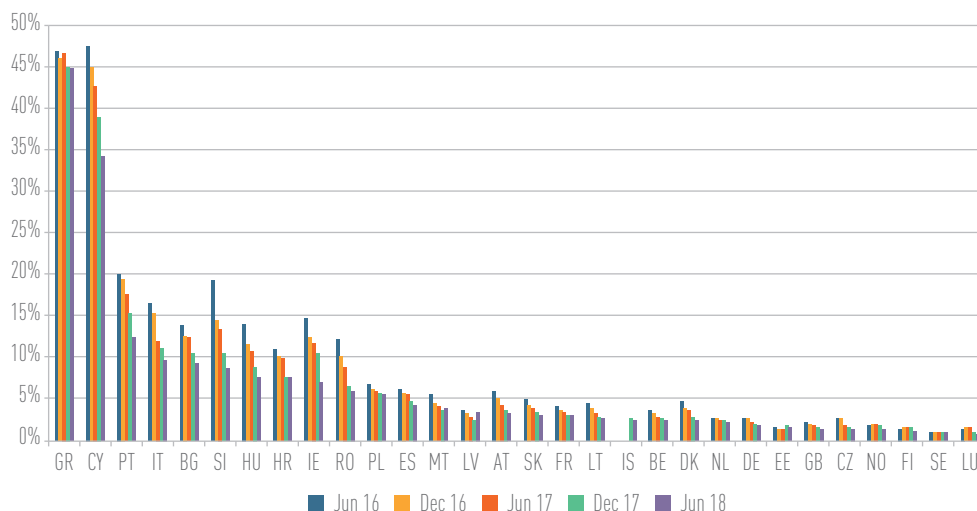
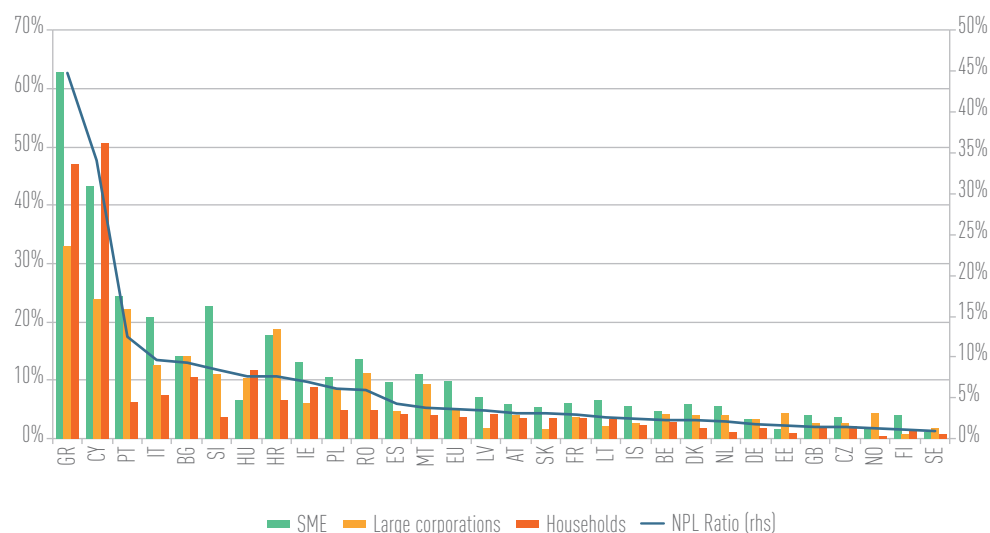


Figure 25: NPL ratios by sector and overall NPL ratio (rhs) — June 2018 (%)
 Source: EBA supervisory reporting data



Similar to the NPL ratio, the forborne loan (FBL) ratio has declined steadily, by 50 bps to 2.3% in June 2018 compared with June 2017. The pace of reduction of both the NPL ratio and the FBL ratio is in line with previous quarters (Figure 21).

Coverage ratios have remained stable

The average coverage ratio of NPLs was 46.0% as of June 2018 (EU weighted average). It had increased by 1 pp in June 2018 compared with 1 year earlier. This trend has been supported by a faster decline of NPLs than of provisions during the last three quarters (Figure 26). Higher coverage ratios give banks more room to reduce their NPLs through, for example, sales.

Figure 27 shows changes in coverage and NPL ratios. The chart tracks the progress made in some jurisdictions last year in terms of increasing the coverage ratios and reduction in NPLs. The key assumption of this analysis is that banks that increase provisions (movement in the quadrant’s top side to the right) are more likely to experience a decrease in the NPL ratio (movement in the quadrant’s right side to the bottom). The chart does not provide information on, for instance, the type of instruments or collateral values, although it helps to identify possible areas for changes in the ways banks address asset quality. The chart shows that the majority of the countries have moved in the right direction and towards the third and fourth quadrant. Still, work remains to be done in order to further de-risk the EU banking sector and bring the EU’s average NPL ratios to lower levels.

Figure 26: Coverage ratio — 5th and 95th percentiles, interquartile range and median; numerator and denominator trends (2014 = 100)

Source: EBA supervisory reporting data

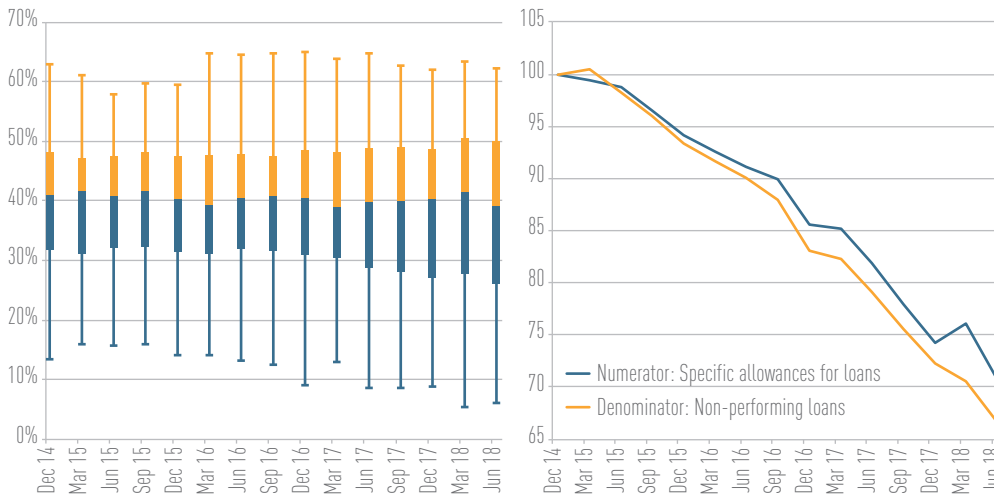
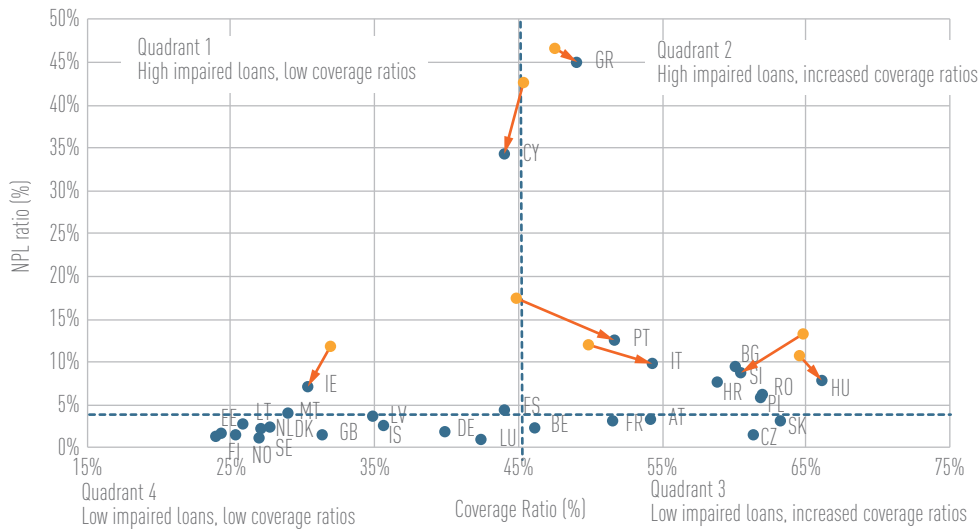


Figure 27: NPL ratio versus coverage ratio by country (movements between Q2 2017 and Q2 2018) ^[29]

Source: EBA supervisory reporting data



NPL disposals as one measure to reduce NPL stocks

Banks apply a combination of different strategies for managing and reducing NPLs. According to their responses in the RAQ, banks' preferred options are an internal workout as well as sales (Figure 28). NPL securitisation is only cited by a few banks as a possible strategy to reduce

NPLs. There can be various reasons for this, such as the complexity of structuring NPL securitisations and potentially less investor interest to conclude such transactions because of stringent rules compared with whole-loan sales or the lack of standardisation for NPL securitisations. NPL secondary markets also remain particularly vulnerable to economic and political developments.

^[29] The lines defining the four quadrants are based on the NPL and coverage ratios (EU weighted average). They were calculated as the average of respective ratios as of Q4 2014 (first time application of the EBA's definition of non-performing exposures) and Q2 2018.

Figure 28: Strategies for NPL reduction — December 2018

Source: EBA RAQ for banks

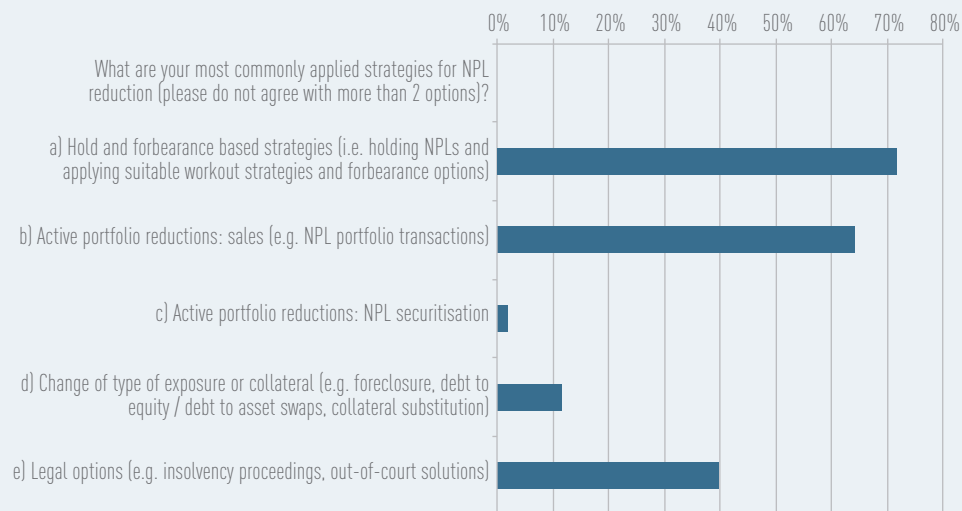
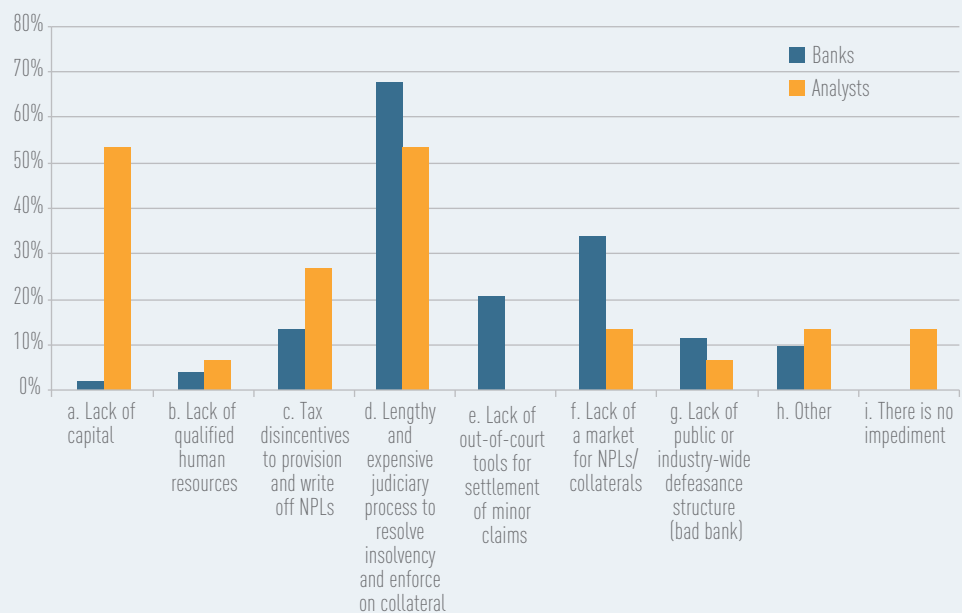


Figure 29: Impediments to resolving NPLs — December 2018

Source: EBA RAQ for banks and for analysts



NPL transaction sales have been increasing constantly YoY according to market data. In 2017, NPL portfolio sales reached EUR 144 bn, whereas in the first three quarters of 2018 NPL sales stood at EUR 125 bn, with another EUR 60 bn transactions in the pipeline. Most of these deals have been closed in Italy and Spain (EUR 59 bn and EUR 33 bn, respectively), followed by Ireland (EUR 11 bn), Greece (EUR 7 bn), Cyprus (EUR 3 bn) and Portugal (EUR 2 bn) ⁽³⁰⁾.

The main impediment identified by banks in the effort to resolve NPLs is a lengthy and expensive judiciary process in the case of insolvency and to enforce collateral (Figure 29). Moreover, the lack of markets for NPL transactions is considered an important obstacle in banks' efforts to reduce NPLs. Around 50% of the analysts consider the lack of capital and the judiciary process as main impediments for banks.

⁽³⁰⁾ Data as reported by Debtwire (<https://events.debtwire.com/debtwireweek/european-npls-set-for-another-record-year-as-focus-shifts-east>).

Implementation of IFRS 9: distribution among stages and coverage ratios for Stage 2 and 3 loans

As of January 2018, International Financial Reporting Standard 9 (IFRS 9) replaced the previous accounting standard for financial instruments (IAS 39), changing, among other aspects, the approach that banks are required to follow in the calculation of credit losses. With the new accounting standard, provisions need to be determined based on an expected credit loss (ECL) model instead of an incurred loss model. The introduction of IFRS 9 also requires banks to allocate financial instruments subject to ECL requirements in three different stages (stages 1, 2 and 3) according to their credit risk level. Those financial assets that have experienced a significant increase in credit risk are assigned to Stage 2 and those that are credit impaired are assigned to Stage 3.

On average in the EU, the share of loans and advances (recognised at amortised cost) in Stage 1 was around 88%, the share in Stage 2 was around 8% and in Stage 3 was around 4%, as of June 2018. Eight countries had less than 10% allocated to stages 2 and 3, while for six countries stages 2 and 3 together represented at least 20% of their total loans and advances. The latter also included several countries with

elevated NPL ratios. Nevertheless, some countries with low NPL ratios also showed elevated ratios of loans and advances allocated to Stage 2. It should be noted that, under IFRS 9, the level of exposures allocated to Stage 2 is a direct result of the approach followed by banks (according to the requirements defined in IFRS 9) when assessing significant increases in credit risk (Figure 30).

Of the total allowances for loans and advances, 82% were allocated to Stage 3, 11% to Stage 2 and 7% to Stage 1. The share of Stage 3 allowances in high NPL countries was around 90%, whereas low NPL countries had a more even distribution of allowances between stages (around 75% in Stage 3) (Figure 31).

There is a strong correlation between the coverage ratios for Stage 2 and Stage 3 loans (Figure 32). However, several countries showed elevated coverage ratios for Stage 2 loans (marked in red). This might indicate lower asset quality. Further explanations might be that the collateralisation of loans considered in Stage 2 versus Stage 3 differs, with, for example, a high share of secured loans in Stage 3, or that coverage ratios in Stage 3 might be rather low.

