

RISK ASSESSMENT OF THE EUROPEAN BANKING SYSTEM

NOVEMBER 2017

**Europe Direct is a service to help you find answers to your questions
about the European Union**

**Freephone number (*):
00 800 6 7 8 9 10 11**

(*) The information given is free, as are most calls (though some operators, phone boxes or hotels may charge you).

print	ISBN 978-92-9245-384-8	ISSN 1977-9089	doi:10.2853/816166	DZ-AC-17-001-EN-C
epub	ISBN 978-92-9245-385-5	ISSN 1977-9097	doi:10.2853/379923	DZ-AC-17-001-EN-E
PDF	ISBN 978-92-9245-386-2	ISSN 1977-9097	doi:10.2853/605354	DZ-AC-17-001-EN-N
flip book	ISBN 978-92-9245-387-9	ISSN 1977-9097	doi:10.2853/605354	DZ-AC-17-101-EN-N

Luxembourg: Publications Office of the European Union, 2017

© European Banking Authority, 2017

Reproduction is authorised provided the source is acknowledged.

RISK ASSESSMENT OF THE EUROPEAN BANKING SYSTEM

NOVEMBER 2017

Contents

Abbreviations	7
Executive summary	9
Introduction	11
1. Macroeconomic environment and market sentiment	13
2. Asset side	20
2.1 Volume developments	20
2.2 Asset quality	26
3. Liability side	37
3.1 Asset encumbrance trend	42
4. Capital	44
5. Profitability	49
6. Operational resilience	59
6.1 ICT-related risks	59
6.2 Outsourcing	60
6.3 Legal issues and reputational concerns	61
7. Policy implications and measures	63
7.1 Further progress on NPL cleaning is needed	63
7.2 Business model sustainability to enhance profitability	64
7.3 IT risk and Operational resilience	64
7.4 Funding conditions in preparation for regulatory requirements	64
Annex I — Samples	65
Annex II — Descriptive statistics from the EBA key risk indicators	70

List of Figures

Figure 1:	Debt of general governments and private sector debt as a percentage of GDP (end of 2016)	13
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)	14
Figure 3:	Price to expected earnings index (right-hand side) and price to book value index (left-hand side) — average of indexes of EU banks	15
Figure 4:	Volatility index (VIX) – daily prices	15
Figure 5:	Total asset and liability exposures of EU-27 banks to the UK (billion EUR)	16
Figure 6:	Total asset and liability exposures of EU-27 banks to the UK by category (billion EUR)	16
Figure 7:	Market sentiment: positive and negative influences	18
Figure 8:	Total asset and loan volumes (trillion EUR)	20
Figure 9:	Breakdown of total assets	21
Figure 10:	Expectations about further deleveraging of banks' overall balance sheet	21
Figure 11:	Portfolios considered by banks for increase and decrease of assets	22
Figure 12:	Loans and advances and debt securities by segments (December 2014 = 100)	23
Figure 13:	Portfolios considered by analysts for increase and decrease of assets	24
Figure 14:	Reasons for deleveraging	24
Figure 15:	Consumer credit loans and new leased equipment volumes in the EU	25
Figure 16:	Banks' views on car loans and credit card finance	25
Figure 17:	Non-performing loans ratio — 5th and 95th percentiles, interquartile range and median; numerator and denominator trends (December 2014 = 100)	26
Figure 18:	Non-performing loans ratio — weighted average by country	26
Figure 19:	Ratios of non-performing loans and forborne loans	27
Figure 20:	A composite credit weakness ratio of non-performing and performing forborne loans by country, Q2 2017	28
Figure 21:	Non-performing loan ratios by sector, Q2 2017	28
Figure 22:	Portfolios which are expected to improve or deteriorate in asset quality, Q2 2017	29
Figure 23:	Total exposures of European banks (by country of origin) towards EU non-financial sectors (by sector of the counterparty)	30
Figure 24:	EDF quartile distribution by sector (non-financial) at EU level compared to EU banks' total exposures towards non-financial corporations by sector	31
Figure 25:	Exposures in Europe towards non-financial sectors by banks' country of origin (as a percentage of total) and sector EDF median (Q2 2017)	32
Figure 26:	Coverage ratio — specific allowances for loans to total non-performing loans — 5th and 95th percentiles, interquartile range and median; numerator and denominator trends (December 2014 = 100)	33

Figure 27: Coverage ratio — specific allowances for loans to total non-performing loans — country dispersion — weighted average by country	33
Figure 28: Impediments to resolving non-performing loans	34
Figure 29: NPL ratio versus coverage ratio by country	36
Figure 30: Provisioning expectations for the next 12-18 months	36
Figure 31: Loan-to-deposit ratio: numerator and denominator	37
Figure 32: Main refinancing operations, marginal lending facility, LTRO, lending to euro area	38
Figure 33: iTraxx financials (Europe, senior and subordinated, 5 years, bp)	39
Figure 34: Constraints to issuing subordinated instruments eligible for MREL	39
Figure 35: Bonds – aggregate debt maturity profile – 20 year breakout as of October 2017 (billion EUR)	40
Figure 36: Intentions to attain more funding via different funding instruments	40
Figure 37: Expectations on banks' funding channels	41
Figure 38: Expected growth of selected liability classes in the EU	41
Figure 39: Weighted average asset encumbrance by country	42
Figure 40: Encumbered assets and collateral by type; distribution of the sources of encumbrance	43
Figure 41: Evolution of capital ratios	44
Figure 42: Evolution of transitional vs fully loaded CET1 ratios	45
Figure 43: CET1 ratio dispersion — 5th and 95th percentiles, interquartile range (left-hand side) and by country (right-hand side)	46
Figure 44: Evolution of capital positions	46
Figure 45: Evolution of risk weighted assets	47
Figure 46: CET1 issuance plans	47
Figure 47: Expectations about new issuances of subordinated debt instruments	48
Figure 48: Decomposition of RoE (EU aggregate) – solid fill for June 2017, transparent fill for June 2016	49
Figure 49: Return on Equity (RoE, left-hand side) and Return on Assets (RoA, right-hand side)	50
Figure 50: RoE country dispersion as of June 2017; ROE: 5th and 95th percentiles, interquartile range and median	50
Figure 51: Evolution of the net interest income (left-hand side) and net fees and commission to total operating income (right-hand side)	51
Figure 52: Evolution of the main sources of income as a percentage of total operating income	51
Figure 53: Evolution of the operating expenses on total assets	52

Figure 54: RAQ for banks: long-term sustainable RoE	52
Figure 55: RoE by bucket and percentage of banks' total assets; estimated cost of equity	53
Figure 56: EU banks' CoE per business model	54
Figure 57: Banks' expectations on their business model change	55
Figure 58: EU banking sector structure indicators	55
Figure 59: Expected evolution of profitability in the coming months and main drivers	56
Figure 60: Actual evolution and outlook of the main profitability indicators	57
Figure 61: Expected evolution of short-term earnings and main drivers	57
Figure 62: Operational risk in banks and main drivers	59
Figure 63: Main ICT-related risks	60
Figure 64: Expected litigation costs	61
Figure 65: Compensation, redress, litigation and similar payments made since the financial year 2007/2008	62

Abbreviations

AMC	asset management company	IMF	International Monetary Fund
APP	asset purchase programme	ITS	implementing technical standard
AT1	additional tier 1	IRRBB	interest rate risk in the banking book
BIS	Bank for International Settlements	RI	risk indicator
bp	basis point(s)	LCR	liquidity coverage ratio
BRRD	Bank Recovery and Resolution Directive	LCU	local currency
CAPM	capital asset pricing model	MDA	maximum distributable amount
CCP	central counterparty	MPO	monetary policy and operations
CDS	credit default swap(s)	MREL	minimum requirement for own funds and eligible liabilities
CET1	common equity tier 1	NFC	non-financial corporate(s)
CoCo	contingent convertible (instrument)	NII	net interest income
CoE	cost of equity	NPL	non-performing loan(s)
CRD	Capital Requirements Directive	NSFR	net stable funding ratio
CRR	Capital Requirements Regulation	OCR	overall capital requirements
CRE	commercial real estate	p.a.	per annum
DDoS	distributed denial of service	OMT	outright monetary transactions
EBA	European Banking Authority	PD	probability of default
ECB	European Central Bank	pp	percentage point(s)
ECL	expected credit loss(es)	P & L	profit and loss
EDF	expected default frequencies	RAQ	risk assessment questionnaire
EEA	European Economic Area	RAR	Risk Assessment Report of the European Banking System
ESRB	European Systemic Risk Board	REA	risk exposure amount
Euribor	Euro interbank offered rate	RoA	return on assets
EWS	early warning system	RoE	return on equity
FBL	forborne loan(s)	SA-CCR	standardised approach for counterparty credit risk
Finrep	financial (supervisory) reporting	SME	small and medium-sized enterprises
FinTech	financial technology	SREP	supervisory review and evaluation process
FRTB	fundamental review of the trading book	TLAC	total loss-absorbing capacity
GDP	gross domestic product	(T)LTRO	(targeted) long-term refinancing operation
ICT	information and communication technologies	TOI	total operating income
IFRS	International Financial Reporting Standard		

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 shown further resilience amidst a benign macroeconomic and financial environment, with an additional strengthening of the capital position and a slight improvement of profitability and asset quality. However, important structural challenges still persist as the high level of non-performing loans (NPLs) remains a source of concern while lingering low profitability raises the question of cost efficiency and business model sustainability amid a more competitive environment.