Figure 30: Distribution of loans and advances among Stages 1, 2 and 3 – June 2018 (%)
 Source: EBA supervisory reporting data

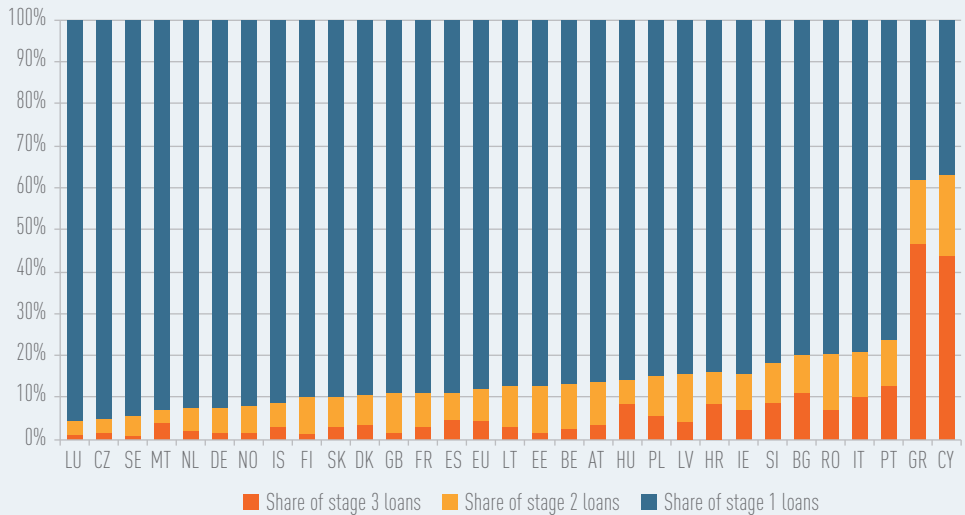


Figure 31: Total allowances on loans and advances by stage and country and EU distribution — June 2018 (EUR bn) and (%)

Source: EBA supervisory reporting data

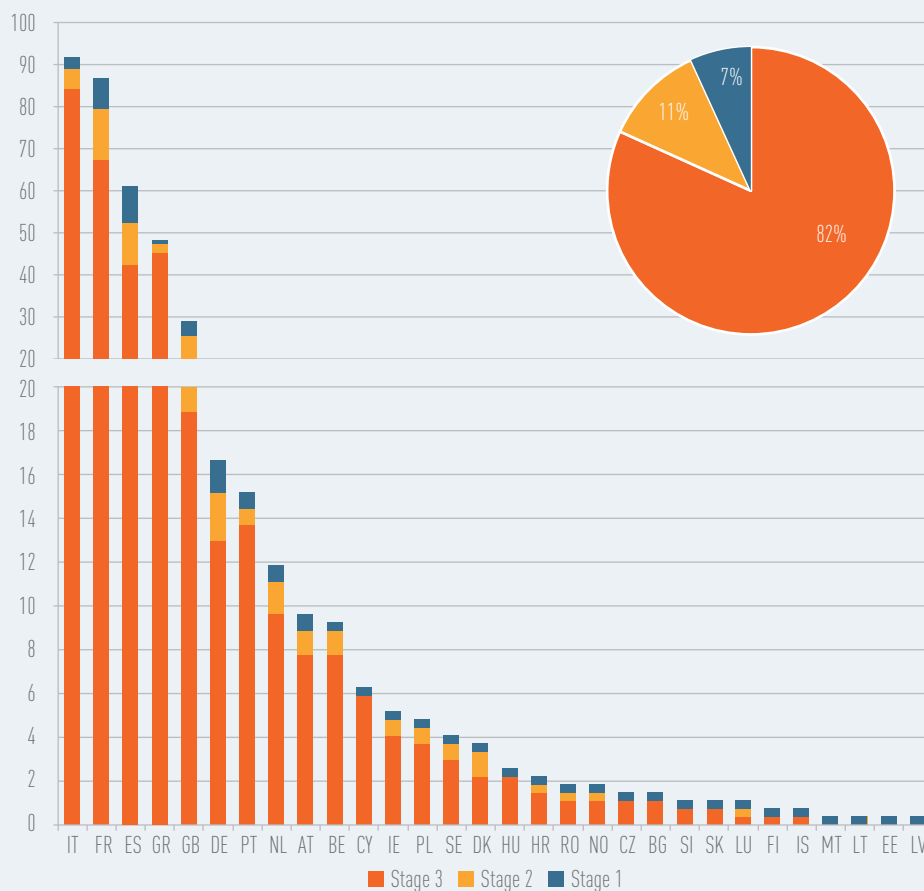
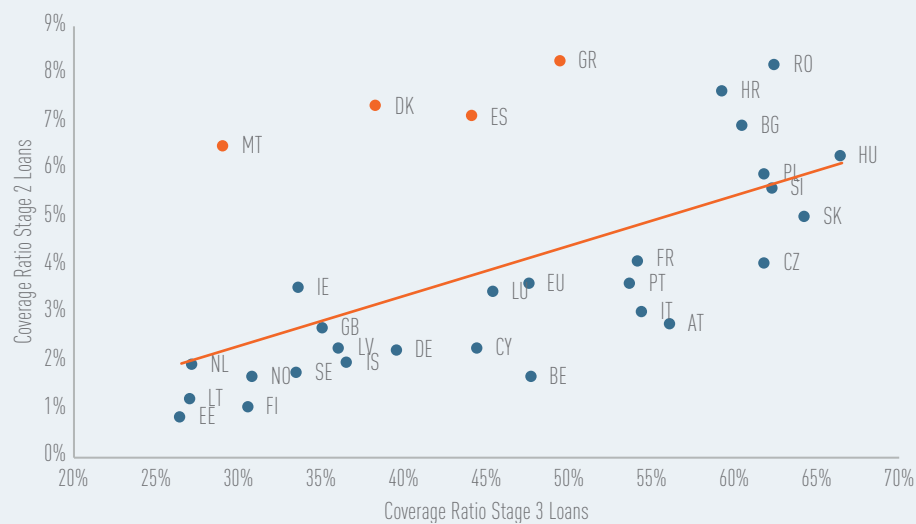


Figure 32: Coverage ratios for Stage 2 versus coverage ratios of Stage 3 loans — June 2018 (%)

Source: EBA supervisory reporting data



Banks high risk NFC exposures: trends in covenant-lite exposures

Market data indicate that in recent years issuance of leveraged loans has risen (Figure 33) ⁽³¹⁾. In addition, the share of exposures with covenant-lite structures ⁽³²⁾ has increased. Such trends have been driven by low interest rates, making loans more affordable, and by banks' search-for-yield behaviour in such an environment. In addition, increased competition among lenders might have contributed to this trend (Section 2.1).

In the first half of 2018, covenant-lite loans in Europe represented around 80% of the total issuance of leveraged loans, as opposed to only 5% in 2007 (Figure 34). This trend is broadly in line with the development in the US.

There also seems to be a strong link between the credit quality of the borrower and covenant arrangements. Within the group of borrowers rated B-, the share of covenant-lite loans has significantly grown in recent years, which adds further to the

Figure 33: Issuance volumes of leverage loans per year (EUR bn)
 Source: Bloomberg, EBA calculations

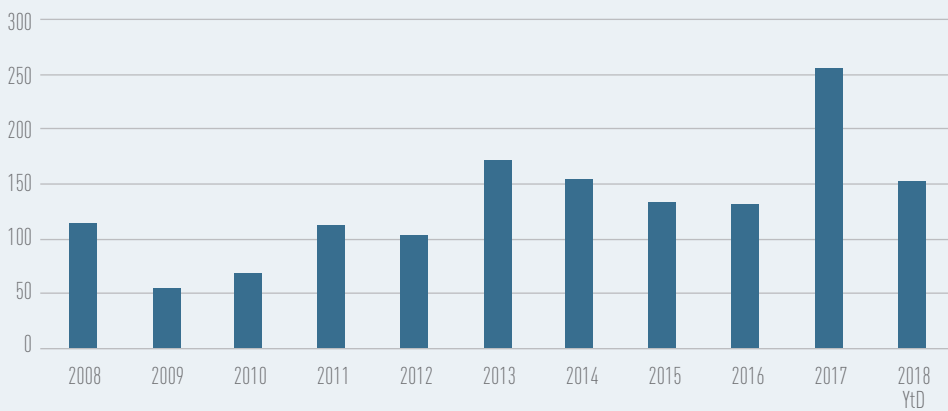


Figure 34: Trends in the composition of leveraged loans in Europe: share of loans with covenant-lite structures
 Source: S&P Global Market Intelligence, EBA calculations

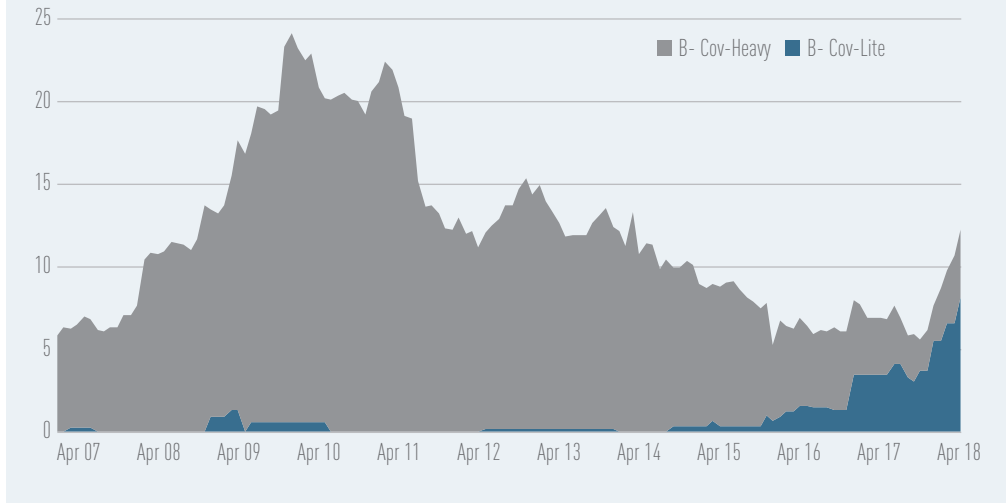


⁽³¹⁾ Leveraged loans include exposures to NFCs with, for example, low credit quality or exposures to NFCs that already have significant outstanding debt financing. In addition, exposures to borrowers that are owned by, for example, private equity investors might be considered as leveraged loans. For information on these assumptions, see the 'definition of leveraged transactions' in the ECB's guidance on leveraged transactions (https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.leveraged_transactions_guidance_201705.en.pdf).

⁽³²⁾ Covenant-lite structures include exposures with rather weak covenants when compared with other loans for similar creditors.

already elevated risks of these exposures (Figure 35). In the case of a reversing credit cycle (see Chapter 1), this might make the sudden decline in banks' asset quality in such a situation even worse.

Figure 35: Leveraged loans to borrowers rated B- in Europe [EUR bn]
 Source: S&P Global Market Intelligence LCD, S&P European LL Index, EBA calculations



Further improvements in asset quality expected

In the next 12 months both banks and analysts expect an improvement in asset quality. Banks (Figure 36), however, are more optimistic than analysts (Figure 37), as banks' expectations are that all portfolios will improve in asset quality, while analysts' responses suggest that some portfolios, such as sovereigns and financial institutions and asset finance (shipping, aircrafts and similar), will deteriorate.

In particular, more than 50% of banks expect SME, residential mortgage and corporate

loans to improve in quality. Positive responses for corporate loans has even increased by 10 pp compared with June 2017 and was the highest seen in the last 3 years. Banks do not expect much deterioration in other portfolios.

Although asset quality has improved across the board, and further improvement is expected, such development could easily turn in the event of, for example, an economic downturn (on this risk, see Chapter 1). Certain sectors, such as the SME sector, might be particularly vulnerable to a downturn, as they are more dependent on economic cycles.

Figure 36: Which portfolios do you expect to improve/deteriorate in asset quality in the next 12 months? (December 2018)
 Source: EBA RAQ for banks

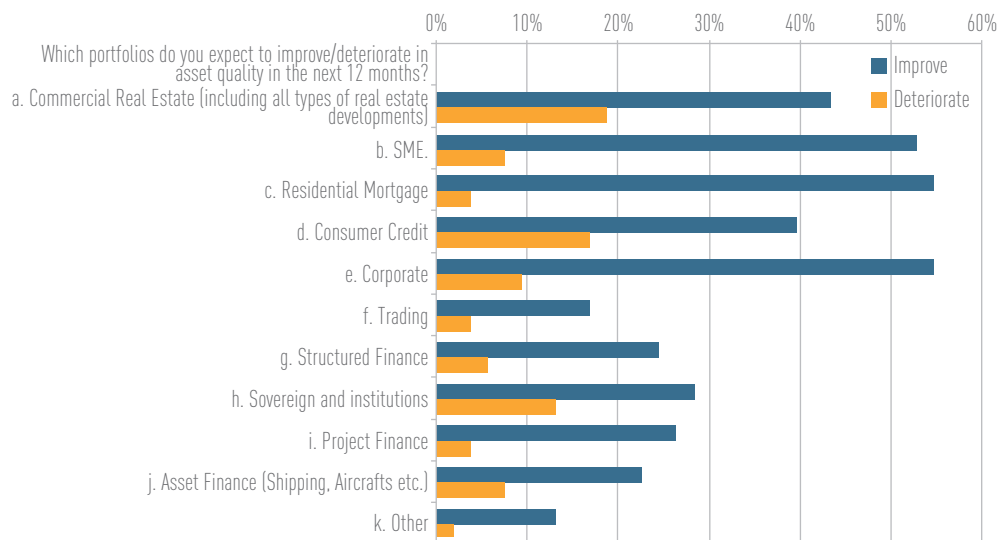
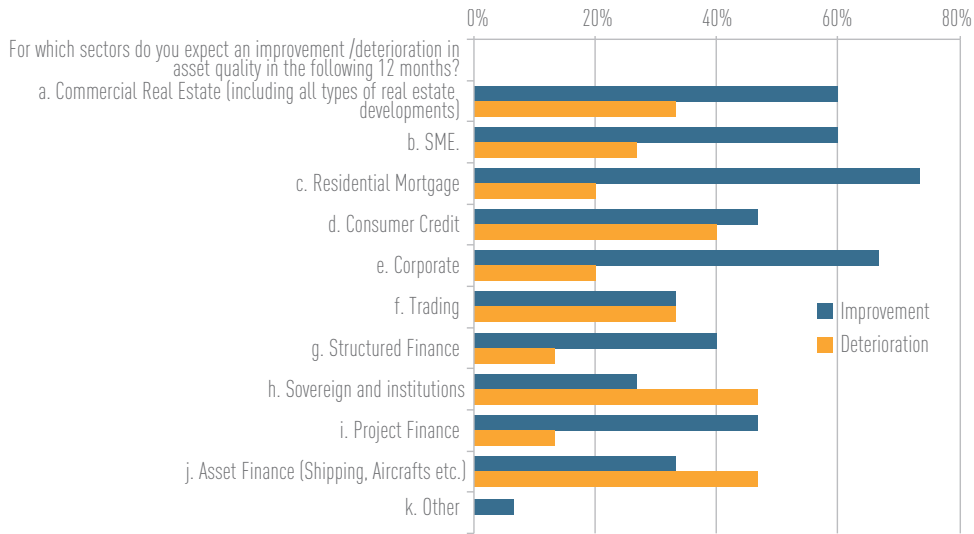


Figure 37: For which sectors do you expect an improvement/deterioration in asset quality in the next 12 months? (December 2018)

Source: EBA RAQ for analysts



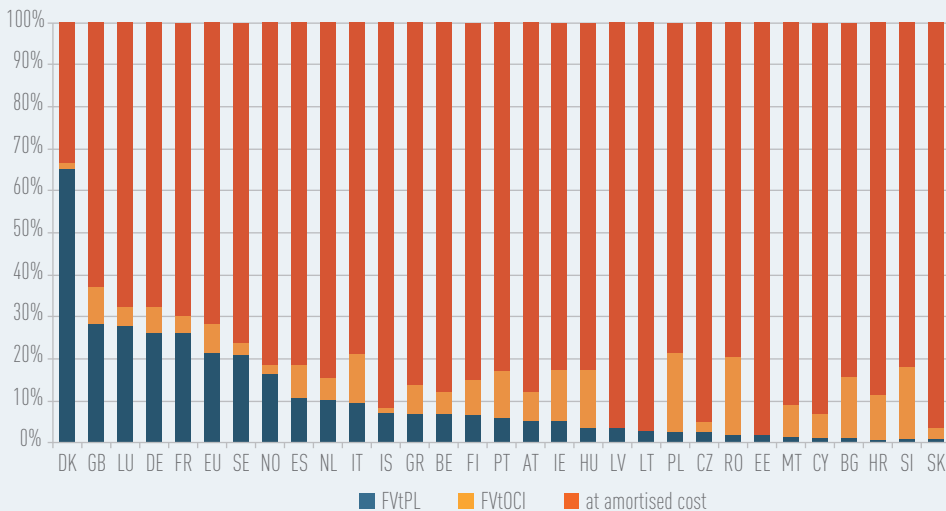
Model risk: level 2 and level 3 financial assets and liabilities

On average in the EU, the share of fair valued financial assets over total financial assets was nearly 30% (June 2018). IFRS 13 defines different levels of input parameters for the valuation of such instruments (IFRS 13.72 ff.).

Following this approach, level 2 (L2) and level 3 (L3) instruments are financial assets and liabilities, for which quoted prices in active markets are not available⁽³³⁾. This implies that these assets and liabilities require a valuation and are, as such, subject to model uncertainty and elevated liquidity risk, especially when it comes to complex products.

Figure 38: Distribution of financial assets — financial assets at fair value through P&L, fair value through OCI and at amortised cost — June 2018)

Source: EBA supervisory reporting data



⁽³³⁾ Quoted prices in active markets are considered level 1 inputs according to this concept. Level 2 inputs are inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs for the asset or liability (IFRS 13.72-90).

In June 2018, the total exposures of EU banks in L2 and L3 instruments represented 63% and 4%, respectively, of total fair valued financial assets and 84% and 3%, respectively, of total fair valued financial liabilities. The dispersion across countries of the different levels of fair value measurement was high for assets (Figure 39), while for liabilities, L2 instruments represented the largest share in most countries. Countries with an elevated share of L2 financial assets are generally those with a higher share of financial as-

sets measured at fair value (through P&L and through OCI).

Since Q1 2015, L2 and L3 financial instruments have steadily decreased. However, in 2018 there has been an increase, most likely due to the first time application of IFRS 9. IFRS 9 has resulted in an increase in the share of financial instruments mandatorily recognised at fair value. The main component of both assets and liabilities has remained stable for trading positions, representing almost 80% of the total.

Figure 39: Breakdown of total fair value (FV) financial assets (left) and liabilities (right) by country – June 2018

Source: EBA supervisory reporting data

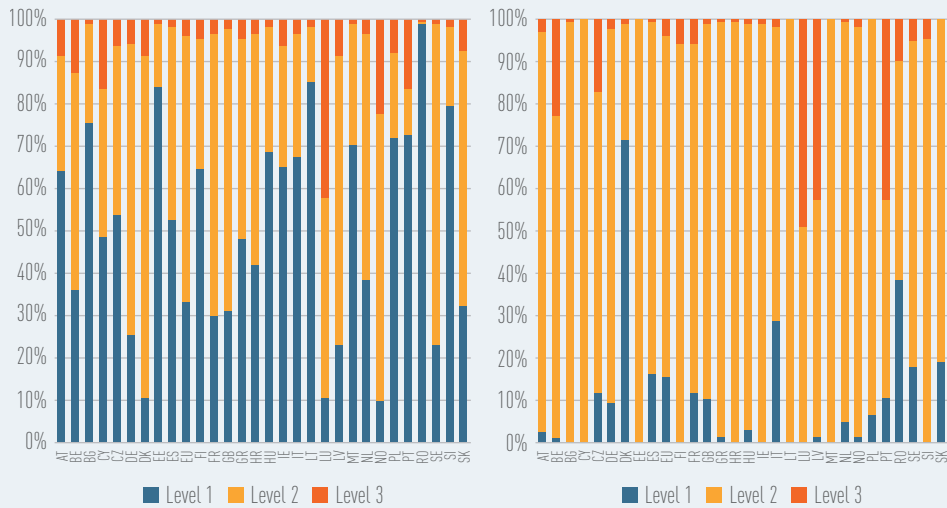
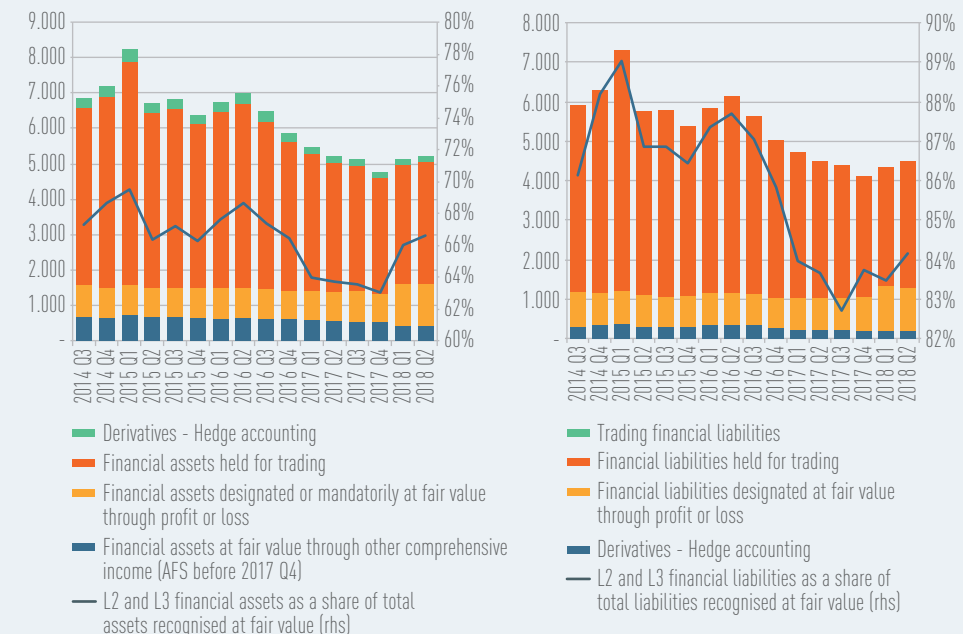


Figure 40: Evolution of L2 and L3 financial assets (left) and liabilities (right) by accounting category (EUR bn) and as a share of total assets and liabilities recognised at fair value (% , rhs) – EU total

Source: EBA supervisory reporting data



3. Liability side

On the liability side of their balance sheets, banks continued with a funding strategy of a slight reduction of market funding in favour of taking customer deposits, which increased by about 3% between June 2017 and June 2018. In their market-based funding, banks compensated for decreasing volumes of unsecured funding by increased volumes of secured funding.

A preference for secured funding instruments can be explained by their lower costs and higher resilience in times of volatility. Market data suggest that the issuance of both securitisations and covered bonds has markedly increased compared with 2017, albeit from low volumes in 2017. Increased placements of covered bonds are the result of high investor demand, not least due to the inherent security these instruments offer, and are supported by the continued ECB covered bond purchases under its expanded asset purchase programme (APP).

Primary funding activity reflects increased volatility in financial markets

In bank funding markets, volatility increased during the first three quarters of 2018. This development was mostly driven by external events, such as elections in some countries and global trade tensions. The distribution of issuances was uneven across the first three quarters of 2018, as banks markedly reduced their issuance activities in episodes of heightened volatility^[34].

While in general no major constraints could be observed to secured and unsecured funding,

there has been some reluctance to place subordinated instruments. This was mainly connected to increased pricing. In addition, some banks domiciled in countries having experienced financial stress in the past have shown reluctance to issue because of increased pricing. General funding conditions nevertheless continued to be positively influenced by a very accommodative monetary policy stance and investors' search for yield.

For the euro area, with the last tender of the ECB's targeted long-term refinancing operation (TLTRO II) in March 2017, volumes of TLTRO increased to EUR 764 bn. TLTRO volumes have remained high since March 2017, and were at over EUR 725 bn in October 2018. Minor reductions of TLTRO exposure volumes during the first three quarters of 2018 were mainly attributable to maturing tranches (Figure 41).

An analysis of banks' funding plans and, in particular, a comparison of planned net issuances of debt securities with maturing TLTRO volumes show that the latter remain significantly higher than the former (Table 2)^[35]. Over the forecast period (2018-2020), banks plan net issuances of debt securities reaching EUR 378 bn. This compares with total outstanding TLTRO volumes of EUR 503 bn maturing in 2020. This comparison suggests that banks plan to replace 73% of outstanding TLTRO with debt securities, with the remaining 27% unexplained. An increase in banks' customer deposits might partly replace this remaining, unexplained share.

Table 2: Net issuance volumes of debt securities (euro area banks only) versus outstanding TLTRO volumes

Source: EBA funding plans report, Bloomberg (outstanding ECB open-market operations), EBA calculations

	2018	2019	2020
Debt securities: net issuances	EUR 108 bn	EUR 114 bn	EUR 155 bn
Maturing TLTRO volumes	EUR 12.4 bn	0	EUR 503 bn ^[36]

^[34] For information on the volatility in financial markets during the year, see Figure 4.

^[35] See EBA's 2018 'Report on Funding Plans', 19 September 2018, based on a sample of 159 EU banks (<https://eba.europa.eu/documents/10180/2357155/EBA+Report+on+Funding+Plans.pdf>).

^[36] This amount comprises the three TLTRO2 operations settled in 2016 and maturing in 2020. It does not take into account the EUR 233 bn settled in 2017 and maturing in March 2021.

Funding activity trends in countries outside the euro area are similar, for instance with the funding for lending programme and the term funding scheme in the UK.

Customer deposit base still increasing

The relevance of customer deposits in bank funding has continued to increase, although average deposit rates have been at historically low levels in 2018. The share of customer deposits in total liabilities has further risen from 53.7% in June 2017 to 55.3% in June 2018, its highest level since December 2014. The increase in deposits in parallel to rising loans has resulted in a stable

loan-to-deposit ratio of 118.4% (June 2017: 118.2%). This confirms a strategy of EU banks to focus on more stable sources of funding, in particular on retail deposits. Going forward, responses to the RAQ indicate that retail deposits are expected to remain an important element in banks' funding strategies (Figure 45).

While customer deposits have gained further importance in the liability composition, the share of unsecured and secured debt securities and of deposits from credit institutions has slightly decreased (from 18.8% in June 2017 to 18.6% in June 2018, and from 7.1% to 6.7%, respectively).

Figure 41: Main refinancing operations, marginal lending facility, LTRO, lending to euro area
 Source: ECB data warehouse, EBA calculations

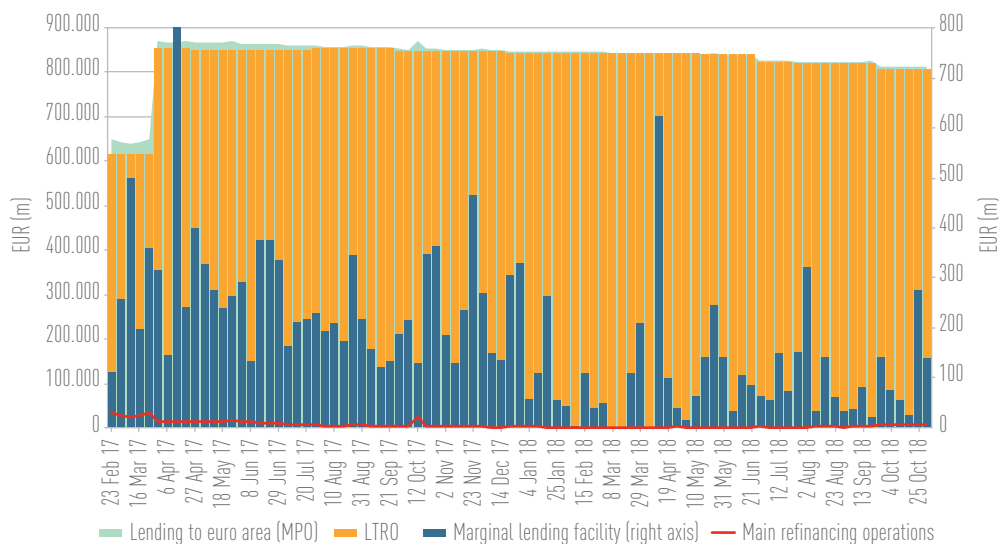


Figure 42: Loan-to-deposit ratio dynamics (numerator and denominator)
 Source: EBA supervisory reporting data

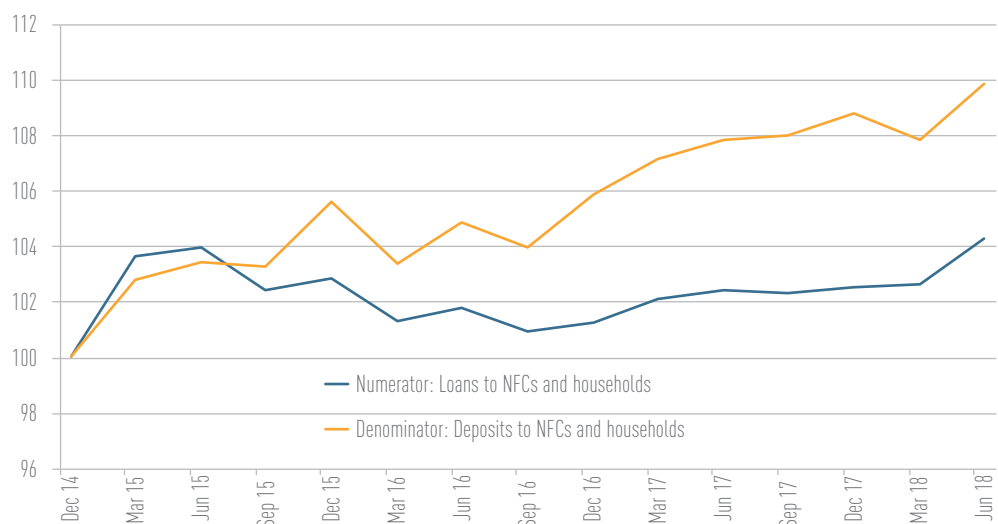
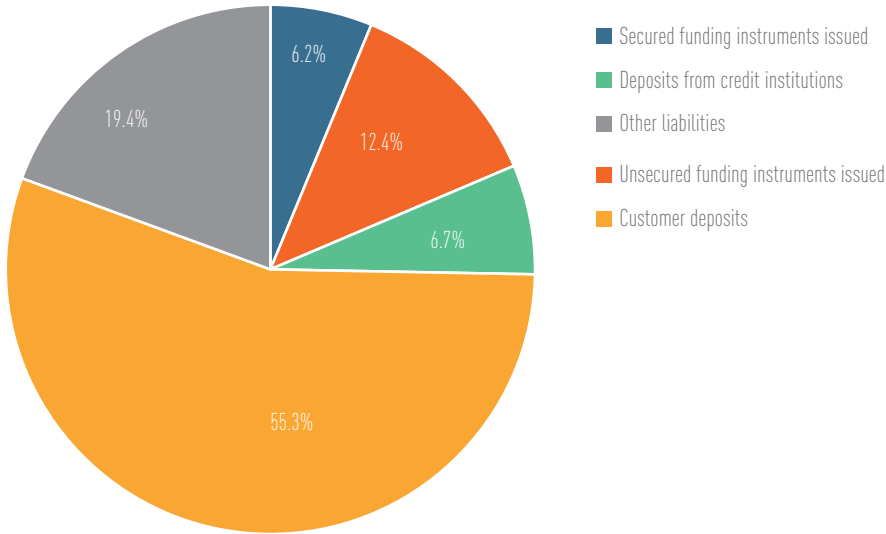


Figure 43: Liability composition of EU banks — June 2018
 Source: EBA supervisory reporting data

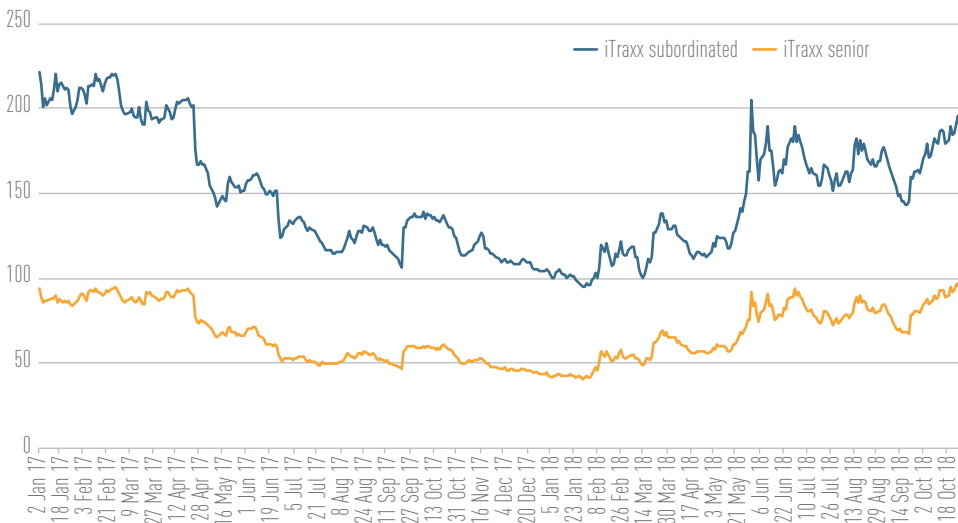


Market-based funding: episodes of volatility also reflected in pricing

Spreads of all market funding instruments have been more volatile since the beginning of this year. They have been on an increasing trend in the course of the year, albeit from very tight levels. Spread differentials between unsecured and covered bonds, as well as between unsecured and subordinated instruments have widened. ITraxx data for European financials for both senior unsecured and subordinated debt indicate substantially higher spread volatility since the beginning of the year (Figure 44).

Increased spread volatility is attributable to, for instance, macroeconomic factors, including uncertainties about the path of monetary policy normalisation, and to political events (see Chapter 1). The trend of widening spreads is also linked to a reassessment of investor risk perceptions about bank debt instruments. Trading market liquidity has mostly displayed resilience throughout the year, including in times of heightened market uncertainties. However, concerns about vulnerabilities to the banks’ refinancing capacity at reasonable prices still persist should risk premia or market volatility rise suddenly.

Figure 44: iTraxx financials (Europe, senior and subordinated, 5 years, bps)
 Source: Bloomberg, EBA calculations



Foreign currency funding and potential liquidity challenges

Some banks also hold significant amounts of foreign (non-domestic) currencies in their funding profiles. The EBA has identified in its monitoring of liquidity coverage requirements a total of 72 banks reporting US dollars as a significant foreign currency ⁽³⁷⁾. Their liquidity coverage ratio (LCR) in US dollars stood at 91% in December 2017. It is much lower than the average LCR of 143% for all currencies for the same sample of banks. In addition, 19 banks reporting pounds sterling as a significant foreign currency reported a weighted average LCR of 95% only. While banks can in general swap foreign currencies and raise funds in foreign currency markets, the ability to swap currencies may be constrained in stressed conditions with potential challenges to access liquidity. Low levels of LCR in a significant currency may therefore pose additional challenges.

In light of relatively low liquidity positions in US dollars and pounds sterling and the potential to access or swap these positions, it will be important that banks concerned carefully manage foreign currency positions in their funding profiles, including short-term liquidity positions. Banks should also avoid significant currency mismatches in their balance sheets. This is particularly relevant in an environment of heightened political ten-

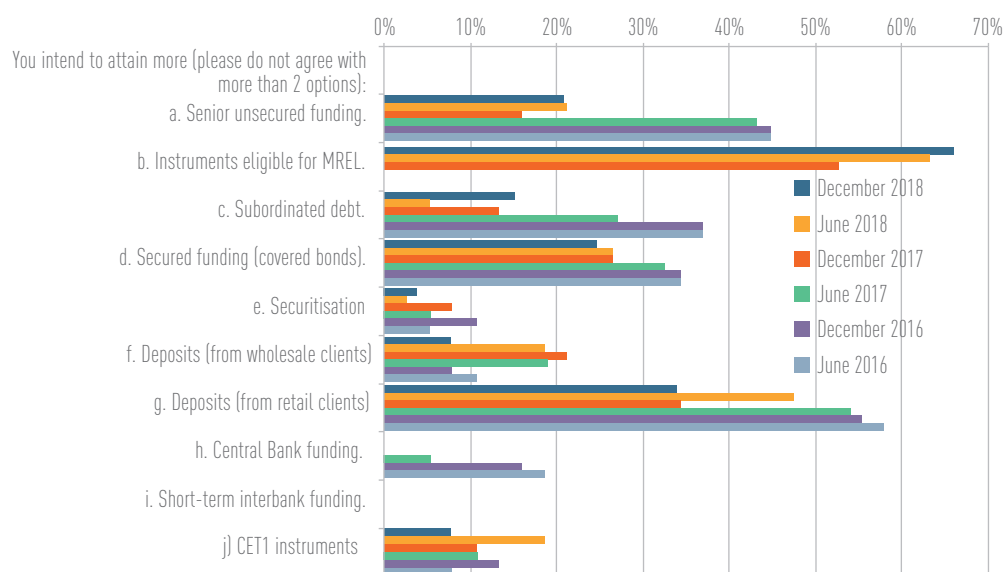
sions with risks of suddenly increasing risk premia, including uncertainties surrounding Brexit and concerns about EMEs (see Chapter 1). In this context, the regulatory framework provides for an option for competent authorities to require credit institutions to restrict currency mismatches.

Building loss-absorbing capacity

While the total volume of senior unsecured funding decreased in the first half of 2018 compared with the first half of 2017, market data suggest that issuance volumes of senior bail-in-able debt instruments increased markedly compared with 2017 as banks implemented the MREL and total loss-absorbing capacity (TLAC). While issued volumes of senior bail-in-able debt instruments increased, issuance of subordinated instruments, such as of Tier 2 (T2), decreased in the first three quarters of 2018 compared with 2017. Responses to the RAQ confirm that the implementation of MREL requirements is a key driver of funding strategies, and show that instruments eligible for MREL are the most important source of funding that banks intend to attain (Figure 45). Analysts share expectations that instruments eligible for MREL are of high relevance in banks' funding strategies.

While large banks have already issued significant amounts of MREL-eligible instruments,

Figure 45: Intentions to attain more funding via different funding instruments
 Source: EBA RAQ for banks



⁽³⁷⁾ See EBA's 2018 'Report on Liquidity Measures under Article 590 (1) of the CRR', 4 October 2018, based on a sample of 126 banks from 28 Member States and one EEA state (<https://eba.europa.eu/documents/10180/2380948/2018+EBA+Report+on+Liquidity+Measures+under+Article+509%281%29%20of+the+CRR.pdf>).

medium-sized banks, small banks required to hold MREL funding and banks with weaker market perceptions often still have to reach high volumes of loss-absorbing instruments.

The ability of banks to meet their expected MREL requirements will be an important challenge going forward. Market volatility and increasing prices have already affected issuance volumes in 2018. Banks with further needs to build loss-absorbing capacities may face further challenges in an environment of monetary policy normalisation and expected interest rate increases with steepening yield curves.