Market sentiment towards the banking sector has improved as the broad-based cyclical recovery triggered higher expectations of further improvement of banks' profitability. However, downside risks such as geopolitical risks as well as uncertainties over the pace of the normalisation process of monetary policies in a context of high-indebtedness could shift the market sentiment in the short run. The Brexit negotiations continue to be a source of political risk for the EU financial market as a cliff-edge scenario could lead to substantial disturbances for the European banking sector.

EU banks' total assets decreased by 6.3 % between June 2016 and June 2017, driven by the decline of derivatives exposures and debt securities, while banks have continued to increase loans volume. For the near future, the EBA risk assessment questionnaire (RAQ) results point towards a slowdown of the decreasing pace and an increase of lending volumes to the corporate sector, in particular SMEs, and to households, including both residential mortgages and consumer credit loans.

The average NPL ratio of EU banks decreased from 5.4 % to 4.5 % between June 2016 and June 2017 reflecting progress made by EU banks to clean up their balance sheets. However, around one third of EU jurisdictions have NPL ratios above 10 % and the level of NPLs still remains at a very high historical level (EUR 893 billion). The reduc-

tion of the ratio, mainly driven by a decrease in NPLs, has picked up pace since September 2016. The EU area coverage ratio increased to 45 % with however a high dispersion among EU countries.

Bank funding markets were characterised by stable conditions in the first three quarters of 2017 amid low volatility. Accommodative monetary policy stances and central banks' asset purchase programmes have supported low funding costs. Funding strategies have been increasingly targeted towards building loss-absorbing capacity to meet minimum requirements for own funds and eligible liabilities. Central bank funding has increased as well, and high volumes attained in the ECB's Targeted Long-Term Refinancing Operation (TLTRO 2) have contributed to decreasing volume of debt securities issued.

Deposit volumes increased in 2017, in line with banks' strategies and funding plans, and the relevance of deposits in bank funding mix increased. Low or, in some cases, negative rates have not had a negative impact on deposit volumes.

EU banking sector solvency has continued to strengthen with a slight increase of capital ratios, albeit at a slower pace. This improvement has been mainly driven by a decrease of credit risk exposure reflecting a structural change in the EU banking sector as some institutions aim at improving the quality of their assets through a repositioning in some core activities and sell those that are less profitable. The transitional ⁽¹⁾ common equity tier 1 (CET1) ratio stood at 14.3 % as of June 2017, up by 70 bps with respect to June 2016. The trend is similar for the fully loaded CET1 ratio (i.e. assuming no transitional provisions, as defined in the capital requirements regulations (CRR), were in place), which reached 14 %. The total capital ratio has reached a new high (18.6 %), with an increase of 80 bps.

⁽¹⁾ CET1 calculated taking into account the phasing in of CRR/CRD IV provisions during the transitional period

Profitability has cautiously improved supported by the benign environment but still remains a key challenge for the EU banking sector. As of June 2017, the average return on equity (RoE) stood at 7.0 %, up by 130 bps with respect to June 2016, its highest level since 2014. Dispersion across countries is still high, with ROE ranging between -28 % and 18 %. The increase in profitability has been driven by several different trends: a decrease of impairments, an increase of fees and commissions and an increase of trading profits. Notwithstanding this evidence average RoE has remained below the cost of equity and many banks are still struggling to generate sufficient margins through their traditional lending activity in a context of a low-rate environment and flat yield curves. Moreover, EU banks have continued to face important structural challenges such as high levels of NPLs which still hamper profitability in some countries along with cost efficiency issues in a competitive environment.

In a context of heightened competition from new financial technology players, EU banks have started to adapt their business model to ensure sustainable profitability. Banks have identified upcoming competition from FinTech companies as a risk to revenues in business lines relying on standard solutions such as payment and settlement business, while they see opportunities in FinTech solutions offering enlarged customer bases and product lines in asset management and com-

mercial banking. Some banks have launched digitalisation projects to improve their cost efficiency as the intermediation margins from the traditional banking lending model are put under pressure by the low rate environment.

These new opportunities are accompanied by a number of new pockets of risk. In this regard, cyber and data security are key risk drivers. The risks that cyberattacks are posing and their volume and sophistication are moreover unabatedly high. While banking operations have become increasingly dependent on IT platforms, cost pressures and operational challenges have contributed to an increasing reliance on the third-party service providers to which a range of IT services and data are outsourced. Notwithstanding its benefits, the outsourcing of IT services and data poses security issues and challenges to governance and controls as well as to data management.

Operational risks remain prominent. Risks related to the conduct of business and to litigation remain an important concern. Related costs have not yet abated and affect consumer confidence and the profitability of banks. Over half of the banks responding to the RAQ have made compensation, litigation and similar payments of more than EUR 500 million since the 2007/08 financial year, and over 30 % of respondents expect heightened litigation costs going forward.

Introduction

This is the 10th report on risks and vulnerabilities of the EU banking sector published by the European Banking Authority (EBA). It describes the main developments and trends that have affected the EU banking sector since the end of 2016 and provides the EBA's outlook on the main micro-prudential risks and vulnerabilities looking ahead ^[2]. As with the 2016 edition, the November 2017 risk assessment report (RAR) is complemented by the EBA's EU-wide 2017 transparency exercise.

Chapter 1 of the RAR looks at the macroeconomic environment and market sentiment. Chapter 2 focuses on the asset side, explaining the trends in asset volumes and dynamics of asset quality. Chapter 3 considers the liability side, presenting the evolution of the funding mix and its conditions. It also discusses deposit trends and highlights remaining structural challenges in funding markets. Chapter 4 provides an overview of the banks' capital positions and related trends. Chapter 5 describes banks' income and profitability drivers and future evolution. Chapter 6 touches on aspects of banks' operational and ICT-related resilience, as well as business conduct and litigation issues. Finally, Chapter 7 presents policy implications and possible measures to address the prudential issues mentioned in the previous chapters.

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

- the EBA supervisory reporting
- the EBA risk assessment questionnaire (RAQ) for banks and market analysts
- micro-prudential qualitative information (e.g. SREP assessment) and supervisory college information-gathering.

The RAR builds on the supervisory reporting data submitted to the EBA on a quarterly basis by competent authorities for a sample of 186 banks from 29 European Economic Area (EEA) countries (151 banks at the highest EU level of consolidation). Based on total assets, this sample covers about 85 % 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 averages if not otherwise indicated ^[3]. The cut-off date for the supervisory reporting data that feeds into the RAR and transparency exercise is 31 October 2017.

^[2] 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.

^[3] There might be slight differences between some of the risk indicators covered in the Q2 2017 version of the risk dashboard, published on 5 October 2017, and this report due to 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>).

The RAQ is conducted by the EBA on a semi-annual basis, and addressed to banks as well as market analysts. Answers to the questionnaires were provided by 38 European banks (Annex I) and 21 market analysts in October 2017. The report also analyses information gathered by the EBA from the colleges of supervisors and from informal discussions as part of the regular risk assessments and ongoing dialogue on risks and vulnerabilities of the EU banking sector. Market data presented in the RAR dates is as of 30 September 2017, if not otherwise indicated.

The EBA is disclosing, in parallel with the RAR, bank-by-bank data as part of the 2017 EU-wide transparency exercise, for two reference dates, December 2016 and June 2017. 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 2017 transparency exercise includes 132 banks at the highest EU level of consolidation, from 24 EEA countries ⁽⁴⁾. The EU-wide transparency exercise fully relies on supervisory reporting data.



⁽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 2017 the macroeconomic environment improved, with a broad-based cyclical upturn amid moderate commodities prices and low inflation. Volatility has remained low and the low-rate environment persists despite a recent upward shift of yield curves reflecting the recovery growth scenario and higher expectations towards monetary policy normalisation. The highly accommodative monetary stance and supportive fiscal policy in certain countries have continued to maintain favourable financial conditions. Even though the global outlook is broadly upbeat, geopolitical risks as well as uncertainties over the pace of the normalisation process of monetary policies remain serious concerns that could shift the market sentiment in the short run. In Europe, possible outcomes of the Brexit negotiations continue to be a key source of political risk for EU financial markets.