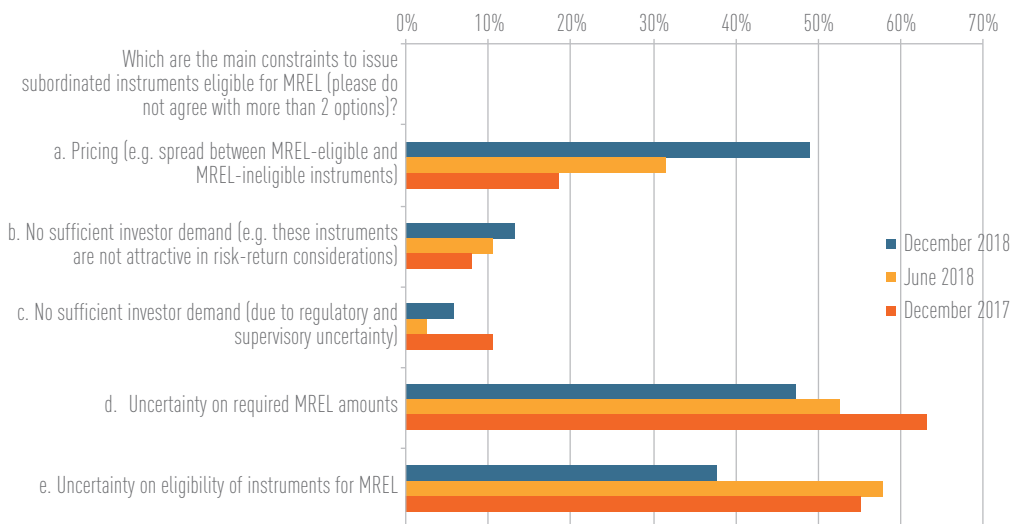
Against this backdrop, RAQ responses show that banks consider the pricing of instruments eligible for MREL as the most relevant constraint to issuing these instruments

(Figure 46). Challenges for banks with weaker market perceptions and some medium-sized banks domiciled in countries affected by the sovereign crisis could be amplified by the profitability constraints that these banks often face (see Chapter 5).

Banks still consider uncertainties related to the determination of actual levels of MREL, the eligibility of instruments for MREL and subordination as important constraints to issuing loss-absorbing instruments. The share of banks considering such pending uncertainties as constraints has nevertheless decreased markedly compared with previous RAQs. This indicates that regulatory policy and the actions of authorities, including detailed MREL-eligibility criteria of instruments in different jurisdictions, are becoming clearer.

Figure 46: Constraints to issuing subordinated instruments eligible for MREL

Source: EBA RAQ for banks



Benchmark rate replacement initiatives and related risks

Benchmark reference rates play a major role in banks’ daily business, mainly applied as reference rates in refinancing and derivatives operations as well as lending activity ^[38]. As such, they also implicitly play a key role in banks’ risk management as well as other internal operations. Major examples of such reference rates include the Euro Overnight Index Average (EONIA),

the Euro Interbank Offered Rate (EURIBOR) and the London Interbank Offered Rate (LIBOR), which is available for different currencies, such as the pound sterling or US dollar. Reference rates are also commonly referred to as Interbank Offered Rate (IBOR) benchmark rates. Cases of manipulations of these widely applied reference rates, combined with the elevated volatility of interbank funding rates, have led to different initiatives across the globe to replace them with risk-free (benchmark) rates (RFRs).

^[38] See also last year’s risk assessment report, covering the transition-related risks from EURIBOR and LIBOR replacements, page 62 (<https://www.eba.europa.eu/documents/10180/2037825/Risk+Assessment+Report+-+November+2017.pdf/4f9778cc-1ccd-4f65-9bc3-eb76971b9a4a>).

The ECB decided to develop a euro short-term rate (ESTER), in order to replace EONIA. It intends to publish ESTER for the first time by October 2019 ⁽³⁹⁾. ESTER is intended to reflect the borrowing cost of overnight unsecured wholesale funding of euro area banks, denominated in euros. It aims to supplement existing benchmark rates, as produced by the private sector, and will serve as a backstop RFR. In parallel, the European Money Markets Institute (EMMI), the EURIBOR administrator, is working on the development of a hybrid methodology ahead of its application for authorisation as administrator under the EU Benchmark Regulation ⁽⁴⁰⁾. Overall, the transition to the replacement of benchmark reference rates with RFRs gives rise to uncertainty and elevated risks.

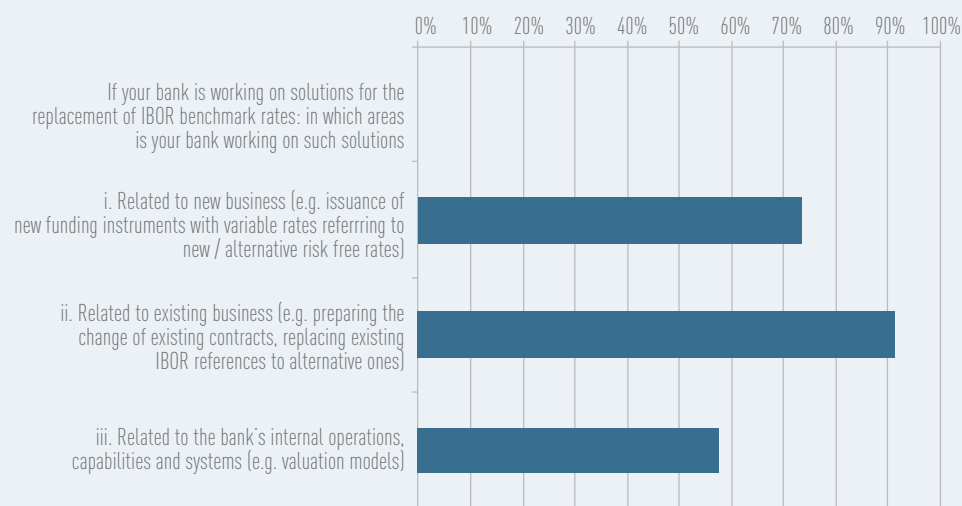
The Bank of England has already introduced the Sterling Overnight Index Average (SONIA). It is assumed that the pound sterling LIBOR will be discontinued in 2021 ⁽⁴¹⁾. Several bonds applying SONIA as a refer-

ence rate were issued in 2018, including a covered bond and a senior unsecured placement from the European Investment Bank (EIB) ⁽⁴²⁾.

Banks face different types of risks related to the upcoming replacements of reference rates. They need to manage the transition of existing business to the new RFR, but also have to be prepared to apply the latter in their new business amid a tight timeline for the application of and the compliance with the EU Benchmarks Regulation by January 2020 ⁽⁴³⁾. The RAQ results confirm that banks are aware of this challenge, with around 85% of them confirming that they are working on solutions for the IBOR replacement. The RAQ responses also show that most of this work is related to existing business, for example to amending existing contracts (agreement of about 90%). It is followed by work related to new business, as the issuance of new funding instruments, which already apply the new RFR (agreement of slightly more than 70%;

Figure 47: IBOR benchmark rate replacements: areas in which banks are working – December 2018

Source: EBA RAQ for banks



⁽³⁹⁾ See the ECB's homepage on the 'euro short-term rate (ESTER)' (https://www.ecb.europa.eu/paym/initiatives/interest_rate_benchmarks/euro_short-term_rate/html/index.en.html).

⁽⁴⁰⁾ See Regulation (EU) 2016/1011 on indices used as benchmarks.

⁽⁴¹⁾ See the Bank of England's letter to UK banks, 'Firms' preparations for transition from LIBOR to risk-free rates', dated 19 September 2018 (<https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/letter/2018/firms-preparations-for-transition-from-libor-to-risk-free-rates-banking.pdf?la=en&hash=79FFF-C3A5790F5ED59FBDBA370200AE9D7803DC9>).

⁽⁴²⁾ The ISINs of the two mentioned issuances are XS1878123303 and XS1789459713, respectively.

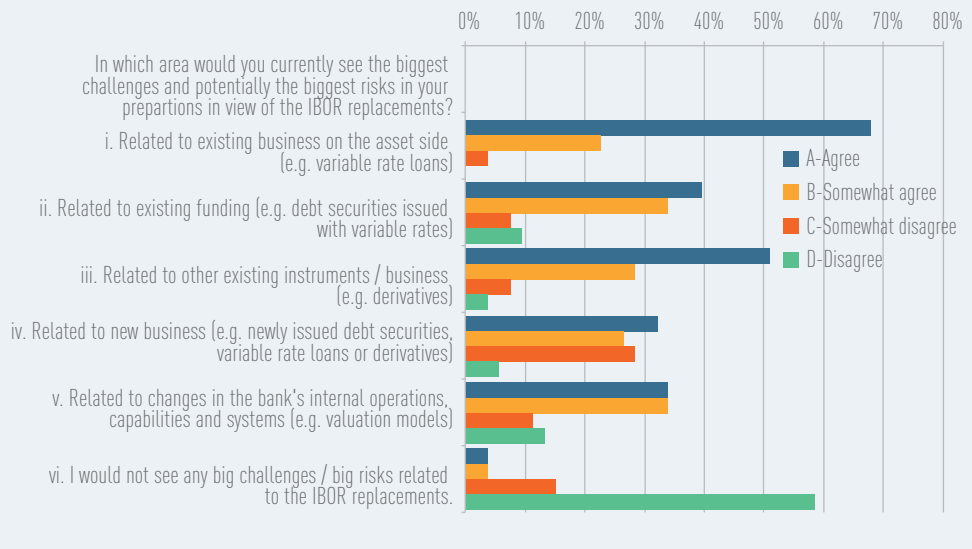
⁽⁴³⁾ See the regulation referred to in footnote 42.

see the abovementioned issuances with reference to SONIA as examples for such initiatives), whereas less than 60% of the respondents point to ongoing work related to banks' internal operations, capabilities and systems.

When asked about the areas in which banks see the biggest challenges and risks, around 90% of the respondents pointed to the existing business on the asset side

(sum of 'agree' and 'somewhat agree'). It is followed by existing other business, which includes derivatives (around 80% of the respondents agree and somewhat agree). Finally, the responses also confirm that a large majority of the banks see big challenges and/or risks related to the IBOR replacements (nearly 80% of the respondents disagreeing or somewhat disagreeing with the statement that they would see any such challenges and/or risk) (Figure 48).

Figure 48: IBOR benchmark rate replacements: areas of biggest challenges and/or risks – December 2018
 Source: EBA RAQ for banks



4. Capital

Capital ratios have increased further

European banks' capital ratios stayed stable despite a pick up of RWAs in the first half of 2018. As of June 2018, the average CET1 ratio stood at 14.5%, which represents an increase of 20 bps compared with June 2017.

The same trend can be seen in the total capital ratio, which improved slightly by 20 bps YoY and reached 18.8% as of June 2018. The Additional Tier 1 (AT1) component has increased on average by 10 bps ⁽⁴⁴⁾, while the T2 components decreased from 2.9% to 2.7% ⁽⁴⁵⁾. As of June 2018, the leverage ratio stood at 5.3% (5.1% if a fully phased-in definition of Tier 1 capital is used) and as such remained unchanged compared with June 2017.

While banks' capital ratios have improved across the sample, the dispersion among banks and countries has remained wide (Figure 50). Several banks in central, eastern and northern European jurisdictions show average CET1 ratios well above the EU average, while many banks in a number of south European countries are on average below the EU

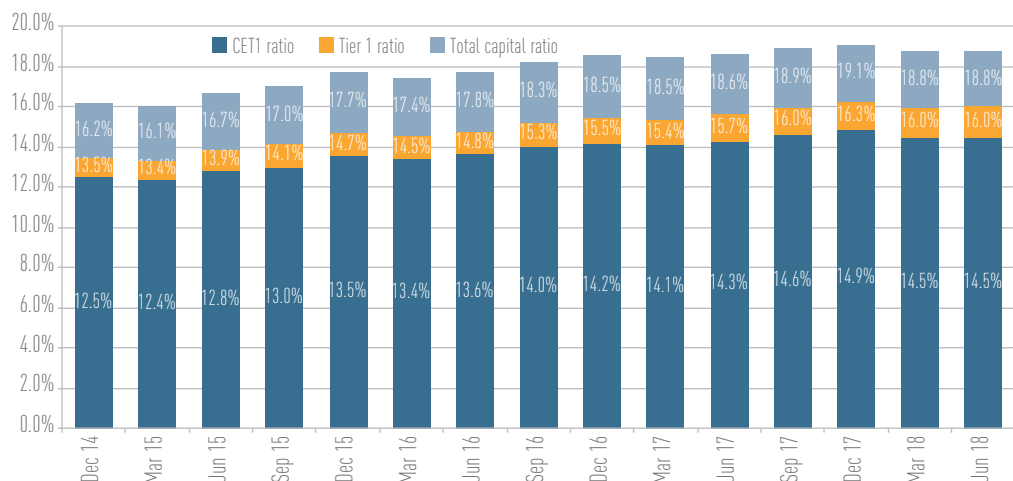
level. Notwithstanding the dispersion, 88% of the banks in the sample have a CET1 ratio above 12%, and 45% of the banks have a CET1 ratio of above 16%.

The level of capital eligible as CET1 as of June 2018 has remained almost unchanged since 2017 (Figure 51), with an increase in retained earnings and other reserves, which together make up almost 70% of total common equity.

The increase in retained earnings and other reserves has been offset by a decrease in minority interest and accumulated OCI. In particular, the accumulated OCI has seen a significant decline in the first two quarters of 2018.

Banks have also managed to increase the share of capital instruments during the previous year, reversing the previous trend. The slight increase in paid-in capital and share premiums suggests that banks have issued shares and discontinued the share buy-back programmes seen in 2017.

Figure 49: Capital ratios (transitional) — June 2018
Source: EBA supervisory reporting data



⁽⁴⁴⁾ On the basis of bank-by-bank data, for 32% of the banks included in the sample the AT1 is equal or above 1.5%.

⁽⁴⁵⁾ On the basis of bank-by-bank data, for 50% of the banks included in the sample the T2 is equal or above the regulatory level of 2%. For information on declining T2 issuance volumes, see Chapter 3.

Figure 50: CET1 ratio dispersion — by country and EU average (left, June 2018) and 5th and 95th percentiles, interquartile range (right)

Source: EBA supervisory reporting data

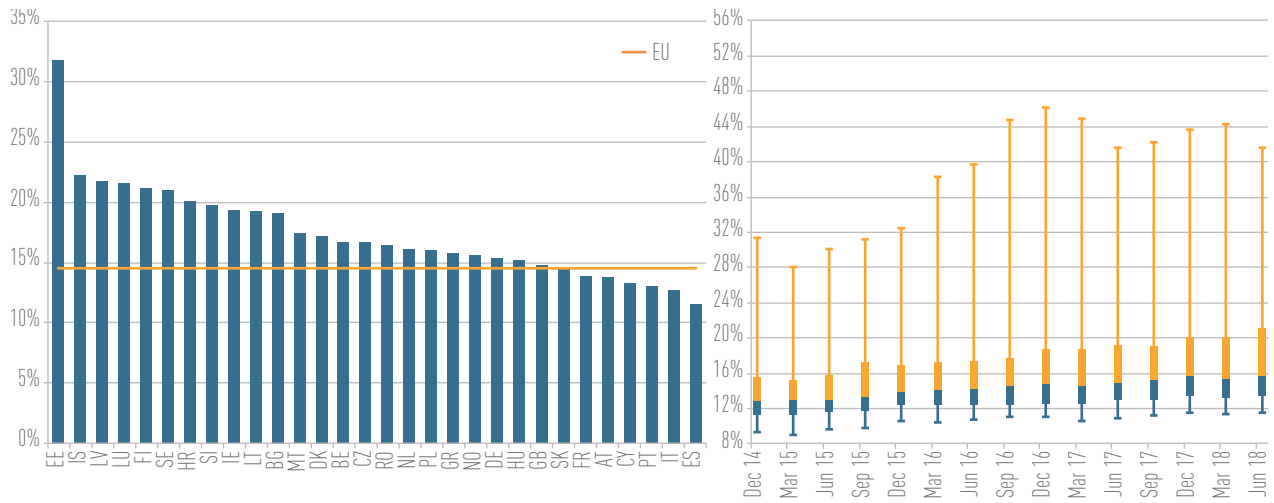


Figure 51: Evolution of capital (EUR bn)

Source: EBA supervisory reporting data



The impact of IFRS 9 transitional arrangements in capital

From December 2017 to March 2018, the CET1 fully loaded ratio decreased from 14.6% to 14.3%, a trend similar to the transitional CET 1 ratio. This decrease is driven by different factors, including seasonality (distribution of dividends), but also the first time application of IFRS 9 and, for the transitional CET1 ratio, Capital Requirements Regulation (CRR) provisions regarding a phase-in of the impact of IFRS 9 on capital. Data from supervisory reporting do not provide the first time application impact of IFRS 9 in CET1. However, the results from the EBA’s stress test exercise revealed that the impact of the move to IFRS 9 on banks’ aggregate CET1 capital ratio was -10 bps on a transitional basis

and -20 bps on a fully loaded basis ^[46]. As regards the transitional impact of IFRS 9 on capital, the CRR was amended to allow for a transitional recognition of this impact, permitting banks to add back a percentage of the recognised ECL to CET1 capital, partially neutralising the impact of IFRS 9 in prudential terms ^[47]. The aim of this approach is to lessen the impact on capital ratios during a 5-year period.

^[46] For more details about the impact of the restatement of banks’ financial statements from IAS 39 to IFRS 9, as implemented in the stress test methodology, and the sample of banks included in the exercise, see <https://www.eba.europa.eu/documents/10180/2419200/2018-EU-wide-stress-test-Results.pdf>

^[47] Regulation of the European Parliament and of the Council amending Regulation (EU) No 575/2013 as regards transitional arrangements for mitigating the impact of the introduction of IFRS 9 on own funds (<https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX-3A32017R2395>).

Data reported by banks as of June 2018 show that, on average, 1.3% of total CET1 capital from all banks in the EU stemmed from a transitional add-back of effects from the first time application of IFRS 9 (Figure 52). Expressed in terms of the impact on CET1 ratios, transitional arrangements

added back 18 bps to CET1 ratios at the EU level. Given that only 45 banks have reported making use of IFRS 9 transitional arrangements, the impact for some of those banks might be higher. Considering only data from those 45 banks, the weighted average impact on their CET1 ratio was around 50 bps.

Figure 52: Transitional adjustments to CET1 due to IFRS 9 (amounts in EUR bn if not otherwise stated)

Source: EBA supervisory reporting data

	Dec 17	Mar 18	Jun 18
RWA	11,249	11,270	11,378
CET1 capital (transitional)	1,673	1,636	1,650
IFRS9 transitional adjustments		19	21
Impact of IFRS9 transitionals on CET1 ratio		17 bps	18 bps
Share of IFRS 9 transitionals to CET1 capital		1.2%	1.3%

RWA reduction trend reversed in 2018

The trend of declining RWAs came to a halt in the first quarter of 2018 (Figure 53). For the first time since March 2015, RWAs increased compared with the previous quarter. This trend reversal suggests that most banks have effectively finished their asset reduction programmes or that the origination of new assets outstrips the reduction of legacy assets (see Chapter 2).

Credit risk and market risk were the main drivers of the RWA increase in 2018. The increase in credit risk in the first half of 2018 (+1% since December 2017) reflects the increase in lending to households and NFCs (see also Chapter 2). The increase in market

risk was significant in Q1 2018 (+5% since Q4 2017) and most likely due to the increased volatility of financial markets seen at the beginning of the year (see Chapters 1 and 3). The increase of RWAs is a trend to be monitored in the next quarters, also in light of economic and financial developments.

Outlook for RWAs and capital

In line with the recapitalisation efforts since the financial crisis, EU banks have strengthened their capital position in recent years and have maintained this position in 2018. Strong capital positions helped to increase market confidence in the EU banking sector and banks have built up a buffer to guard against unexpected losses.

Figure 53: Evolution of RWAs (EUR bn)

Source: EBA supervisory reporting data

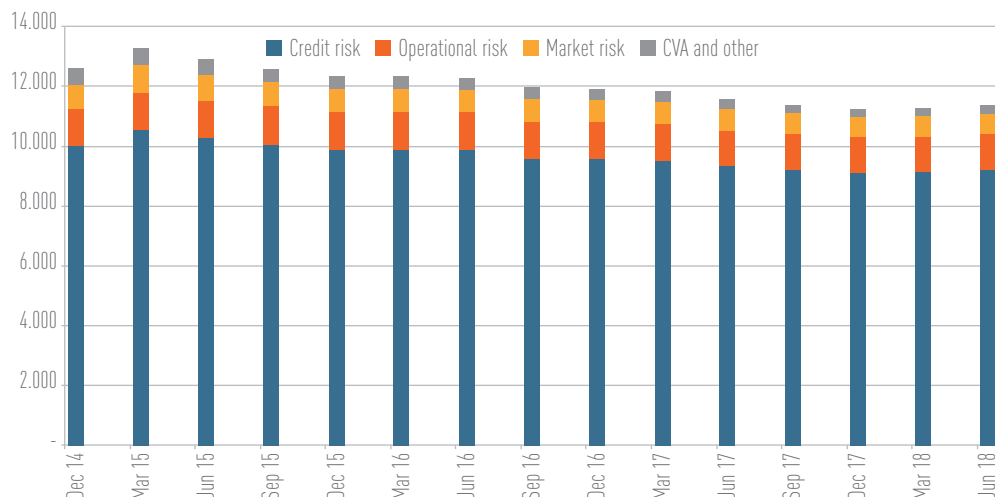
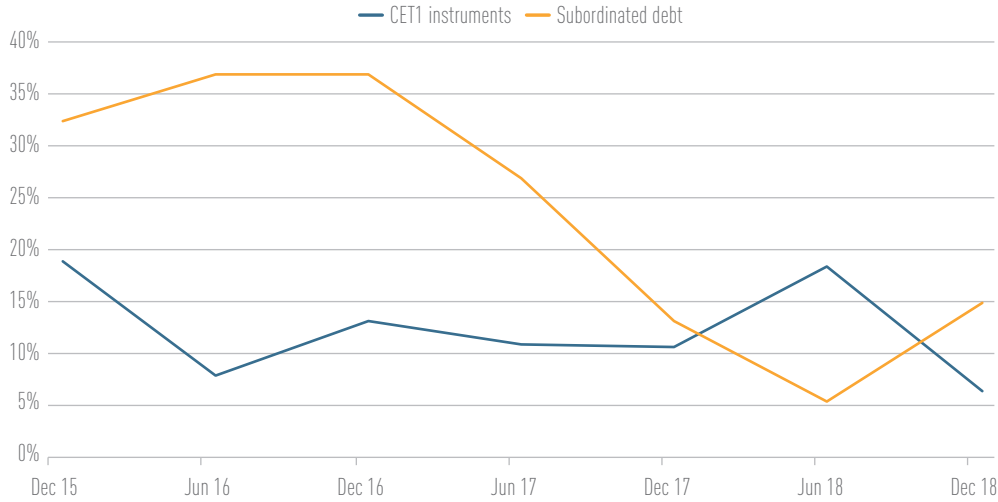


Figure 54: Banks' plans to issue CET1 or subordinated debt in the next 12 months (% of RAQ respondents)

Source: EBA RAQ for banks



In the near future, banks do not expect to issue more CET1 instruments. On the basis of the RAQ, the percentage of banks which do envisage issuing CET1 instruments in the following 12 months has decreased to about 5% (Figure 54). Given that assets are projected to increase, banks and supervisory authorities will have to monitor the evolution of CET1 ratios and remain vigilant that retained earnings and other reserves increase in line with RWA. In addition, the future introduction of output floors, as part of the implementation of Basel rules, may create additional capital needs

for some IRB (internal ratings based) banks. These potential capital needs will be quantified as part of the EBA's impact assessment.

As regards subordinated debt (AT1 and T2 instruments), banks do not plan significant issuances in the next 12 months (see Figure 45 and Chapter 3). On the basis of responses to the RAQ, about 15% of banks envisage issuing subordinated debt instruments. While this percentage is low by historical standards, it has increased from its lowest level in June this year (Figure 54).



5. Profitability

The average RoE reported as of June 2018 was 7.2%, almost unchanged compared with June 2017 (Figure 55). Even though profitability has shown an increasing trend since December 2014, the current level seems to be insufficient to guarantee long-term sustainability of banks' business models. According to responses provided by banks to the EBA's RAQ, most banks believe they can operate on a long-term basis with RoE levels of 10% or higher. Only about 20% of banks deem RoE levels of below 10% viable and sustainable. Dispersion of profitability across banks remained broadly at June 2017 levels and differences across countries are still significant, with RoE ranging between -2% and 21%.

5.1. Income

Net operating income continues to decline

One of the key challenges for banks in recent years has been that they have not been able to increase revenues. This is also explained by asset reduction programmes in the years since the financial crisis (Section 2.1). However, generating income to support investments in technology and growth is vital to ensure the long-term viability of banks. As of June 2018, total net operating income was 3% below the income generated in the same period of 2017 and almost 5% below the 4-year average (see Figure 56, which shows the evolution of total net operating income and its

main sources indexed, with June 2015 representing 100).

NII was the most important source of revenues for banks. NII continued its decline in the first half of 2018 (almost -1% compared with the same period of 2017) and was about 3% below the 4-year average. As of June 2018, the net interest margin (calculated as net interest income divided by interest-earning assets) reached a new low, of 1.44% (Figure 57). The main driver is the numerator, net interest income, which has declined by almost 0.7% since June 2017 and has not kept pace with the denominator, interest-earning assets, which have increased by almost 1.4% during the same period.

Results from the ECB's Bank Lending Survey (October 2018 edition) identified competitive pressure as the main contributor to the easing in credit standards in the euro area ⁽⁴⁸⁾. This impact of increasing competition was also evident in data reported by banks in the context of funding plans ⁽⁴⁹⁾, according to which the net interest spread for households and NFCs — measured as the difference between interest rates for client loans versus

⁽⁴⁸⁾ See https://www.ecb.europa.eu/stats/ecb_surveys/bank_lending_survey/html/index.en.html

⁽⁴⁹⁾ The report on banks' funding plans was published by the EBA in September 2018 (<http://www.eba.europa.eu/risk-analysis-and-data/risk-assessment-reports/thematic-reports>).

Figure 55: Return on equity
Source: EBA supervisory reporting data

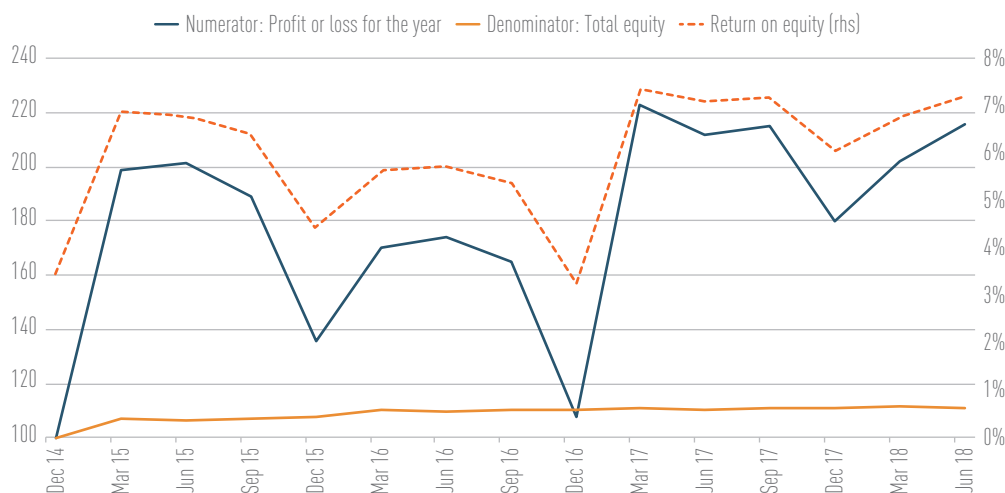


Figure 56: Evolution of net operating income (rhs, EUR bn) and its main sources (lhs, June 2015 = 100)
 Source: EBA supervisory reporting data

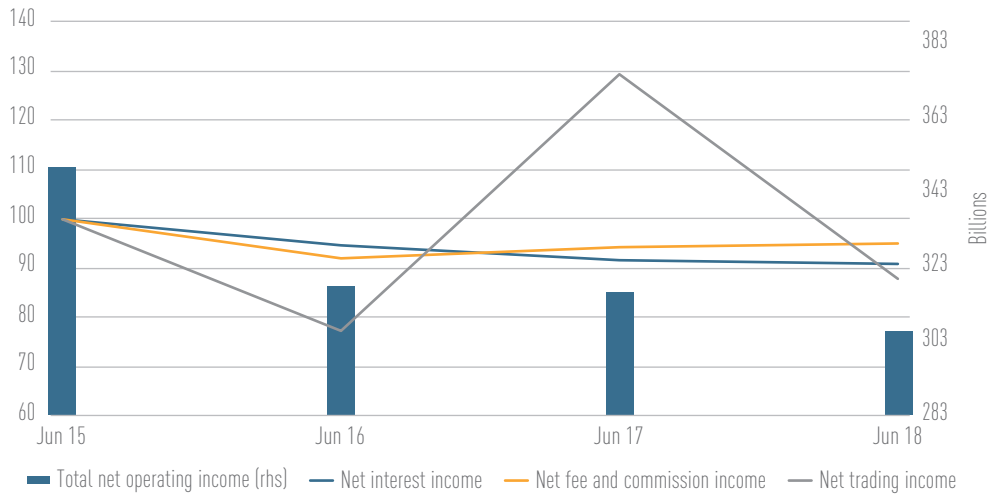
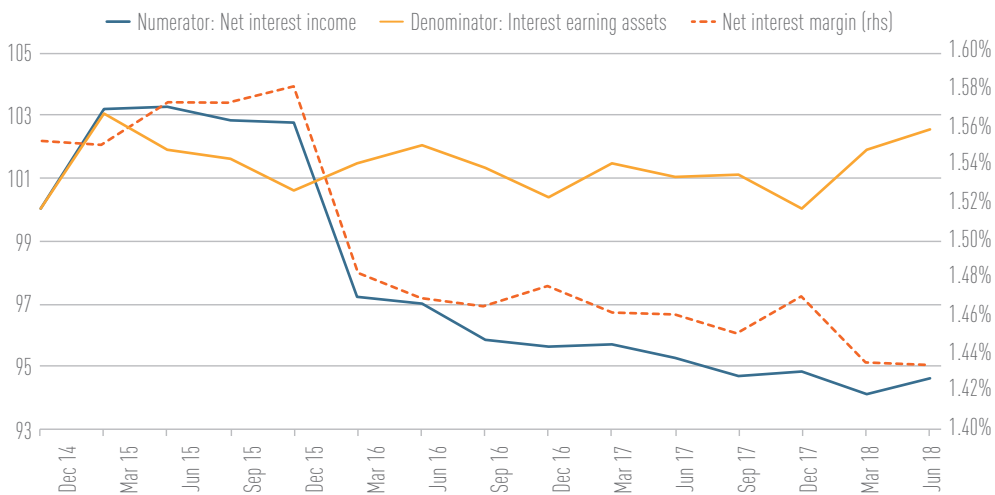


Figure 57: Net interest margin
 Source: EBA supervisory reporting data



client deposits – actually contracted in 2017 (Figure 58) ^[50]. As of December 2017, the average net interest spread for banks’ client business was 2.61%, almost 15 bps lower than 1 year earlier. Most banks expect this trend of declining interest spreads to continue, and estimate the average spread in 2018 to be 2.50%.

Banks will also face pressure on funding costs, with the need to further issue MREL-eligible instruments and replace central bank funding in the coming years (see Chapter 3). In addition, it is assumed that central banks’ APPs will end in the near future ^[51].

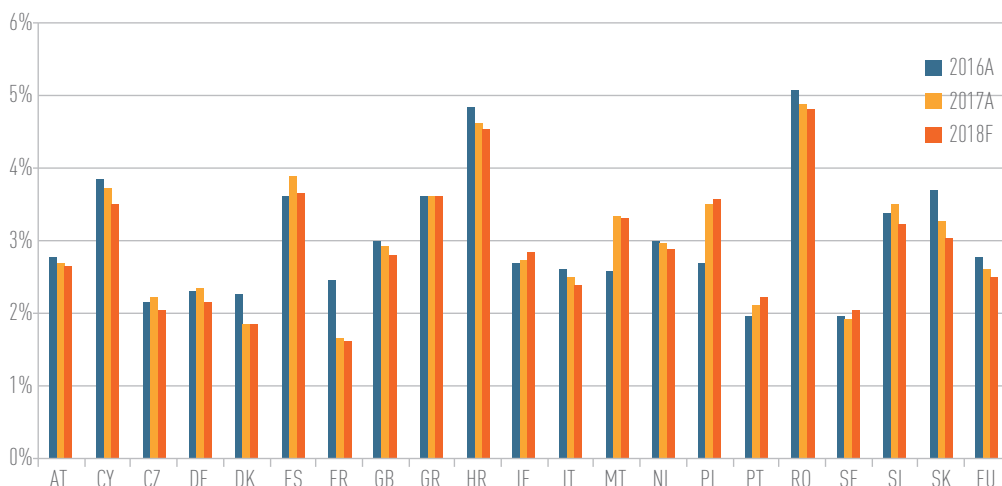
When these programmes no longer support markets, the pricing of debt instruments is likely to increase.

In contrast to NII, net fee and commission income has increased by almost 1% in the first half of 2018 compared with the same period in 2017, and was slightly below the 4-year average. Net trading income, the most volatile source of income, decreased in the first half of 2018 by more than 30% from the record levels seen in 2017 and was well below the 4-year average.

^[50] Net interest spread is defined as the difference between the interest rates charged for loans to clients and the interest rates paid on client deposits.

^[51] ECB covered bond and corporate bond purchases expires at the end of 2018.

Figure 58: Actual and planned spread between client loans and client deposits (households and NFCs), in pp
 Source: EBA funding plans report



5.2. Costs

No signs of improving efficiency

For the last 3 years, the cost-to-income ratio has been on an upwards trend and as of June 2018 stood at around 64% (Figure 59). Compared with June 2017, this represents an increase of almost 2.5 pp.

However, when applying the cost-to-income ratio, one should be aware that it is not always comparable among banks with different business models. For example, an online retail bank is likely to have a lower ratio than a large universal bank because its cost base does not reflect high staff expenses.

Operating expenses prove to be sticky, while impairments drop to record lows

As of June 2018, operating expenses were just 1.5% below the 4-year average, while net operating income was 4.5% below the 4-year average. In particular, staff expenses and other administrative expenses proved sticky in a period when banks reduced their business volume (see details on the reduction of assets in recent years as covered in Section 2.1). This indicates that banks are not able to adjust their operating cost structure at the same pace as the changes to demand and to the economic environment occur. The increase in other administrative expenses might be driven by competition from FinTech firms and advances in technology, which

Figure 59: Cost-to-income ratio
 Source: EBA supervisory reporting data

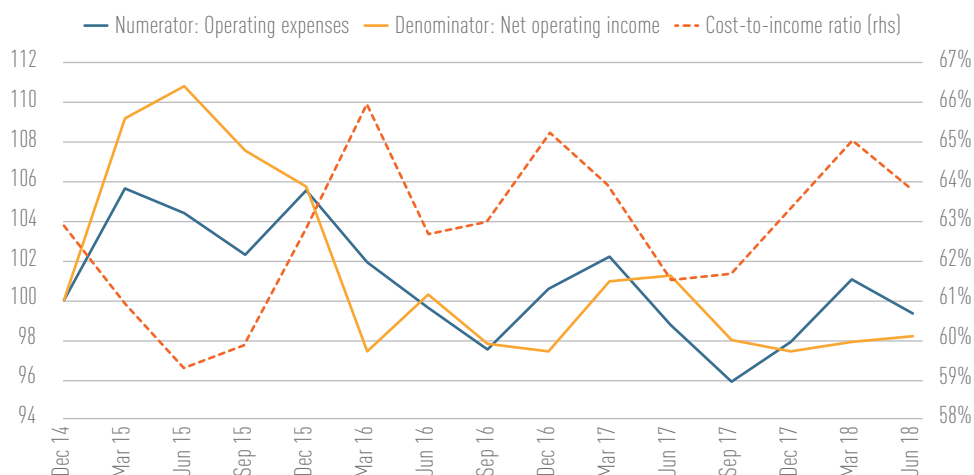
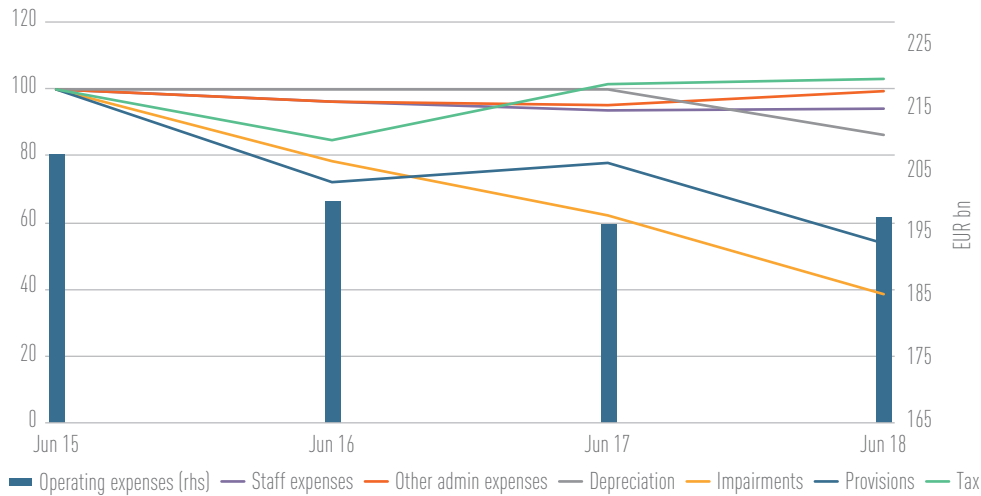


Figure 60: Evolution of main sources of expenses

Source: EBA supervisory reporting data



forces banks to keep investing in customer technology or risk losing customers. Recent events related to system outages and failures suggest that many banks have to bear costs to renew their ICT systems and to enhance cybersecurity (see Chapter 6).