EU banks are facing a more stable, but still vulnerable environment

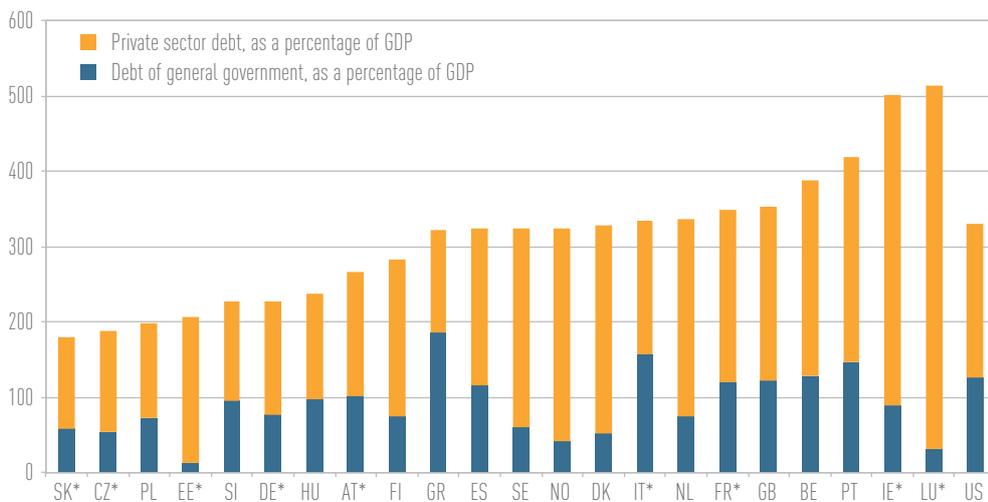
In the EU, the real gross domestic product (GDP) growth is expected to increase to 2.3 %

this year and to moderate marginally to 2.1 % in 2018, according to European Commission forecasts. Private consumption has been the main growth driver over the past few years; investments have recently strengthened. Despite the gradual recovery in world trade, the contribution of net exports to GDP growth is likely to turn neutral, given the strengthening of import growth. However, in spite of this positive growth momentum, the economic recovery remains incomplete. Some weaknesses and vulnerabilities resulting from the crisis are fading but still persist (i.e. sluggish pace of structural reform implementation, subdued inflation, weak investment recovery and insufficient profitability of the banking system).

Indebtedness of the private and public sectors in EU countries is still high with respect to the United States (Figure 1). While the general government debt has exhibited a downward trend since 2014, the total debt (public and private)-to-GDP ratio for EU countries was between 180 % and 514 % as of the end of 2016.

Figure 1: Debt of general governments and private sector debt as a percentage of GDP (end of 2016) ^[5]

Source: OECD statistics, EBA calculations.



^[5] For the countries marked (*), 2015 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. http://stats.oecd.org/Index.aspx?DataSetCode=FIN_IND_FBS. For some countries, the level of private sector debt is affected by intra-group liabilities of foreign-owned multi-national enterprises.

Deflation risks have abated and inflation in the EU shows signs of increase mainly due to the energy prices. The European Commission expects the EU headline inflation to reach 1.7 % both in 2017 and in 2018 versus 0.3 % in 2016. Despite growing expectations on the ECB unwinding strategy from quantitative easing and some increase in the long-term interest rates, monetary conditions in the euro area remain accommodative and the gradual increase in long-term inflation expectations keeps real long-term financing costs in negative territory. Given the high weight of debt, an increase of interest rate levels could have a negative impact on the service of debt costs.

Financial markets and EU banks’ valuation

European banks’ stocks outperformed the market over the period, underpinned by a more benign macroeconomic environment. Market sentiment towards the banking sector has markedly improved since late 2016. Market prices of listed EU banks have gone up while EU banks’ credit default swap (CDS) spreads have decreased since the beginning of the year, suggesting that concerns about the long-term solvency of the European banking sector are declining.

The price-earnings index surged at the beginning of 2017 (Figure 3). Higher equity valuations may partly reflect investors’ increasing optimism regarding banks’ earnings outlook, due to expectations of positive effects on profits coming from the steepening of the yield curve and the potential future increase of the level of short-term rates. In addition to higher earnings expectations, lower risk premium levels have possibly played an important role in the strong increases in bank stock prices.

In 2017, the aggregate price-to-book-value of EU banks has increased, although it is still below one. The high dispersion across EU banks partly reflects cyclical factors, as the pace of economic recovery varies across countries, but also differences in the progress made by institutions in tackling structural challenges (e.g. NPLs, operating efficiency) or even some lack of confidence in the sustainability of banks’ business models.

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 data, EBA calculations.

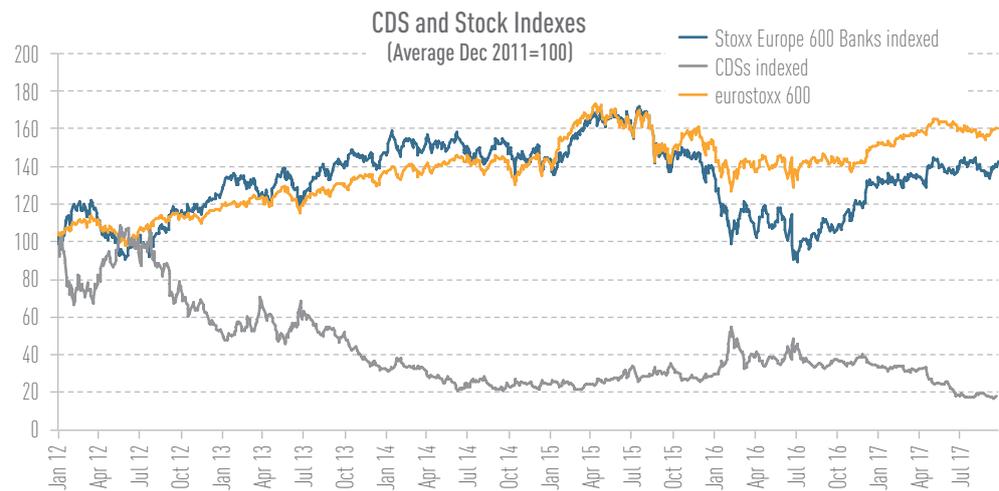


Figure 3: Price to expected earnings index (right-hand side) and price to book value index (left-hand side) – average of indexes of EU banks
 Source: Bloomberg data, EBA calculations.



Volatility (Figure 4) has remained stubbornly low throughout 2017 despite heightened geopolitical uncertainties. This counterintuitive trend raises concerns that, in the context of ultra-low volatility, a low-interest rate environment and abundant liquidity, investors may shift towards riskier assets in search of higher returns. Therefore, a long period of low volatility could continue to support the

search for yield leading to a build-up in excessive risk and to an increase of medium-term vulnerabilities.

Furthermore, the possible outcomes of the Brexit negotiations add a high degree of uncertainty to the future trend of EU financial markets.

Figure 4: Volatility index (VIX) – daily prices
 Source: Bloomberg.



Brexit: Short-term financial stability risks in the EU banking system related to cliff-edge scenario

On 29 March 2017 the United Kingdom notified the European Council of its intention to withdraw from the European Union. The withdrawal will take place on the date of entry into force of a withdrawal agreement or, failing that, 2 years after the notification, on 30 March 2019.

The UK is a central part of the EU’s financial system because of its leading position in capital, liquidity, derivatives and

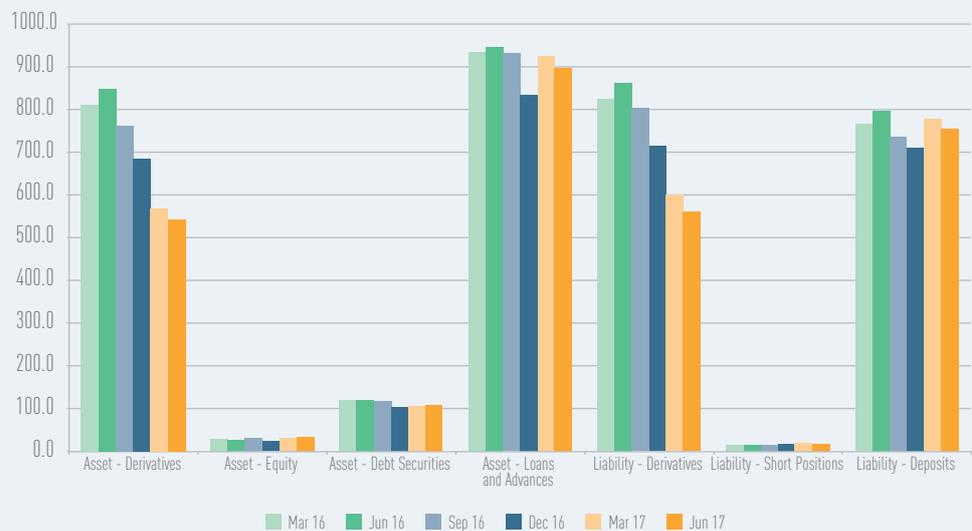
foreign exchange markets. In June 2017 EU-27 banks had a total asset exposure to the UK of EUR 1.585 trillion and a total liability exposure to the UK of EUR 1.335 trillion. However, since the referendum in June 2016, both the total asset and total liability exposures of EU-27 banks towards the UK have been steadily decreasing (see Figure 5).

The reduction in the total asset and total liability exposures has been mainly driven by falling derivatives exposures (- 35%), while the other categories have remained constant over the period (see Figure 6).

Figure 5: Total asset and liability exposures of EU-27 banks to the UK (billion EUR)
 Source: Supervisory data.



Figure 6: Total asset and liability exposures of EU-27 banks to the UK by category (billion EUR)
 Source: Supervisory Data



Continuity of contracts as a significant source of concern in a cliff-edge scenario

In the event of no agreement, the effect of the consequential regulatory changes on financial contracts entered into between parties from the EU-27 and the UK constitutes a cause for concern, in the absence of mitigating actions. Indeed, while only 10 % of respondents to the RAQ expect material negative implications to banks' business from the scenario of a 'hard Brexit', more than one third of banks are concerned about the continuity of financial contracts in such a scenario.

A no-agreement scenario may affect the legal ability to fulfil the contractual obligations entered into, as well as the provision of ancillary services (e.g. for loans, liquidity lines, swap arrangements). This would entail risks for consumers and businesses, including payment and credit institutions, in terms of potential cancellation, amendment or renegotiation of contracts, loss of protection, disruption and financial losses. It is important that banks and their counterparties, as well as consumers and public authorities, consider appropriate mitigating actions and contingency plans to address these concerns.

Other pockets of risks that could disrupt financial stability

The potential loss of access to UK-based central counterparties (CCPs) and to short-term liquidity provided by UK-based counterparties could lead to disruptions of financial flows. The UK CCPs currently act as clearing-houses for a large share of derivatives trading (interest rate swaps, credit swaps etc.). In the event of a no-agreement scenario, the UK will then be considered a third country, which implies a potential period when UK CCPs are no longer authorised and are not recognised

to operate in the EU. This might pose not only a threat to market continuity but also challenge banks domiciled in the EU-27 through increased capital requirements for exposures to UK CCPs.

In a worst-case scenario UK entities might be unable to continue to provide services to EU-27 entities, including payment services. As a consequence, corporates and households in the EU-27 could face restrictions on accessing both wholesale and retail financial services provided in the UK.

Further risks related to data protection issues such as data transfer and the protection of data with a third country could disrupt financial stability and market confidence.

The potential loss of automatic recognition and enforcement in the EU-27 of judgments of UK courts could also lead to some disruption if parties seek to amend contracts to apply EU-27 law or court jurisdiction, including in relation to funding instruments of financial institutions.

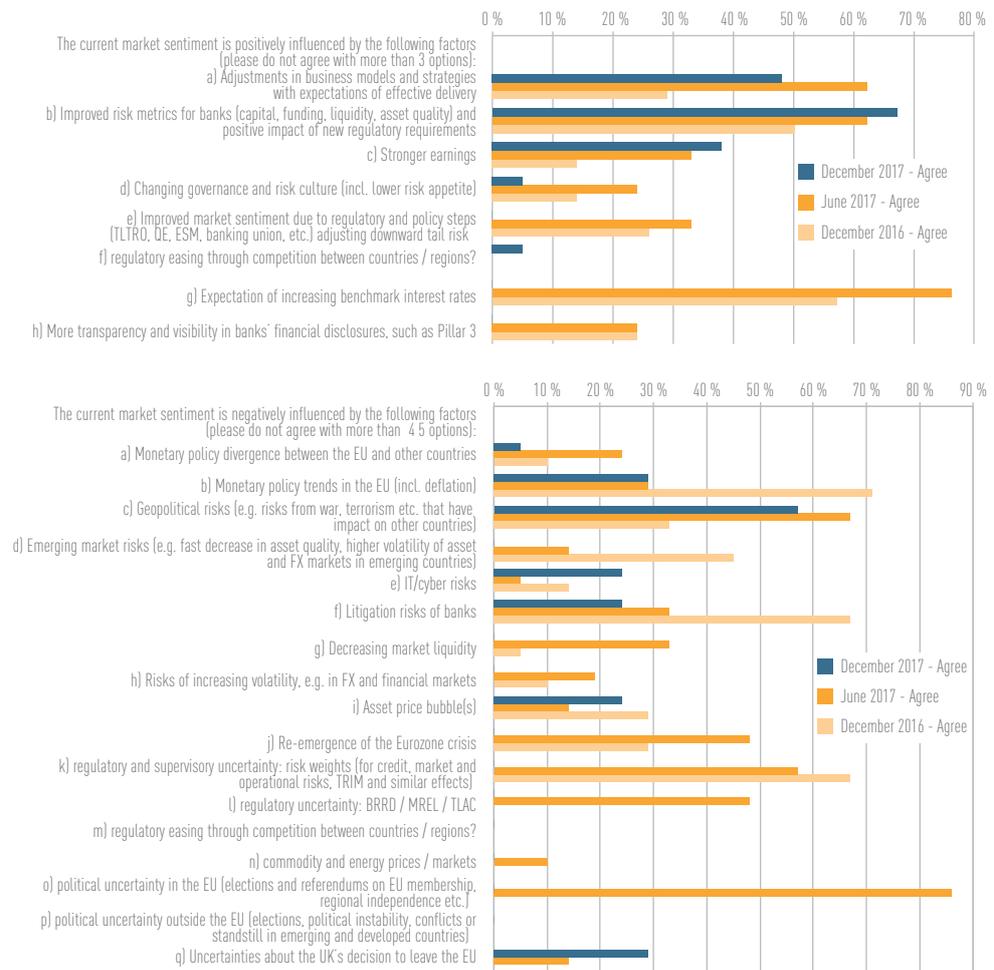
Lastly, the risk of limited consumer awareness of and uncertainty as to the possible consequences of Brexit with regard to contract continuity, rights and/or obligations could also challenge market confidence.

These risks may, in the short term, endanger the continuity of cross-border financial flows and services between financial service providers in the EU-27 and the UK. A disruption of financial flows and financial services, coupled with diminishing confidence of market participants, could lead to the drying up of market liquidity and rising risk premia, with further potential adverse feedback loops for market confidence affecting financial stability in the EU banking system.

The results of the RAQ show that market analysts expect stronger earnings in an environment of improved risk metrics. However, they are still concerned about geopolitical risks and possible monetary policy trends in

the EU. Further general concerns come from cyber risk, the possible excess capacity of the banking system and increasing risks due to the search for yield.

Figure 7: Market sentiment: positive and negative influences
 Source: EBA RAQ for market analysts.



Main risks identified in the 2017 SREP risk assessments performed for the EU's largest banking groups

The aim of the supervisory review and evaluation process (SREP) is to analyse and assess risks to which an institution is or might be exposed on both solo and consolidated levels. The SREP is an ongoing process which brings together conclusions and findings from all supervisory activities to form a comprehensive view on an institution's viability and requirements in terms of capital and liquidity. This box presents the main risks identified in the 2017 SREP risk assessments carried out for the EU's largest banking groups.

In general, the level of risk is driven by the business model and related risk appetite which determines the aggregate level and types of risk an institution is willing to assume within its risk capacity, i.e. the level and quality of the capital base.

Business model analysis

The results from the business model analysis continue to provide a mixed picture on the viability of business models. Institutions with a strong franchise at their core markets, good geographical diversification and diversified revenue sources have demonstrated good levels of profitability and sustainable business models. However, many institutions still struggle to implement the needed changes in their business strategies and to reach the ambitious earnings targets. For these institutions, challenges in the implementation of updated business strategies are often coupled with the limited adaptability of IT infrastructures.

Credit risk

Given that the traditional banking business model is widespread among European banks, credit risk remains the main risk

for the majority of institutions. The overall level of credit risk is still rather high by historical standards; however, there has been further progress in dealing with legacy portfolios. This trend has been confirmed by reductions in the stock of non-performing exposures and improvements in the main credit risk indicators. Nonetheless, there are still some pockets of risks in some specific sectors (e.g. oil and gas portfolios and shipping portfolios) and for some countries, such as Brazil, China, Russia and Turkey. Recently, banks have focused their strategy on credit growth ⁽⁶⁾, in order to compensate for the stagnation of net interest income (NII) due to the low interest-rate environment. While this approach can be viewed as a natural way to keep profitability targets, it has to be accompanied by appropriate lending standards, to avoid any future undue increase in the inflow of non-performing exposures. On the risk management side, some weaknesses in internal credit controls, in data quality and in reporting still persists.