Banks' profits have benefited from lower impairments for financial assets and provisions, which have dramatically decreased in recent years. As of June 2018, impairments were almost 40% lower than during the same period of 2017 and represented almost 40% of the levels seen in 2015. This reduction in the cost of risk was a reflection of the risk-reduction programmes that many banks had implemented in the years since the financial crisis and by improvements in the European economic environment since 2014.

A similar trend applied to provisions, which, as of June 2018, were more than 30% lower than during the first half of 2017. Compared with the volume of provisions booked in 2015, the 2018 volume represented approximately 50%.

5.3. FinTech: trends and challenges for banks

FinTech is one of the drivers that forces banks to rethink their business strategies and models. The RAQ results show that banks' strategies in this area include partnerships with non-bank FinTech firms as well as internal developments of technology-based products/services using new technologies (Figure 61). This may indicate banks' growing confidence in their own resources and capabilities, but

also their intention to redefine their relationships with non-bank FinTech firms or inadequate offerings from third parties.

As the use of online banking in the EU is gradually increasing, with 61% of EU internet users having performed their banking activities online in 2017 ^[52], EU banks are developing digital channels in an effort to offer all the possible options to their customers. Nevertheless, only 13 EU banks (out of the RAQ sample) have launched a stand-alone digital bank, located in jurisdictions where customers are seen to be steadily switching to digital channels (e.g. the Netherlands, the UK, Spain and France).

Banks' investments in FinTech and IT spending assumed to increase

While one out of three EU banks had no investment in non-bank FinTech firms during 2017, there is a growing investment appetite. These investments are made mainly through venture capital funds and to a lesser degree through direct acquisitions. According to the RAQ results, more than 60% of EU banks are planning to increase their investments in the next 12 months (Figure 63).

^[52] Digital Economy and Society Index Report (2018) – Use of Internet Services.

Figure 61: Current form of engagement with FinTech – December 2018
 Source: EBA RAQ for banks

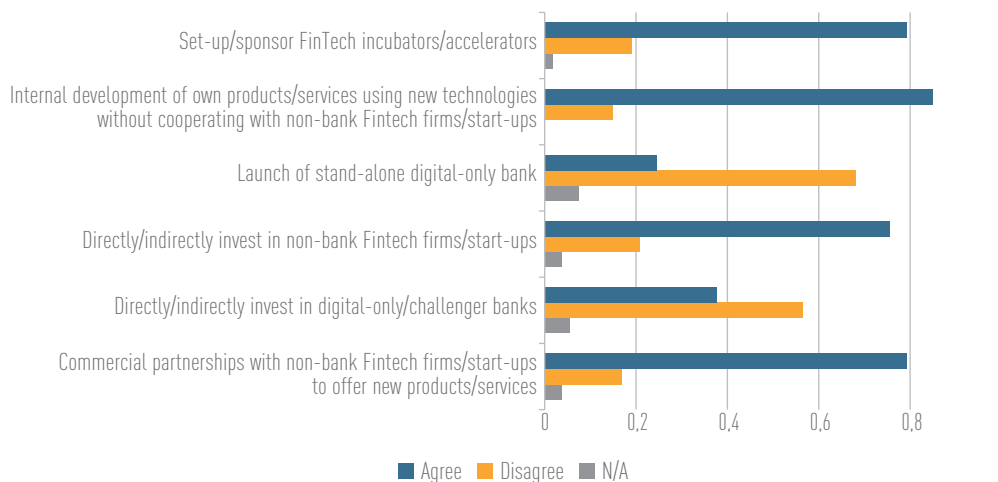


Figure 62: Total IT spending versus investment in non-bank FinTech firms in 2017 – December 2018
 Source: EBA RAQ for banks



Most EU banks invest in their ICT systems in an effort to incorporate new technologies. According to the RAQ results, last year 44% of EU banks spent more than EUR 500 m on IT-related expenditures, which included ICT improvements, adjustments to ICT systems to meet regulatory changes (e.g. GDPR, PSD2) and internal FinTech developments (Figure 62). The proportion of IT spending allocated to internal FinTech developments is less than 10%, while banks intend to increase their FinTech spending in the future (Figure 63).

Status of adoption of financial technologies by EU banks

The RAQ results show that EU banks are gradually adopting financial technologies, with biometrics, digital/mobile wallets and big data analytics being the mostly used technologies, closely followed by cloud computing (Figure 64). Distributed ledger technology and smart contracts are still in an early stage of development. This is in line with the findings of the EBA thematic report on the prudential risks and opportunities arising for

institutions from FinTech ^[53]. Most EU banks face legal and regulatory impediments to the adoption of cloud computing, which was also a main driver for the development of the EBA Recommendations on outsourcing to cloud service providers, applicable from July 2018 ^[54].

Figure 63: Estimated changes in FinTech investments and IT spending (next 12 months) – December 2018

Source: EBA RAQ for banks

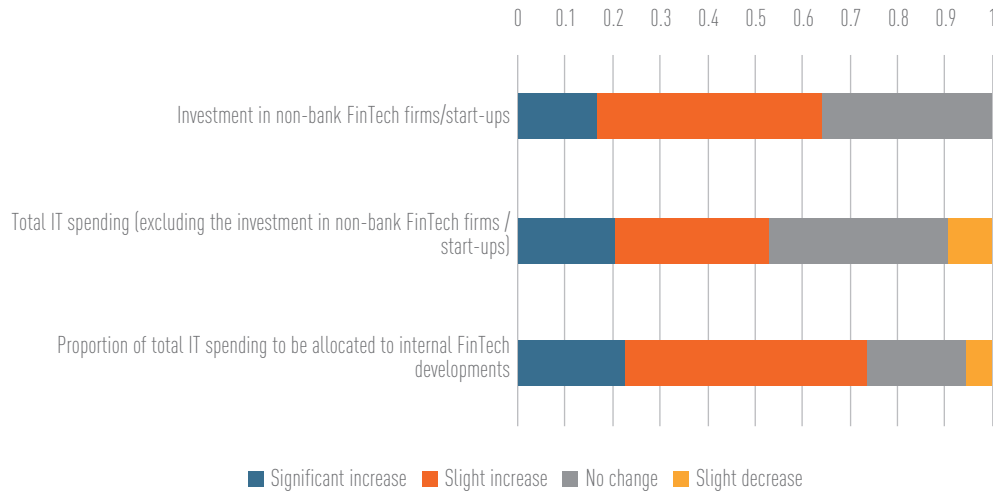
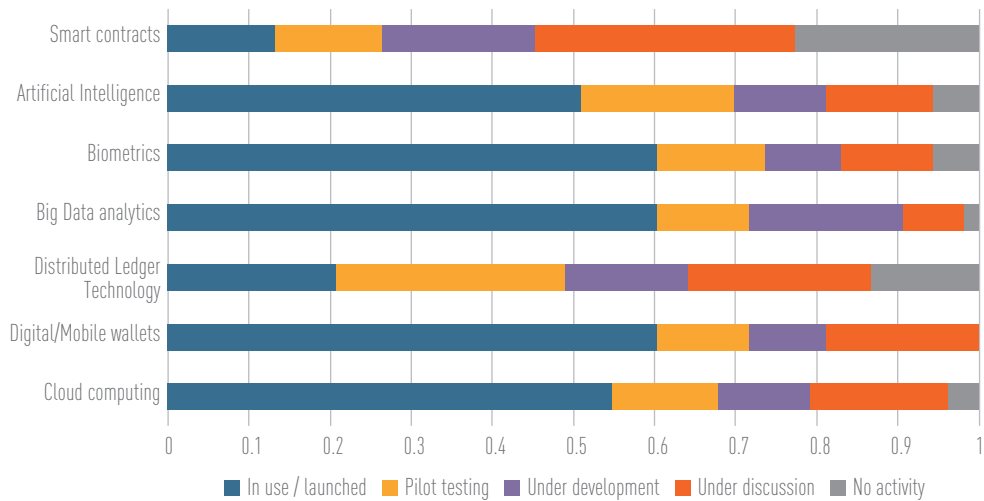


Figure 64: Status of adoption of financial technologies by EU banks – December 2018

Source: EBA RAQ for banks



[53] Report on the prudential risks and opportunities arising for institutions from FinTech, July 2018 (<https://www.eba.europa.eu/documents/10180/2270909/Report+on+prudential+risks+and+opportunities+arising+for+institutions+from+FinTech.pdf>).

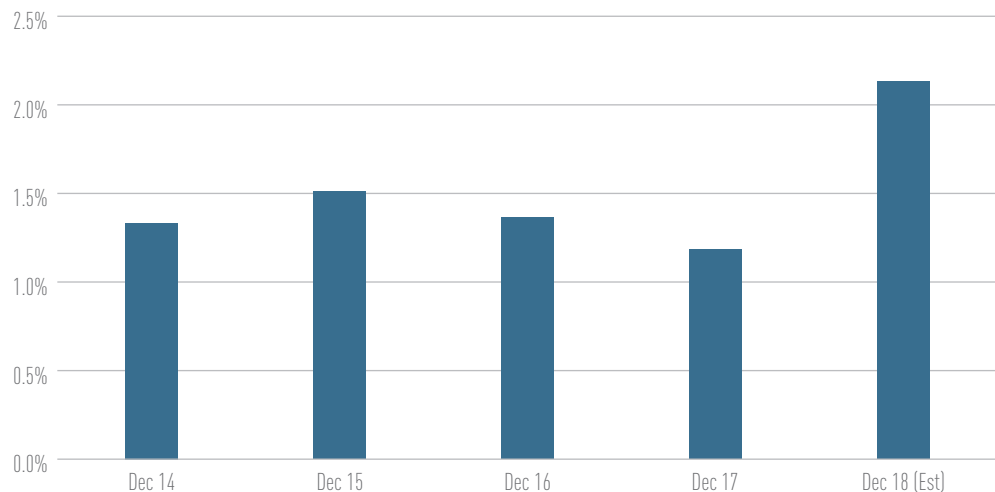
[54] Recommendations on outsourcing to cloud service providers, December 2017 (<https://www.eba.europa.eu/regulation-and-policy/internal-governance/recommendations-on-outsourcing-to-cloud-service-providers>).

6. Operational resilience

Operational risks in EU banks remain high. In 2018, the sum of the five largest losses in operational risk, totalling EUR 35.4 bn, is estimated to account for 2.1% of CET1 for EU banks on average, which compares with 1.2% last year (Figure 65). At country level, the dispersion of losses is high. The share of the five largest losses in 2018 after estimation accounted for 9.0% of CET1 and 8.7% of CET1 in Malta and Germany, respectively, while the share was almost 0% in the Baltic countries. By type of event, almost 80% of the five largest losses came from clients, products and business practices ^[55].

Operational risks are also expected to increase in the near future. Over 50% of the banks foresee an increase in operational risk according to the latest RAQ results (Figure 66). This is about 10 pp lower than the RAQ results in June this year. However, the uncertainty around Brexit might also further increase operational risk, as banks cannot yet be fully prepared to tackle legal challenges, such as the status of existing contracts, and regulatory regimes as well as IT systems (see textbox on Brexit in Chapter 1).

Figure 65: The five largest losses in operational risk as a share of CET1 ^[56]
Source: EBA supervisory reporting data

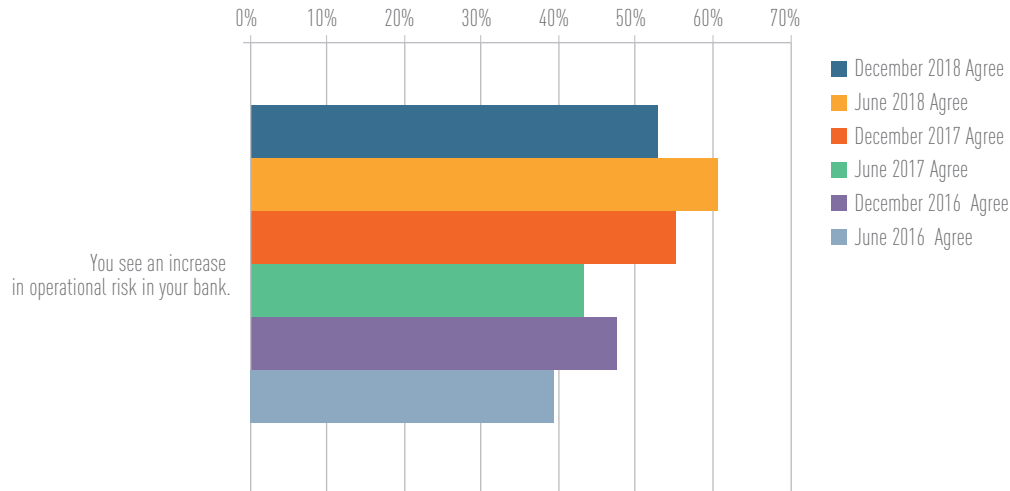


^[55] Losses arising from an unintentional or negligent failure to meet a professional obligation to specific clients, or from the nature or design of a product.

^[56] The share of the five largest losses in December 2018 is an estimation based on the annualised share from June 2018.

Figure 66: Operational risk as seen by banks

Source: EBA RAQ for banks.



6.1. ICT-related risks

Within types of operational risk, ICT-related risks are currently a key challenge for EU banks. Almost 90% of the banks responding to the RAQ point to cyber risks and data security as key operational risk drivers. This reflects a significant increase since last year's RAQ, in which 55% of the banks pointed to the same challenge.

Cyber risks threaten the data integrity, data confidentiality, data protection and business continuity of the increasingly digitalised European banking sector. The IMF estimates that average annual losses to financial institutions from cyber attacks could account for, on average, one fourth of banks' net income, eroding bank profits and potentially threatening financial stability^[57].

As cyber risks are evolving rapidly, it is crucial that banks update and improve their IT infrastructures at the same pace as these threats are emerging. Potential disruptions of IT banking services do not only affect banks' profitability, but might also potentially entail significant losses to the real economy and might endanger the stability of the whole financial system.

6.2. Legal and reputational concerns

The number of cases regarding conduct and legal risk increased in 2018. Compared with previous years, the number and volume of alleged cases related to money laundering, terrorist financing and sanction non-compliance in which European banks have been involved were on the rise in 2018 (Figure 67). Responses to the RAQ acknowledge and reflect this development. Almost 20% of the responding banks identify money laundering, terrorist financing or sanction non-compliance as one of the main drivers for the increased operational risk (15 pp higher than in the former RAQ). Analysts are even more concerned, as around 40% of the respondents point to this risk as one of the main reasons for increased operational risk.

Although the number of cases of conduct and legal risk remains high, supervisory reporting indicates that provisions for pending legal issues and tax litigation have decreased at the EU level. From December 2015 to December 2017, net changes in provisions for pending legal issues and tax litigation (i.e. newly recognised provisions minus reversals of unused provisions) measured as a share of total assets decreased from 0.08% to 0.03% (Figure 68). These provisions are made for various redress and litigation-related issues, for instance related to manipulation of benchmark rates, redress for mis-selling of banking products, NPL resolution measures, AML cases, breach of financial and trade sanctions and similar. However, considering events related to alleged money laundering – among other cases – during 2018, an increase in net provisions on pending legal issues and

[57] Bouveret, A., 2018, 'Cyber Risk for the Financial Sector: A Framework for Quantitative Assessment', IMF Working Paper; impact estimate is based on scenario calculations.

Figure 67: Non-exhaustive list of selected EU banks alleged to have breached money laundering, terrorist financing or sanction laws
 Source: S&P Global Market Intelligence

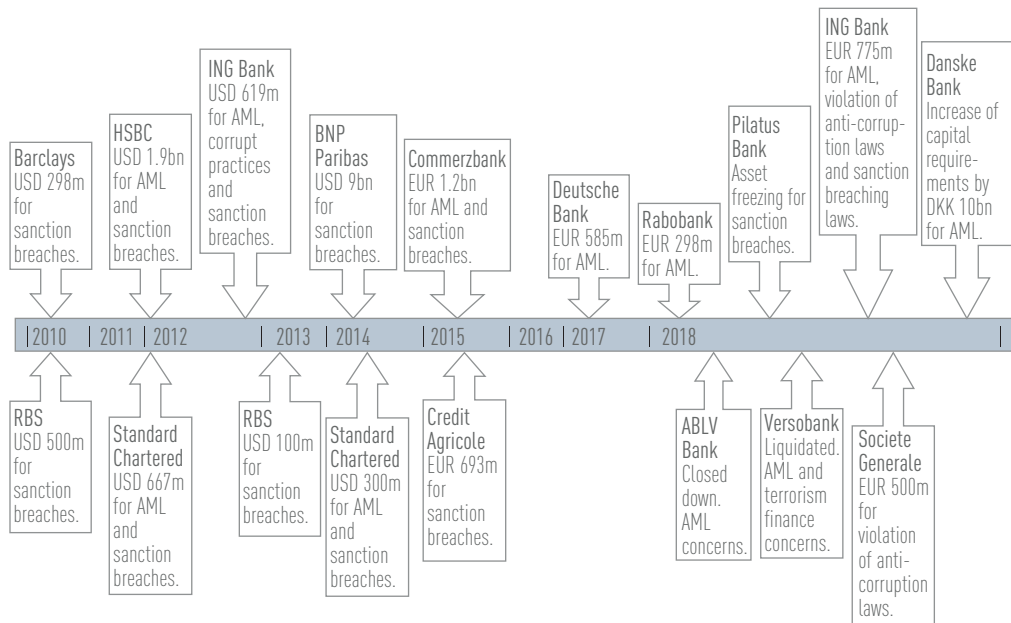
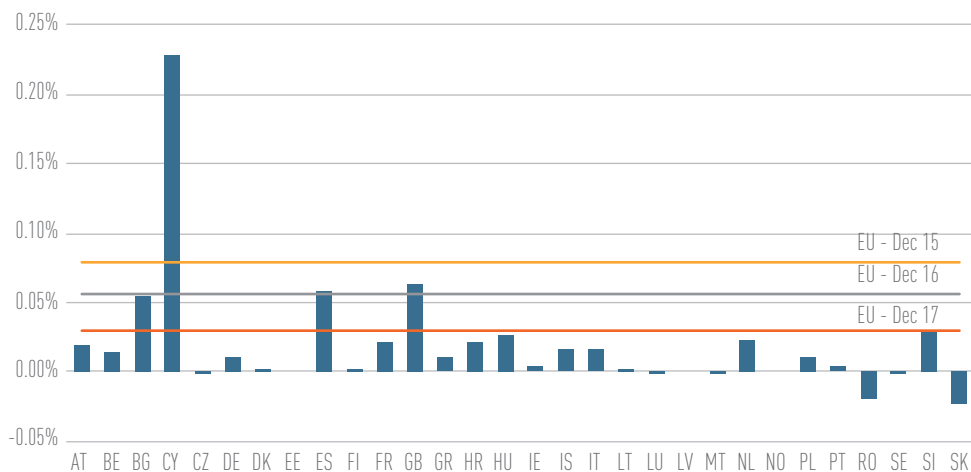


Figure 68: Net provisions for pending legal issues and tax litigation as a share of total assets (country-by-country data as of December 2017)
 Source: EBA supervisory reporting data



tax litigation in the EU banking sector at the end of December 2018 is more likely.