Operational risk

As far as operational risk is concerned, there has been no significant progress and weaknesses identified over the last several years still need to be remedied. A substantial amount of conduct redress-related cost has been recorded in recent years. On the basis of the 2017 risk assessments, some institutions should allocate more resources, both human and financial, to projects that have been initiated to remedy deficiencies in the area of operational risk. The execution of relevant projects is lagging behind schedule, especially in the IT area. In fact, the IT risk alone was assessed as medium-high due to large and complex IT environments with fragmented and aging IT systems. Additional concerns come from the quality of data. In this respect, some institutions are still taking steps to address

⁽⁶⁾ For credit growth, see Chapter 2.1 (Asset side – Volume developments).

the enhancement of their risk infrastructures and data environments in order to fully implement BCBS 239 ⁽⁷⁾. Given all the aforementioned problems, operational risk is still perceived to be high.

Market risk

For the majority of institutions, market risk was assessed as medium-low risk given their low risk appetite for market risk and a relatively small size of the trading book. Nonetheless, some weaknesses in internal risk control frameworks still remain. For some other institutions market risk is at a medium-high level, given their higher reliance on the trading book activities and rather complex financial instruments held (Level 3 instruments).

Liquidity risk

On the whole, liquidity risk is assessed as stable amongst the banking groups closely monitored by the EBA; liquidity buffers are sufficient and general compliance with regulatory ratios is generally ensured. Internal liquidity control frameworks seem to be broadly adequate for liquidity management purposes. Nevertheless, some institutions still need to strengthen their control functions, better define their liquidity risk appetite and improve internal tools used to measure and monitor liquidity risk.

Interest rate risk in the banking book (IRRBB)

The majority of institutions show a medium-low level of IRRBB. However, improvements are still needed both on the quantitative side (e.g. internal behavioural models and quality of data) and on the qualitative side (i.e. internal control function).

⁽⁷⁾ In January 2013, the Basel Committee on Banking Supervision issued principles for effective risk data aggregation and risk reporting (BCBS 239) with the aim to enhance the infrastructure for reporting key information, improve the decision-making processes and ultimately reduce the probability and severity of losses resulting from risk management weaknesses..

2. Asset side

After an increase in banks' assets in 2016, EU banks have been engaged in a new restructuring process of their balance sheets. In the period June 2016 – June 2017, assets decreased by 6.3 %, mainly on the back of decreasing derivatives and debt securities. Nonetheless, banks have continued to increase loan volumes. Total loan and advances have increased by 2.1 % within 1 year and this trend is expected to continue according to the EBA's funding plan analysis and RAQ.

Asset quality has improved since the end of last year. Although it decreased to 4.5 % in the first half of 2017 compared to 5.4 % in June 2016⁽⁸⁾, the average NPL ratio remains

elevated. Dispersion across countries and banks is still high when looking at asset quality metrics. According to banks and market analysts further gradual improvements in asset quality are expected, but they will depend mainly on success in implementing structural changes and improving the secondary markets for NPLs. They also expect a rise in provisions in the near future.

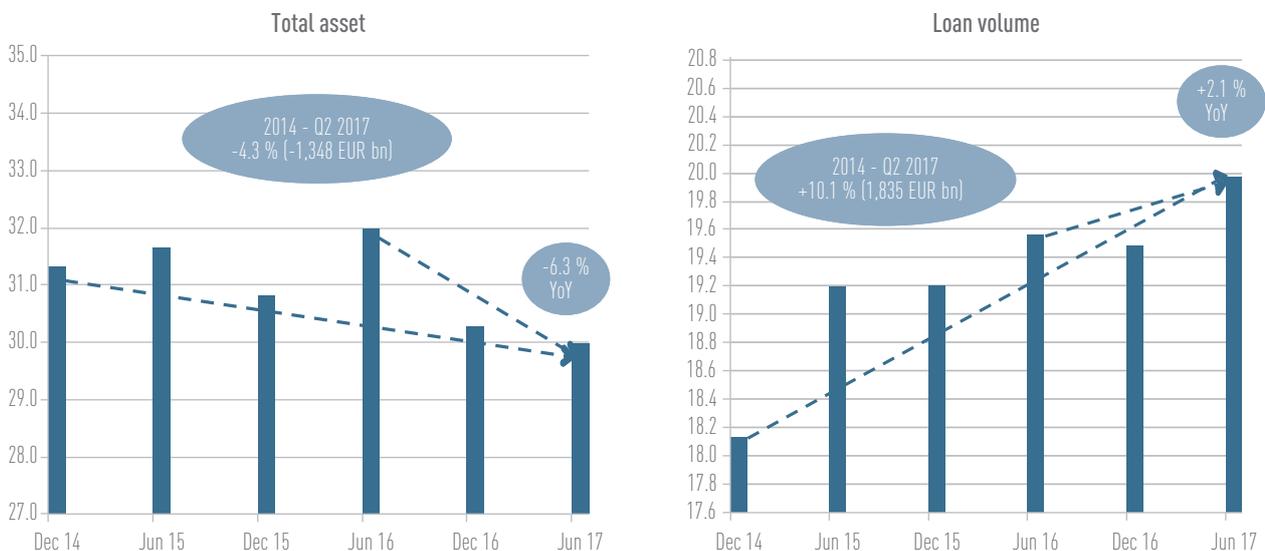
2.1 Volume developments

Reshuffling of the asset mix

Since December 2014 the total assets of EU banks have decreased by EUR 1,348 billion or 4.3 % (to EUR 29,977.5 billion), with high dispersion of banks' asset variation across jurisdictions. On the other hand, banks' loans have increased significantly: the increase since December 2014 has amounted to EUR 1,835 billion or 10.1 %. On a year-on-year basis, loans and advances have increased by 2.1 % (Figure 8), which is in line with the trend in the previous year.

⁽⁸⁾ On the definition of non-performing and forborne exposures see the EBA's implementing technical standard (ITS) on Finrep (<https://www.eba.europa.eu/regulation-and-policy/supervisory-reporting/implementing-technical-standards-amending-commission-implementing-regulation-eu-no-680/2014-on-supervisory-reporting-of-institutions>). These uniform definitions for non-performing and forborne loans may mean there are differences between these figures and the disclosures in banks' annual reports, which might be based on applicable accounting standards. It should also be noted that implementing the EBA's uniform definitions for non-performing and forborne loans, since their introduction in September 2014, has involved substantial system changes for banks and may have initially required banks to make some assumptions about historic data.

Figure 8: Total asset and loan volumes (trillion EUR)
Source: EBA risk indicators and EBA calculations.



The share of loans in total assets has increased to 61.1 %, compared to year-end 2016 (60.3 %) and Q2 2016 (58.8 %).

The share of cash balances has increased further from 5.9 % in June 2016 to 8.5 % June 2017. This upward trend can be explained by the lack of opportunities for investments due to the low interest rate environment, but it can also be the result of the current accommodative monetary policy stance. Indeed both the ongoing quantitative easing program of the European Central Bank and the wide use of the last TLTRO II led to an increase of the total cash reserves of commercial banks.

Also the share of equity instruments has increased, while debt securities and derivatives have notably declined year-on-year (from 14.2 % to 13.2 % and from 13.3 % to

9.1 %, respectively). The changes in asset composition could be related to indications of increasing interest rates; available-for-sale and held for trading portfolios significantly decreased (- 25 %), driven by the decline of derivatives (- 40 %) (Figure 9).

Banks' deleveraging strategy is expected to change

The RAQ results show that fewer than 40 % of the banks see deleveraging as an element of their strategy going forward. This is the lowest level of any RAQ result to date. For example, in December 2014 more than 60 % banks confirmed a deleveraging strategy, and 50 % at the end of 2016 (see Figure 10). Banks mention business unit and line disposals as the main drivers of their strategy (with an agreement rate between 20 % and 30 %).

Figure 9: Breakdown of total assets
Source: EBA risk indicators and EBA calculations.