The determinants of conduct and legal risk appear to be ineffective internal controls, weak governance, complex processes and high risk appetite. Banks should address operational weaknesses that they identify

and strengthen the control and governance framework in order to fully comply with all relevant regulatory requirements, including anti-money laundering, terrorist financing and sanction laws. An increase in legal, conduct and reputational cost could erode earnings and investor confidence and may even threaten the capital resilience of banks.

7. Policy implications and measures

Although the EU banking sector is still benefiting from a benign macroeconomic and financial environment, risks to the global economy are on the rise. Compared with 1 year ago, geopolitical risks have further increased. The trade conflict between the US and China has worsened, the Brexit deal was still not completed at the time of writing and EU internal political tensions have intensified. Another major risk is the deterioration of financial and economic conditions in important EMEs. Banks need to be prepared for adverse scenarios, which might affect funding, asset quality and profitability.

Capital ratios have increased in recent years, providing a certain buffer to elevated risks. This year's EBA stress test has proven that banks can in general also withstand adverse economic conditions, but the dispersion of results showed that not all banks in all regions are similarly well prepared. Despite rising capital ratios, there is no room for complacency. Banks should at least maintain their capital ratios, so that they are able to deal with possible economic challenges.

Banks should develop strategies and plans to address large refinancing needs in the upcoming years. One key driver for this refinancing need is the requirement to build up loss-absorbing capacity. Banks need to address this challenge as early as possible to avoid any cliff-edge effect at a later stage and to meet their respective requirements. In addition, high volumes of liabilities maturing in the medium term as well as an additional required redemption of maturing long-term central bank funding from 2020 onwards should be managed carefully. Supervisors should be vigilant in ensuring that banks address their funding needs in good time and continue on their path to build up bail-in-able capacity and replace central bank funding.

In developing and exercising their funding strategies, banks should also be aware of the resurgence of market volatility and a potential upcoming interest rate increase. Banks should also balance their funding in foreign currencies, which is particularly relevant in an environment of heightened political tensions with a high risk of sudden repricing of risk premia.

Banks need to reduce their legacy NPLs further and avoid the build up of new NPLs. In their efforts to reduce legacy NPLs, banks should take advantage of the current benign macroeconomic and financial environment. In the event of economic headwinds, disposals can become less feasible and, in addition, asset quality would start deteriorating again.

Proper NPL management includes the timely recognition of deteriorating quality of assets, identification of effective measures to reduce potential losses and application of effective workout measures but also implementing strategies to reduce NPLs proactively. Recently, regulators have introduced tools and frameworks to help banks manage their NPLs. These initiatives target both supervisory practices and secondary markets for NPLs. In October 2018, the EBA published its guidelines on management of non-performing and forborne exposures, setting out a consistent framework for banks to establish and operationalise specific strategies to achieve a sustainable reduction of their non-performing exposures. Further initiatives include the EBA's NPL transaction templates, which aim to facilitate market transactions of NPLs, and the European Commission's and Council's work on the use of prudential backstops on banks' provisioning to prevent the build up of new NPLs. Tackling NPLs in Europe is expected to remain a priority in the EU policy agenda and supervisors need to keep up their focus on this topic.

Lending has started to increase. Despite growing competition, banks must avoid easing lending standards and weakening their pricing or covenant requirements. This holds true across all sectors, but also and in particular for high-risk lending. The latter includes covenant-lite and EME exposures. Supervisors need to closely track banks' respective exposures and new lending standards, as well as trends in borrower and credit quality of new lending portfolios.

Elevated volatility in financial markets has shown banks' vulnerabilities stemming from their trading book and other financial instruments measured at fair value, especially sovereign exposures. Value adjustments of such exposures directly affect banks' capital.

Depending on the size of banks' respective exposures, a widening in sovereign spreads can, for instance, easily erode significant parts of their capital. A particular concern is the case of highly concentrated portfolios in domestic sovereign investments, which expose banks to event risk. For this reason, banks should, where possible, actively manage their sovereign exposures and ensure appropriate diversification. At the same time, competent authorities need to continuously monitor the sovereign exposures held by the financial sector and ensure that respective vulnerabilities are well managed by institutions. This is in particular relevant, given that the prudential framework require no or limited capital set aside nor sets limits on concentration risk – contrary to other types of exposures held by banks.

Despite its rising trends, bank profitability continues to be a key concern. Competition, including from FinTech firms, low margins in banks' core business, not least driven by still low interest rates in many jurisdictions, and elevated costs are key contributors to low profitability. This reflects the need for supervisors to further challenge unprofitable banks and their business models in order to increase the resilience of institutions to a more challenging economic environment.

Cyber attacks are one of the major threats to the EU banking sector. Banks should continue to strengthen internal controls and governance related to monitoring and managing information and ICT and security risks. The EBA is planning to publish guidelines on this topic, in which information about security management requirements (including cybersecurity) that are necessary to protect the confidentiality, integrity and availability of information, is set out. Furthermore, the EBA's updated guidelines on outsourcing arrangements also highlight the need for banks to monitor the risks stemming from outsourcing as it may render banks vulnerable to ICT and security attacks. For the specific activity of payment services, the EBA has this year developed a number of technical standards and guidelines under PSD2 to enhance the security of retail payments and the underlying operational procedures, incident reporting, and fraud reporting of payment services providers (including banks). In 2019, the EBA will start monitoring the implementation of these requirements.

Conduct and legal risks have again been on the rise in 2018. Banks should address potential operational weaknesses and identify and strengthen the control and governance framework in order to address these risks

and to fully comply with all relevant regulatory requirements, including AML, terrorist financing and sanction laws. Several cases of apparent AML failings by banks indicate that AML conduct risks have materialised in a number of EU jurisdictions, pointing to a potentially more widespread need for enhanced and consistent AML supervision in the EU.

Banks and other financial institutions as well as competent authorities should be prepared for an unfavourable outcome of the Brexit negotiations. Only a well-prepared EU financial sector will be able to contain negative effects in the case of an unfavourable cliff-edge scenario. Financial institutions will need to prepare themselves and not rely on public sector solutions. In parallel, competent authorities should continue to monitor and follow up on financial institutions' contingency plans and take the necessary actions to reduce the potential damage and to secure financial stability.

Banks face different types of risks related to the upcoming replacements of reference rates. They need to manage the transition of existing business to the new risk-free benchmark rates, but also have to be prepared to apply the latter in their new business amid a tight timeline for application and compliance with the EU Benchmarks Regulation by January 2020.

Annex I: Samples of banks

List of banks that made up the sample population for the risk indicators, transparency exercise and RAQ ⁽⁵⁸⁾:

Name	Country	Risk indicators	Transparency exercise		RAQ
			2017 Q4	2018 Q2	
Sberbank Europe AG	Austria	x	x	x	
BAWAG Group AG	Austria	x	x	x	
Raiffeisenbankengruppe OÖ Verbund eGen	Austria	x	x	x	x
Raiffeisen Bank International AG	Austria	x	x	x	
Raiffeisen-Holding Niederösterreich-Wien registrierte Genossenschaft mit beschränkter Haftung	Austria		x*		
Volksbanken Verbund	Austria	x	x	x	
UniCredit Bank Austria AG	Austria	x			
Erste Group Bank AG	Austria	x	x	x	x
BNP Paribas Fortis SA	Belgium	x			
KBC Group N.V.	Belgium	x	x	x	x
Investeringsmaatschappij Argenta NV	Belgium	x	x	x	
Belfius Banque S.A.	Belgium	x	x	x	x
Dexia SA	Belgium	x	x	x	
AXA Bank Belgium SA	Belgium	x	x	x	
The Bank of New York Mellon S.A.	Belgium	x	x	x	
DSK Bank Bulgaria	Bulgaria	x			
First Investment Bank	Bulgaria	x	x	x	x
UniCredit Bulbank Bulgaria	Bulgaria	x			
Erste & Steiermärkische Bank d.d.	Croatia	x			
Privredna Banka Zagreb d.d.	Croatia	x			
Zagrebacka Banka d.d.	Croatia	x			
RCB Bank LTD	Cyprus	x	x	x	
Cyprus Cooperative Bank Ltd	Cyprus	x	x*	x*	
Bank of Cyprus Holdings Public Limited Company	Cyprus	x	x	x	x
Hellenic Bank Public Company Limited	Cyprus	x	x	x	
Česká spořitelna, a.s.	Czech Republic	x			
Komerční banka, a.s.	Czech Republic	x			
Československá obchodní banka, a.s.	Czech Republic	x			
Jyske Bank A/S	Denmark	x	x	x	
Sydbank A/S	Denmark	x	x	x	
Nykredit Realkredit A/S	Denmark	x	x	x	
Danske Bank A/S	Denmark	x	x	x	x

⁽⁵⁸⁾ The sample of banks is regularly adjusted to take into account bank-specific developments; for example, banks that ceased activity or underwent a significant restructuring process are not further considered. Not all banks are subject to all reporting requirements (e.g. for Finrep or Funding Plan reporting). The list of banks that are the basis for the risk indicators refers to the sample of banks used to calculate the Q2 2018 indicators. For lists of reporting institutions on a yearly basis, please see <https://www.eba.europa.eu/risk-analysis-and-data>. The banks marked (*) are included in the Transparency exercise in "All other banks" bucket.

AS LHV Group	Estonia	x	x	x	x
Luminor Bank AS	Estonia	x			
AS SEB Pank	Estonia	x			
Swedbank AS	Estonia	x			
Kuntarahoiutus Oyj	Finland	x	x	x	
Nordea Hypoteekbank Abp	Finland	x			
OP Osuuskunta	Finland	x	x	x	x
Säästöpankkiliitto osk	Finland	x		x*	
HSBC France	France	x			
SFIL S.A.	France	x	x	x	
RCI Banque SA	France	x	x	x	
Confédération Nationale du Crédit Mutuel	France	x	x	x	
La Banque Postale	France	x	x	x	
Bpifrance S.A. (Banque Publique d'Investissement)	France	x	x	x	
C.R.H. – Caisse de Refinancement de l'Habitat	France	x	x	x	
Groupe BPCE	France	x	x	x	x
GROUPE GCA	France	x	x	x	x
Société générale S.A.	France	x	x	x	x
BNP Paribas	France	x	x	x	x
Banque Centrale de Compensation	France	x	x	x	
Landeskreditbank Baden-Württemberg- Förderbank	Germany	x	x	x	
DekaBank Deutsche Girozentrale	Germany	x	x	x	
Erwerbgesellschaft der S-Finanzgruppe mbH & Co. KG	Germany	x	x	x	
NRW.BANK	Germany	x	x	x	
Deutsche Apotheker- und Ärztebank EG	Germany	x	x	x	
Volkswagen Bank Gesellschaft mit beschränkter Haftung	Germany	x	x	x	
Münchener Hypothekenbank EG	Germany	x	x	x	
DZ BANK AG Deutsche Zentral-Genossenschaftsbank	Germany	x	x	x	x
HASPA Finanzholding	Germany	x	x	x	
HSH Beteiligungs Management GmbH	Germany	x	x	x	
State Street Europe Holdings Germany S.à.r.l. & Co. KG	Germany	x	x	x	
Landwirtschaftliche Rentenbank	Germany	x	x	x	
Deutsche Bank AG	Germany	x	x	x	x
COMMERZBANK Aktiengesellschaft	Germany	x	x	x	x
Landesbank Baden-Württemberg	Germany	x	x	x	
Landesbank Hessen-Thüringen Girozentrale	Germany	x	x	x	
Norddeutsche Landesbank -Girozentrale-	Germany	x	x	x	x
Deutsche Pfandbriefbank AG	Germany	x	x	x	
Aareal Bank AG	Germany	x	x	x	
Bayerische Landesbank	Germany	x	x	x	x
Alpha Bank, S.A.	Greece	x	x	x	x
National Bank of Greece, S.A.	Greece	x	x	x	x
Eurobank Ergasias, S.A.	Greece	x	x	x	x
Piraeus Bank, S.A.	Greece	x	x	x	x
Kereskedelmi és Hitelbank Zrt.	Hungary	x			
UniCredit Bank Hungary Zrt.	Hungary	x			

OTP Bank Nyrt.	Hungary	x	x	x	x
Íslandsbanki hf.	Iceland	x	x	x	
Landsbankinn	Iceland	x	x	x	x
Arion banki hf	Iceland	x	x	x	
Citibank Holdings Ireland Limited	Ireland	x	x	x	
AIB Group plc	Ireland	x	x	x	x
Bank of Ireland Group plc	Ireland	x	x	x	x
DePfa Bank plc	Ireland	x	x	x	
Permanent TSB Group Holdings Plc	Ireland		x*		
Ulster Bank Ireland Designated Activity Company	Ireland	x			
Intesa Sanpaolo S.p.A.	Italy	x	x	x	x
UniCredit S.p.A.	Italy	x	x	x	x
Unione di Banche Italiane Società per Azioni	Italy	x	x	x	
Credito Emiliano Holding S.p.A.	Italy	x	x	x	
Banco BPM S.p.A.	Italy	x	x	x	x
Banca Carige S.p.A. – Cassa di Risparmio di Genova e Imperia	Italy	x	x	x	
Banca Popolare di Sondrio, Società Cooperativa per Azioni	Italy	x	x	x	
BANCA MONTE DEI PASCHI DI SIENA S.P.A.	Italy	x	x	x	x
BPER Banca S.p.A.	Italy	x	x	x	
ICCREA Banca S.p.A. – Istituto Centrale del Credito Cooperativo	Italy	x	x	x	
Mediobanca – Banca di Credito Finanziario S.p.A.	Italy	x	x	x	
Luminor Bank AS	Latvia	x			
Swedbank AS	Latvia	x			
ABLV Bank, AS	Latvia		x*		
AS SEB banka	Latvia	x			
Luminor Bank AB	Lithuania	x			
Swedbank AB	Lithuania	x			
AB SEB bankas	Lithuania	x			
Precision Capital S.A.	Luxembourg	x	x	x	
RBC Investor Services Bank S.A.	Luxembourg	x	x	x	
J.P. Morgan Bank Luxembourg S.A.	Luxembourg	x	x	x	
Banque et Caisse d'Épargne de l'État, Luxembourg	Luxembourg	x	x	x	x
State Street Bank Luxembourg S.C.A.	Luxembourg	x	x	x	
Deutsche Bank Luxembourg S.A.	Luxembourg	x			
Société Générale Bank & Trust	Luxembourg	x			
BGL BNP Paribas	Luxembourg	x			
Commbank Europe Ltd	Malta	x	x	x	
MDB Group Limited	Malta	x	x	x	
Bank of Valletta Plc	Malta	x	x	x	x
HSBC Bank Malta p.l.c.	Malta	x			
BNG Bank N.V.	Netherlands	x	x	x	
ING Groep N.V.	Netherlands	x	x	x	x
ABN AMRO Group N.V.	Netherlands	x	x	x	x
de Volksbank B.V.	Netherlands	x	x	x	
Coöperatieve Rabobank U.A.	Netherlands	x	x	x	x
Nederlandse Waterschapsbank N.V.	Netherlands	x	x	x	

DNB BANK ASA	Norway	x	x	x	x
SPAREBANK 1 SR-BANK ASA	Norway	x	x	x	
SPAREBANK 1 SMN	Norway	x	x	x	
Bank Polska Kasa Opieki SA	Poland	x	x	x	
Powszechna Kasa Oszczędności Bank Polski SA	Poland	x	x	x	x
Santander Bank Polska SA	Poland	x			
Caixa Económica Montepio Geral	Portugal	x	x	x	
Caixa Central - Caixa Central de Crédito Agrícola Mútuo, CRL	Portugal	x	x	x	
Novo Banco, SA	Portugal	x	x	x	
Banco Comercial Português, SA	Portugal	x	x	x	x
Caixa Geral de Depósitos, SA	Portugal	x	x	x	x
Banco BPI, SA	Portugal	x			
Santander Totta - SGPS, S.A.	Portugal	x			
Banca Transilvania	Romania	x	x	x	x
BRD-Groupe Société Générale SA	Romania	x			
Banca Comerciala Romana SA	Romania	x			
Tatra banka, a.s.	Slovakia	x			
Všeobecná úverová banka, a.s.	Slovakia	x			
Slovenská sporiteľňa, a.s.	Slovakia	x			
Biser Topco S.à.r.l.	Slovenia	x	x	x	
Nova Ljubljanska Banka d.d. Ljubljana	Slovenia	x	x	x	x
Abanka d.d.	Slovenia	x	x	x	
UniCredit Banka Slovenija d.d.	Slovenia	x			
Banco de Crédito Social Cooperativo, S.A.	Spain	x	x	x	
Banco Santander, S.A.	Spain	x	x	x	x
Unicaja Banco, S.A.	Spain	x	x	x	
BFA Tenedora de Acciones, S.A.	Spain	x	x	x	
Ibercaja Banco, S.A.	Spain	x	x	x	
Kutxabank, S.A.	Spain	x	x	x	
Liberbank, S.A.	Spain	x	x	x	
CaixaBank, S.A.	Spain	x	x	x	x
ABANCA Holding Financiero, S.A.	Spain	x	x	x	
Banco Bilbao Vizcaya Argentaria, S.A.	Spain	x	x	x	x
Banco de Sabadell, S.A.	Spain	x	x	x	x
Bankinter, S.A.	Spain	x	x	x	
AB Svensk Exportkredit - group	Sweden	x	x*	x*	
Länsförsäkringar Bank AB - group	Sweden	x	x	x	
Nordea Bank - group	Sweden	x	x	x	x
Kommuninvest - group	Sweden	x	x	x	
Skandinaviska Enskilda Banken - group	Sweden	x	x	x	x
SBAB Bank AB - group	Sweden	x	x	x	
Swedbank - group	Sweden	x	x	x	x
Svenska Handelsbanken - group	Sweden	x	x	x	x
Coventry Building Society	United Kingdom	x	x*	x*	
The Royal Bank of Scotland Group Public Limited Company	United Kingdom	x	x	x	x
National Australia Group Europe Limited	United Kingdom	x	x*	x*	
Mizuho International PLC	United Kingdom	x	x*	x*	

Virgin Money Plc	United Kingdom	x	x*	x*	
The Co-operative Bank Plc	United Kingdom	x	x*	x*	
Citigroup Global Markets Europe Limited	United Kingdom	x	x*	x*	
Merrill Lynch UK Holdings Ltd	United Kingdom	x	x*	x*	
Credit Suisse Investments (UK)	United Kingdom	x	x*	x*	
Nomura Europe Holdings PLC	United Kingdom	x	x*	x*	
Lloyds Banking Group Plc	United Kingdom	x	x	x	x
Goldman Sachs Group UK Limited	United Kingdom	x	x*	x*	
Nationwide Building Society	United Kingdom	x	x	x	
J P Morgan Capital Holdings Limited	United Kingdom	x	x*	x*	
Credit Suisse International	United Kingdom	x	x*	x*	
Barclays Plc	United Kingdom	x	x	x	
Morgan Stanley International Ltd	United Kingdom	x	x*	x*	
HSBC Holdings Plc	United Kingdom	x	x	x	x
UBS Limited	United Kingdom	x	x*	x*	
RBC Europe Limited	United Kingdom	x	x*	x*	
Standard Chartered Plc	United Kingdom	x	x	x	x
Mitsubishi UFJ Securities International PLC	United Kingdom	x	x*	x*	
Yorkshire Building Society	United Kingdom	x	x*	x*	

x* - included in "Other Banks"

Annex II: Descriptive statistics from the EBA key risk indicators

The data shows the trend in risk indicators and is based on the sample of banks, which is regularly adjusted to take into account bank-specific developments; for example, banks that ceased activity or underwent a significant restructuring process are not further considered.