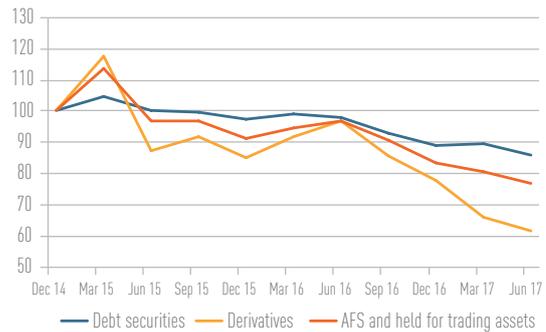
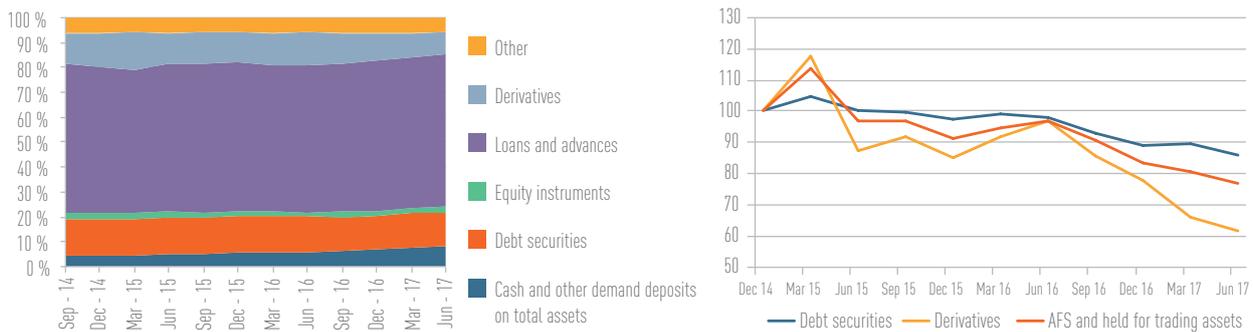
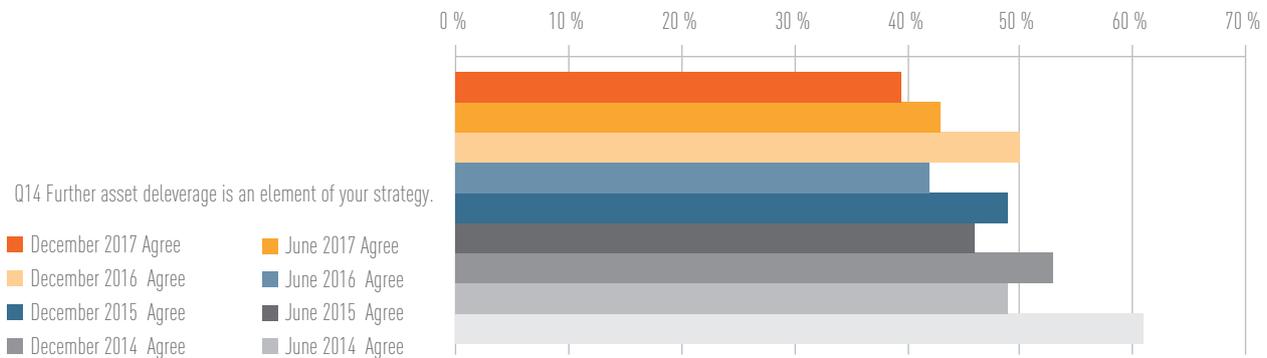


Figure 10: Expectations about further deleveraging of banks' overall balance sheet
Source: EBA RAQ for banks.



Results from the RAQ confirm that banks are continuing to focus on plain vanilla lending. With almost identical results to December 2016, banks plan to increase lending volumes to the corporate sector, in particular SMEs, and to households, including both residential mortgage and consumer credit loans. The most notable changes compared to December 2016 are related to the expectation of growth of corporate lending, about 80 %, and of structured finance volumes (above 40 %), with agreement increasing by more than 10 percentage points compared to the previous year. In addition, a higher number of banks plan to decrease sovereign and institutions portfolios, with agreement reaching almost 30 % (Figure 11).

The ECB's July 2017 Bank Lending Survey^(*) – limited to the euro area – supports banks' expectations about future lending trends. According to the survey, in the second quarter of 2017 loan growth continued to be driven by increasing demand across all loan categories. In addition, banks have eased credit standards to enterprises and households for house purchases, while they have remained unchanged for consumer credit and other household loans.

(*) The ECB's Euro area bank lending survey is available online (<https://www.ecb.europa.eu/stats/pdf/ecb.blssurvey2017q2.en.pdf?ae15d875c87cbc4d60432ec0c1a79800>).

Figure 11: Portfolios considered by banks for increase and decrease of assets
Source: EBA RAQ for banks.

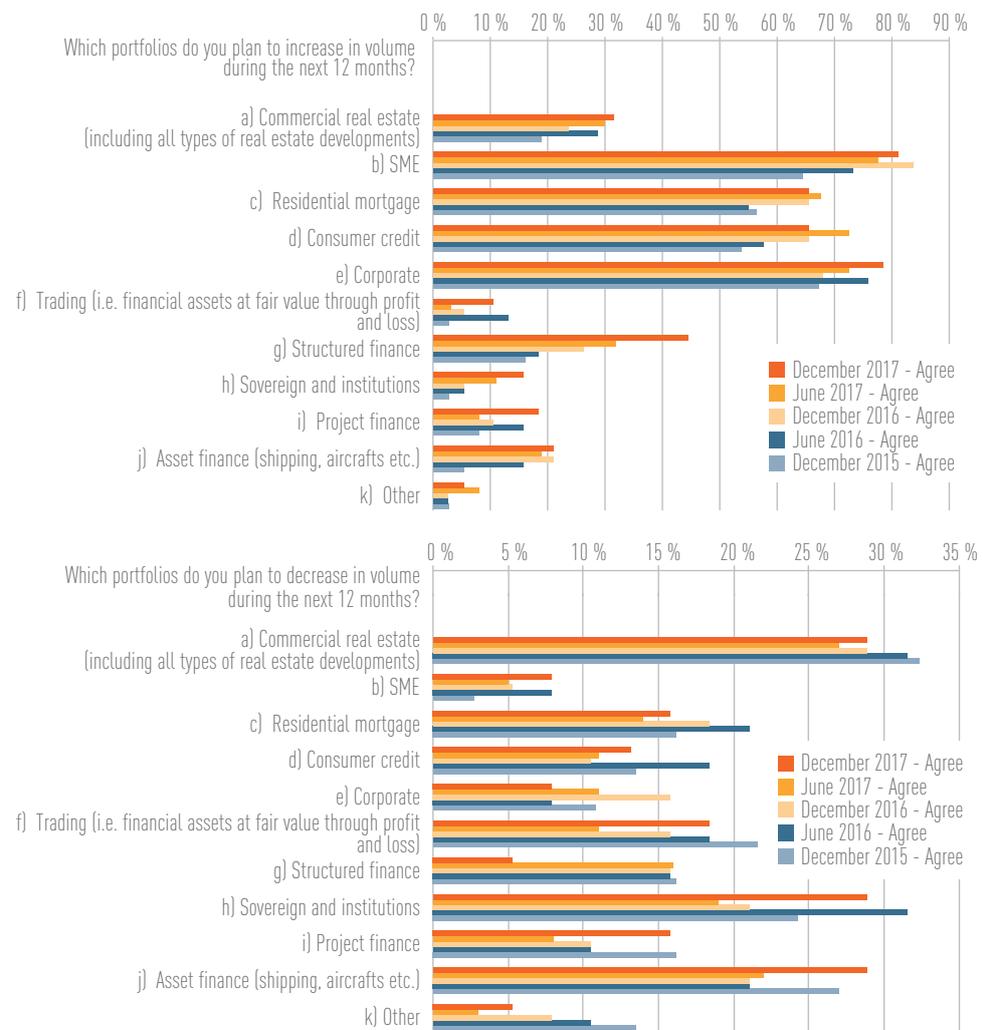
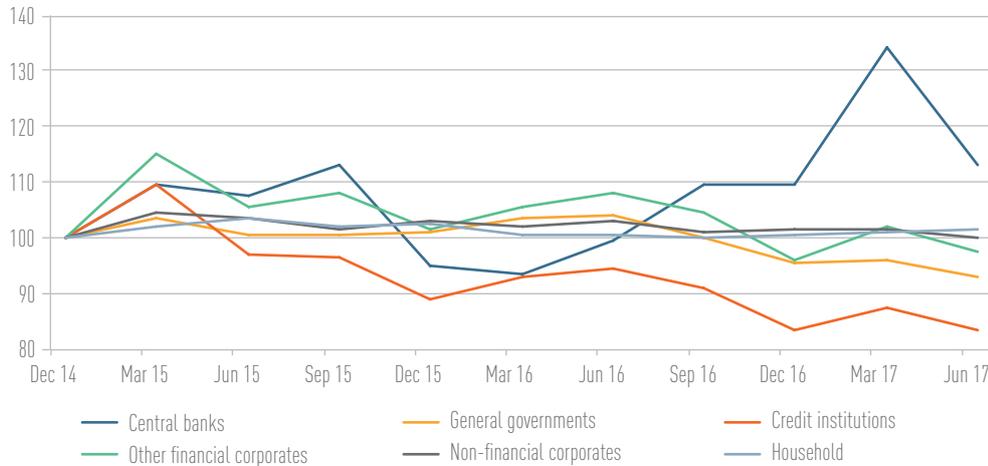


Figure 12: Loans and advances and debt securities by segments (December 2014 = 100)

Source: EBA risk indicators and EBA calculations.



Looking at the volumes of loans and debt securities there is a clear trend of decreasing exposures towards credit institutions since March 2015. Exposures towards general government and other financial corporate exposures started decreasing in June 2016. Exposures towards households and non-financial corporates have stayed flat in the past 2½ years, with the RAQ results suggesting that they might rise more rapidly in the near future.

Market analysts are more confident than in the previous RAQ on the growth of core lending business (agreement higher than 70%), especially for SME and corporate lending. This is possibly a consequence of a more upbeat sentiment on the macroeconomic outlook. For the same reason they also see a potential growth in some of the less conventional bank portfolios, such as structured and project finance.

However, analysts expect a decrease of volumes with regards to trading activities, asset finance, sovereign and institutions, and CRE exposures. The agreement ranges have dropped, especially for CRE exposures: around 50% of market analysts expect decreasing volumes in December 2017 compared to more than 60% a year previously (Figure 13).

According to the RAQ answers from analysts, any further deleveraging would mainly stem from regulatory pressure, capital level constraints and reduced demand for credit. However, from June 2017 to December 2017, the agreement of analysts about the causes of asset reduction has shifted from regulatory pressure towards the declining demand for credit and transactions. This could be explained by reduction of the outstanding NPLs and still high indebtedness of enterprises as well as households in some areas that is preventing further borrowing.

Figure 13: Portfolios considered by analysts for increase and decrease of assets
 Source: EBA RAQ for market analysts.

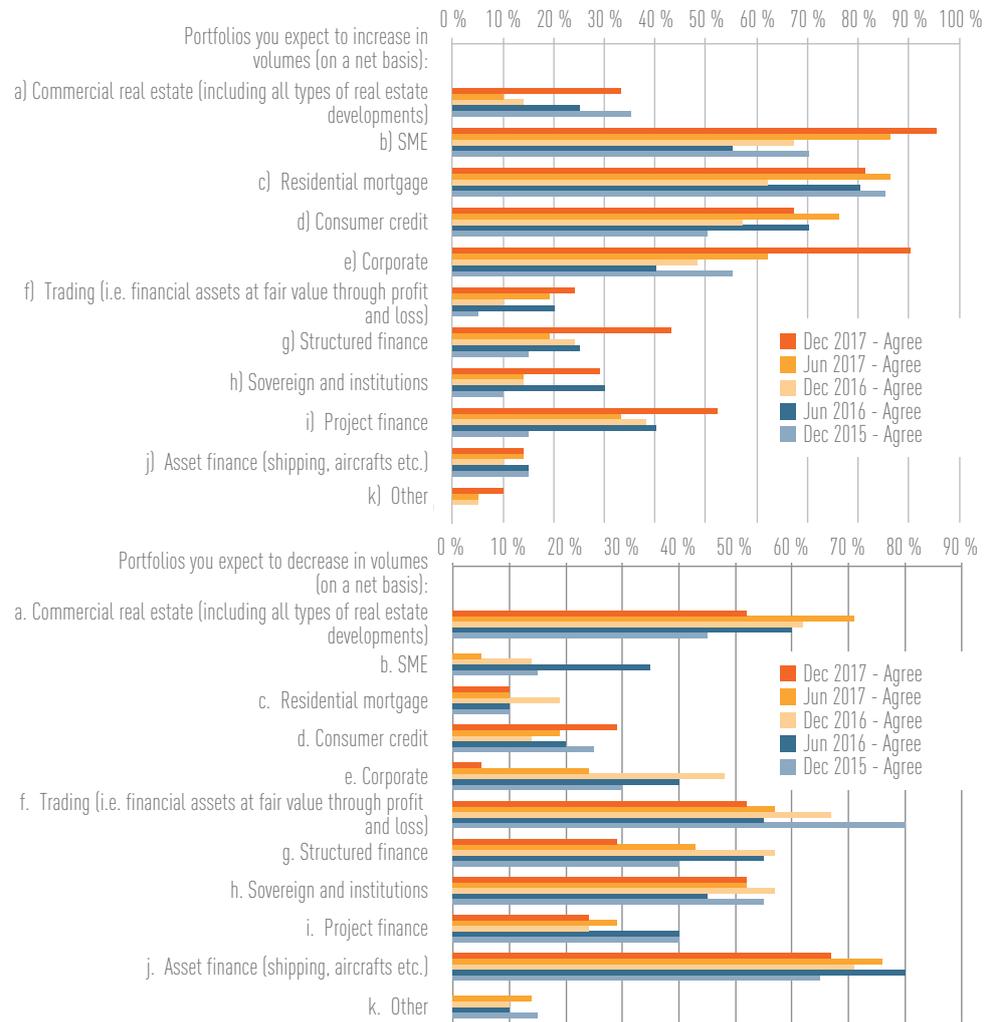
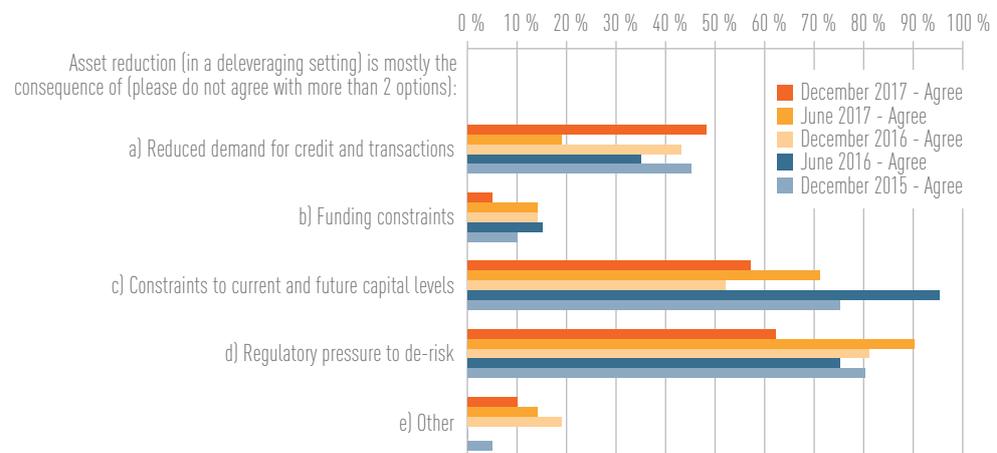


Figure 14: Reasons for deleveraging
 Source: EBA RAQ for market analysts.



Rise in consumer credit and auto loans

Since December 2014 consumer credit loans have increased by around EUR 150 billion or by 15 % with an ongoing upward trend since Q3 2016 supported by better lending conditions offered by the low-rate environment. The consumer credit NPL ratio has recently fallen also because of the increase of the denominator (Figure 15).

Auto loans ^[10] seem to have followed a similar trend. Since 2014 the amount of new loans has been increasing by about 10 % a year, reaching EUR 290 billion (Figure 15).

Since there is no reliable data on the development of asset quality for auto loans in the

EU, it is useful to look at the developments in other comparable regions. For example, the Federal Reserve of New York findings show that a higher growth of auto loans in recent years has increased the share of delinquencies ^[11].

Nonetheless, the RAQ results show that more than 60 % of banks disagree that the consumer credit and auto loan exposures are significant. In addition, most banks do not expect increasing risk coming from such exposures in the next 12 months. This might mean that banks could further increase such portfolios if the demand persists in the next 12 months.

Figure 15: Consumer credit loans and new leased equipment volumes^[12] in the EU
 Source: EBA risk indicators and EBA calculations (left-hand side chart); Leaseurope (right-hand side chart).