KRI	Descriptive Statistics															
	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Sep-16	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17	Mar-18	Jun-18	
1 - Tier 1 capital ratio	Weighted average	13.5%	13.4%	13.9%	14.1%	14.7%	14.8%	15.2%	15.5%	15.4%	15.7%	16.0%	16.3%	16.0%	16.0%	
	First quartile	11.7%	11.6%	12.0%	12.1%	13.0%	13.0%	13.0%	13.0%	13.3%	13.6%	13.9%	14.3%	14.1%	14.1%	
	Median	13.5%	13.6%	13.8%	14.1%	14.9%	14.7%	15.0%	15.2%	15.9%	15.8%	16.2%	16.5%	16.4%	16.7%	
	Third quartile	16.2%	16.2%	16.8%	17.6%	18.5%	18.0%	18.3%	18.9%	19.9%	19.2%	19.6%	19.8%	21.2%	21.3%	21.7%
2 - Total capital ratio	Weighted average	16.2%	16.1%	16.7%	17.0%	17.7%	17.7%	18.3%	18.5%	18.5%	18.6%	18.9%	19.1%	18.8%	18.8%	
	First quartile	13.8%	13.7%	14.2%	14.4%	14.8%	14.9%	15.0%	15.2%	15.3%	16.0%	15.9%	16.3%	16.0%	16.3%	
	Median	16.3%	15.8%	16.6%	16.8%	17.2%	17.2%	17.3%	17.9%	18.5%	18.1%	18.3%	18.3%	18.7%	19.0%	
	Third quartile	19.4%	19.5%	20.3%	21.7%	22.8%	22.3%	22.6%	22.5%	23.5%	22.7%	23.9%	23.2%	23.9%	23.6%	23.2%
3 - CET1 ratio	Weighted average	12.5%	12.4%	12.8%	13.0%	13.5%	13.4%	14.0%	14.2%	14.1%	14.3%	14.6%	14.9%	14.5%	14.5%	
	First quartile	11.2%	11.4%	11.6%	11.7%	12.3%	12.4%	12.3%	12.5%	12.6%	13.0%	13.1%	13.5%	13.3%	13.5%	
	Median	12.8%	13.0%	13.1%	13.4%	14.0%	14.2%	14.3%	14.5%	14.7%	14.6%	15.0%	15.2%	15.8%	15.4%	15.7%
	Third quartile	15.5%	15.2%	15.9%	17.2%	17.0%	17.3%	17.5%	17.7%	18.8%	18.8%	19.1%	19.0%	20.1%	20.1%	21.0%
4 - CET1 ratio (fully loaded)	Weighted average	11.5%	11.7%	12.1%	12.3%	12.9%	12.9%	13.1%	13.7%	13.8%	14.0%	14.3%	14.6%	14.3%	14.3%	
	First quartile	10.5%	10.6%	10.6%	11.1%	11.7%	11.7%	11.9%	12.0%	12.2%	12.5%	12.7%	13.3%	12.9%	12.8%	
	Median	12.1%	12.3%	12.4%	12.7%	13.6%	13.9%	13.8%	14.2%	14.6%	14.5%	14.7%	14.8%	15.5%	15.2%	15.5%
	Third quartile	15.1%	15.2%	15.2%	16.1%	16.9%	17.1%	17.6%	17.9%	18.7%	18.6%	19.1%	19.0%	20.2%	20.1%	21.0%

Solvency

KRI	Descriptive Statistics	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Sep-16	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17	Mar-18	Jun-18
5 - Ratio of non-performing loans and advances (NPL ratio)	Weighted average	6.5%	6.2%	6.0%	5.9%	5.7%	5.6%	5.4%	5.3%	5.1%	4.8%	4.4%	4.2%	4.1%	3.8%	3.6%
	First quartile	2.1%	2.1%	2.2%	2.2%	2.2%	1.9%	1.9%	1.8%	1.6%	1.5%	1.4%	1.4%	1.3%	1.2%	1.2%
	Median	5.5%	5.5%	5.8%	5.5%	5.0%	4.9%	4.6%	4.4%	4.1%	3.5%	3.4%	3.4%	3.0%	2.9%	2.7%
	Third quartile	14.9%	15.4%	14.4%	14.5%	14.8%	14.2%	13.6%	13.1%	13.1%	10.0%	9.0%	8.7%	7.8%	7.6%	7.0%
6 - Coverage ratio of non-performing loans and advances	Weighted average	43.4%	43.0%	43.6%	43.6%	43.7%	43.7%	43.9%	44.3%	44.8%	45.2%	45.0%	44.7%	44.6%	46.7%	46.0%
	First quartile	31.8%	31.2%	32.1%	32.3%	31.3%	31.2%	31.8%	31.7%	31.0%	30.6%	28.6%	28.2%	26.9%	27.7%	26.0%
	Median	41.1%	41.7%	40.9%	41.7%	40.3%	39.5%	40.6%	40.9%	40.6%	38.9%	39.9%	40.1%	40.4%	41.6%	39.2%
	Third quartile	48.2%	47.2%	47.5%	48.3%	47.5%	47.6%	47.9%	47.5%	48.6%	48.2%	48.9%	49.0%	48.7%	50.4%	50.0%
7 - Forbearance ratio for loans and advances	Weighted average	3.9%	3.8%	3.7%	3.6%	3.5%	3.5%	3.4%	3.3%	3.1%	3.0%	2.8%	2.7%	2.6%	2.4%	2.3%
	First quartile	1.2%	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%	1.2%	1.3%	1.1%	1.0%	1.0%	0.9%	0.7%	0.7%
	Median	3.3%	3.3%	3.4%	3.2%	2.9%	2.8%	2.9%	2.8%	2.7%	2.5%	2.4%	2.3%	2.3%	2.1%	2.1%
	Third quartile	8.9%	9.3%	8.7%	8.8%	8.9%	9.3%	8.9%	9.1%	8.5%	8.3%	7.3%	7.0%	5.9%	5.3%	4.9%
8 - Ratio of non-performing exposures (NPE ratio)	Weighted average	5.5%	5.3%	5.1%	5.0%	4.9%	4.8%	4.7%	4.6%	4.4%	4.2%	3.9%	3.7%	3.6%	3.4%	3.2%
	First quartile	2.0%	1.9%	1.9%	1.8%	1.8%	1.7%	1.6%	1.6%	1.4%	1.4%	1.3%	1.2%	1.2%	1.1%	1.1%
	Median	4.7%	4.5%	4.5%	4.4%	4.0%	3.8%	3.6%	3.7%	3.2%	3.0%	2.9%	2.8%	2.6%	2.5%	2.4%
	Third quartile	11.5%	11.9%	11.9%	12.3%	12.0%	11.3%	9.9%	10.2%	8.9%	8.5%	7.4%	7.1%	6.4%	6.1%	5.3%

Credit Risk
and Asset
Quality

KRI	Descriptive Statistics															
	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Sep-16	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17	Mar-18	Jun-18	
9 - Return on equity	Weighted average	3.5%	6.9%	6.8%	6.4%	4.5%	5.6%	5.7%	5.4%	3.3%	7.3%	7.2%	6.0%	6.8%	7.2%	
	First quartile	-2.8%	3.4%	3.5%	3.5%	2.5%	1.9%	2.3%	2.4%	1.4%	3.0%	3.9%	4.1%	3.1%	3.9%	4.0%
	Median	3.8%	7.1%	7.0%	6.8%	5.7%	5.0%	6.2%	5.9%	5.5%	6.7%	7.5%	7.2%	6.6%	6.9%	6.8%
	Third quartile	8.0%	10.6%	10.5%	10.7%	9.1%	8.5%	9.7%	9.7%	9.6%	10.4%	10.4%	10.5%	10.5%	10.0%	10.1%
10 - Return on assets	Weighted average	0.2%	0.4%	0.4%	0.4%	0.3%	0.4%	0.4%	0.3%	0.2%	0.4%	0.5%	0.4%	0.5%	0.5%	0.5%
	First quartile	-0.1%	0.2%	0.2%	0.2%	0.1%	0.1%	0.2%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.3%	0.2%
	Median	0.2%	0.4%	0.4%	0.4%	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.5%	0.4%	0.4%	0.5%	0.5%
	Third quartile	0.5%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%	0.6%	0.6%	0.7%	0.8%	0.8%	0.9%	0.8%	0.9%
11 - Cost to income ratio	Weighted average	62.9%	60.9%	59.3%	59.9%	62.8%	66.0%	62.7%	63.0%	65.3%	63.9%	61.6%	61.7%	63.4%	65.0%	63.8%
	First quartile	45.9%	44.8%	46.3%	46.9%	48.2%	50.7%	49.9%	49.5%	50.0%	49.7%	50.2%	49.5%	50.1%	51.0%	51.4%
	Median	58.5%	56.8%	55.9%	57.3%	59.2%	63.9%	59.8%	58.9%	61.2%	59.8%	58.0%	58.0%	59.5%	62.0%	62.1%
	Third quartile	69.7%	66.5%	65.3%	66.3%	67.7%	73.8%	70.7%	70.8%	73.2%	72.5%	69.0%	69.1%	70.2%	73.3%	73.4%
12 - Net interest income to total operating income	Weighted average	58.8%	55.5%	54.9%	56.3%	57.3%	58.8%	57.0%	57.7%	57.8%	55.9%	55.4%	56.9%	57.3%	56.7%	56.8%
	First quartile	49.6%	43.2%	45.9%	48.3%	48.9%	51.9%	50.4%	50.4%	49.7%	48.7%	50.1%	52.7%	48.5%	48.3%	51.0%
	Median	62.2%	58.3%	58.9%	59.9%	61.1%	64.7%	64.1%	62.6%	63.8%	62.7%	61.8%	62.9%	63.4%	63.6%	65.9%
	Third quartile	75.4%	73.8%	72.7%	77.6%	78.1%	80.7%	77.1%	76.8%	75.5%	75.9%	72.9%	74.5%	73.5%	77.4%	76.3%
13 - Net fee and commission income to total operating income	Weighted average	27.2%	26.6%	26.2%	26.4%	26.8%	27.1%	26.6%	27.1%	27.2%	27.5%	27.4%	27.8%	28.1%	28.5%	28.6%
	First quartile	13.7%	13.6%	13.5%	13.3%	12.2%	13.6%	11.8%	12.3%	12.6%	12.6%	13.0%	13.1%	13.7%	13.4%	14.0%
	Median	22.9%	22.6%	21.7%	21.6%	22.1%	23.3%	22.5%	23.2%	23.1%	23.1%	22.1%	22.2%	23.6%	25.9%	25.6%
	Third quartile	30.3%	31.4%	30.4%	30.9%	29.9%	32.9%	32.3%	32.6%	32.5%	32.3%	33.1%	33.1%	32.7%	33.4%	34.2%
14 - Net trading income to total operating income	Weighted average	6.7%	7.8%	6.5%	6.2%	5.8%	5.3%	5.4%	6.2%	6.1%	10.1%	9.2%	8.9%	8.6%	5.5%	6.3%
	First quartile	-0.5%	-1.0%	-1.1%	-1.4%	-0.5%	-1.8%	-1.2%	-0.2%	-0.1%	0.0%	0.1%	0.1%	0.0%	-0.2%	-0.3%
	Median	1.2%	1.0%	1.3%	1.5%	0.9%	0.2%	0.4%	1.0%	1.6%	1.9%	2.1%	2.5%	1.6%	1.3%	1.1%
	Third quartile	5.4%	9.6%	5.5%	4.4%	4.8%	3.9%	3.8%	4.5%	7.5%	7.9%	7.8%	7.2%	6.8%	6.8%	5.2%
15 - Net interest income to interest bearing assets	Weighted average	1.6%	1.6%	1.6%	1.6%	1.6%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.4%	1.4%
	First quartile	1.1%	1.0%	1.1%	1.0%	1.1%	1.1%	1.0%	1.1%	1.1%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
	Median	1.5%	1.5%	1.5%	1.5%	1.5%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%
	Third quartile	1.8%	1.8%	1.8%	1.8%	1.9%	2.0%	1.8%	1.9%	1.8%	1.9%	1.9%	1.9%	1.9%	2.0%	2.0%

KRI	Descriptive Statistics															
	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Sep-16	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17	Mar-18	Jun-18	
16 - Loan-to-deposit ratio	Weighted average	124.7%	125.7%	125.3%	123.6%	121.6%	122.3%	120.9%	119.3%	119.3%	118.2%	118.0%	117.4%	118.6%	118.3%	
	First quartile	97.5%	99.1%	100.1%	99.7%	94.0%	95.7%	96.4%	93.2%	93.5%	94.2%	91.6%	90.3%	89.7%	91.4%	
	Median	121.1%	122.2%	120.6%	120.0%	118.3%	119.3%	117.9%	116.9%	116.1%	117.7%	114.9%	113.6%	114.1%	113.7%	112.3%
	Third quartile	191.8%	188.0%	183.0%	187.0%	179.4%	175.6%	176.0%	179.8%	192.5%	181.7%	163.9%	175.4%	174.7%	179.9%	180.7%
17 - Leverage ratio (fully phased-in definition of Tier 1)	Weighted average							5.0%	5.1%	5.0%	5.1%	5.2%	5.4%	5.1%	5.1%	
	First quartile							4.1%	4.3%	4.3%	4.3%	4.4%	4.6%	4.5%	4.5%	
	Median							5.4%	5.4%	5.3%	5.4%	5.5%	5.7%	5.5%	5.5%	
	Third quartile							7.2%	7.3%	7.1%	7.4%	7.5%	7.9%	7.6%	7.6%	
18 - Leverage Ratio (transitional definition of Tier 1 capital)	Weighted average							5.3%	5.5%	5.3%	5.3%	5.4%	5.6%	5.3%	5.3%	
	First quartile							4.4%	4.6%	4.4%	4.4%	4.5%	4.8%	4.6%	4.7%	
	Median							5.8%	5.7%	5.5%	5.7%	5.6%	5.9%	5.8%	6.0%	
	Third quartile							7.2%	7.5%	7.3%	7.6%	7.7%	8.1%	8.1%	7.8%	
19 - Debt to equity ratio	Weighted average	1592.0%	1632.5%	1547.4%	1534.5%	1442.1%	1504.7%	1532.0%	1476.2%	1440.2%	1438.4%	1399.7%	1358.2%	1407.7%	1421.8%	
	First quartile	1137.5%	1159.9%	1165.1%	1145.2%	1091.9%	1012.1%	1034.7%	1009.6%	1069.0%	1070.5%	1011.1%	1010.8%	953.1%	968.3%	
	Median	1469.1%	1427.4%	1416.2%	1393.7%	1373.0%	1351.6%	1346.9%	1290.3%	1301.4%	1276.4%	1255.2%	1226.7%	1226.4%	1261.8%	
	Third quartile	1925.6%	1975.5%	1934.6%	1859.6%	1768.5%	1784.8%	1852.9%	1797.7%	1696.3%	1763.6%	1714.1%	1663.2%	1593.1%	1683.9%	
20 - Asset encumbrance ratio	Weighted average	25.4%	25.6%	25.8%	25.4%	25.5%	25.4%	25.5%	26.5%	26.6%	27.7%	27.9%	27.9%	28.4%	28.0%	
	First quartile	13.1%	14.3%	13.7%	13.7%	15.0%	14.3%	12.8%	14.0%	13.5%	14.3%	13.7%	13.4%	14.2%	13.8%	
	Median	24.3%	24.8%	25.3%	24.9%	25.4%	24.6%	24.9%	24.3%	24.6%	25.3%	24.3%	25.0%	23.7%	23.8%	
	Third quartile	38.8%	38.4%	36.2%	36.9%	35.7%	36.2%	36.1%	36.9%	37.4%	37.9%	36.8%	35.6%	35.1%	34.0%	
21 - Liquidity coverage ratio (%)	Weighted average							140.4%	141.3%	144.7%	145.5%	144.5%	148.2%	147.0%	148.2%	
	First quartile							127.1%	128.4%	131.7%	135.8%	133.3%	139.7%	139.8%	139.8%	
	Median							150.3%	154.1%	156.6%	159.0%	158.0%	166.0%	165.0%	161.9%	
	Third quartile							243.3%	243.9%	221.1%	230.8%	228.8%	232.7%	230.8%	222.8%	

Balance Sheet
Structure

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Publications Office

ISBN 978-92-9245-492-0