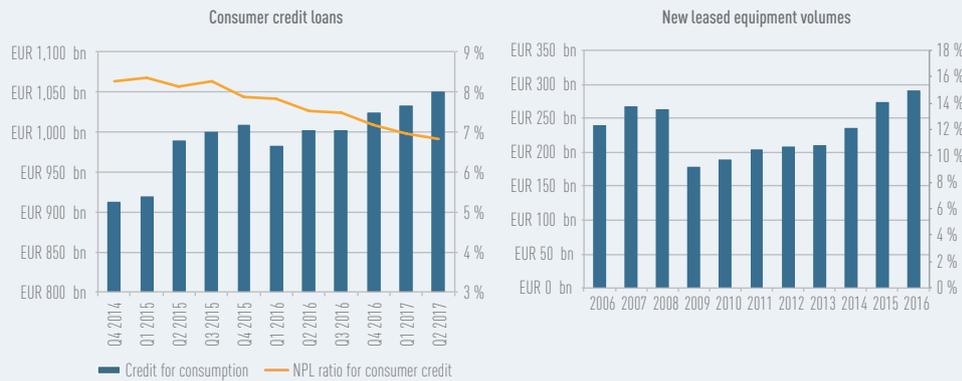
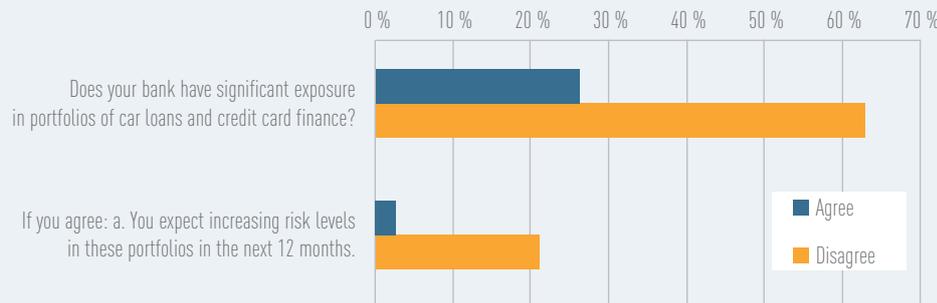


Figure 16: Banks' views on car loans and credit card finance
 Source: EBA RAQ for banks.



^[11] Auto loans started picking up in Q1 2014 (USD 850 billion) increasing by more than 40 % in 3 years. Loan delinquencies have since then increased from 1.5 % to 2.3 %.

^[12] For reference purposes, the share of passenger cars and commercial vehicles in the 2015 new leased equipment was 51 % and 19 %, respectively. The following countries are included: Austria, Belgium, Czech Republic, Denmark, Estonia, Germany, Finland, France, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden and United Kingdom.

^[10] Equipment leases are used as a proxy for auto loans.

2.2 Asset quality

The gross carrying amount of NPLs in the second quarter of 2017 was EUR 893 billion, a decrease of 16 % compared to the same period last year. This decline reflects the progress made by EU banks to tackle the legacy assets issue. The average NPL ratio amounted to 4.5 %⁽¹³⁾, down from its highest level of 6.5 % in December 2014 and 5.4 % a year ago. The NPL ratio reduction has picked up pace since September 2016 (Figure 17); however, the ratio remains elevated when compared

historically and to other regions⁽¹⁴⁾. The decrease in the ratio has been more driven by a reduction of NPLs, than by increasing loans⁽¹⁵⁾.

Looking across EU countries, NPL ratios continue to be highly dispersed although with decreasing interquartile range (Figure 18). Eight countries still have an NPL ratio of above or around 10 %.

⁽¹³⁾ As described in the EBA's risk indicator guide, the NPL ratio is calculated based on gross volumes from a sample of 189 European banks. See the EBA's methodological guide (<http://www.eba.europa.eu/risk-analysis-and-data/risk-indicators-guide>).

⁽¹⁴⁾ For the United States, the NPL ratio was 1.3 % in December 2016, according to World Bank data (<http://data.worldbank.org/indicator/FB.AST.NPER.ZS?locations=US>). However, it should also be noted that due to missing harmonised worldwide definitions these ratios are not perfectly comparable. On the credit risk component see also the box on SREP results in Chapter 1 (Macroeconomic environment and market sentiment).

⁽¹⁵⁾ For loan growth see Chapter 2.1 (Volume developments).

Figure 17: Non-performing loans ratio – 5th and 95th percentiles, interquartile range and median; numerator and denominator trends (December 2014 = 100)

Source: EBA risk indicators.

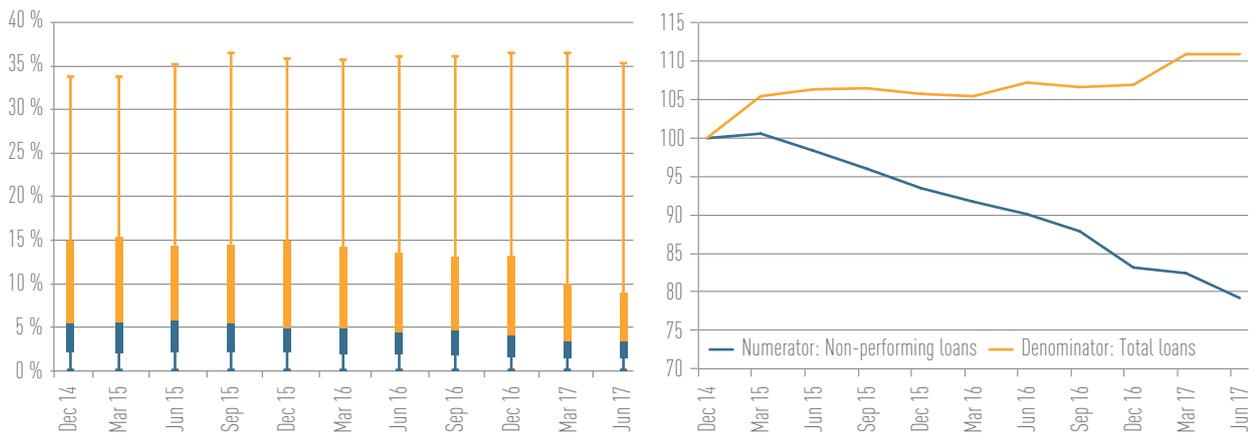
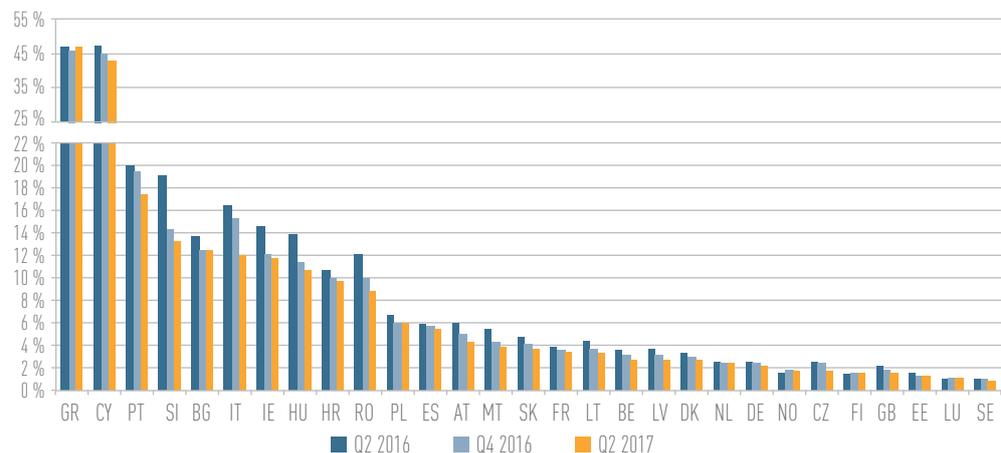


Figure 18: Non-performing loans ratio – weighted average by country⁽¹⁶⁾

Source: EBA risk indicators.



Forborne loan ratios and non-performing loan ratios by sector

The average forborne loan (FBL) ratio has been gradually decreasing over the last four quarters, in line with the NPL ratio. The ratio decreased by 0.5 pp to 2.8 % in June 2017 compared with June 2016 (Figure 19); countries where NPL ratios have been decreasing in the past three quarters have followed this trend.

With the decreasing FBL ratio, the share of performing loans classified as FBL decreased. Some 64 % of FBLs were non-performing in June 2017 and 36 % were performing [17]. The share of performing FBLs

has decreased by 5 pp compared with the same period in 2016. There is also still a significant divergence among countries in the percentage of performing FBLs as share of total FBLs, ranging from 14 % to 71 %.

On the basis of a composite credit weakness indicator, which combines NPLs and performing FBLs [18], 10 countries are above 10 % (Figure 20). The indicator does not include foreclosed assets, which could have an impact on some countries.

The NPL ratio of SME loans was 13.8 % in June 2017, improving since December 2014 (19 %). However, loans to SMEs still show the highest NPL ratios in most jurisdictions.

[16] As described in footnote 13, the NPL ratio is calculated based on gross volumes.

[17] An FBL can be considered as performing as soon as forbearance measures are applied to it, if those measures do not lead to any non-performance criteria being hit, especially if the forbearance measures are not considered as a credit event under accounting standards or as a distressed restructuring under the CRR. A non-performing FBL can become a performing FBL ('in cure') once the non-performing criteria cease to apply to it. All performing FBLs must remain identified as such for at least 2 years before being considered fully performing (performing not forborne).

[18] The assumption is that the performing FBLs indicate a below-average asset quality.

Figure 19: Ratios of non-performing loans and forborne loans
Source: EBA risk indicators.

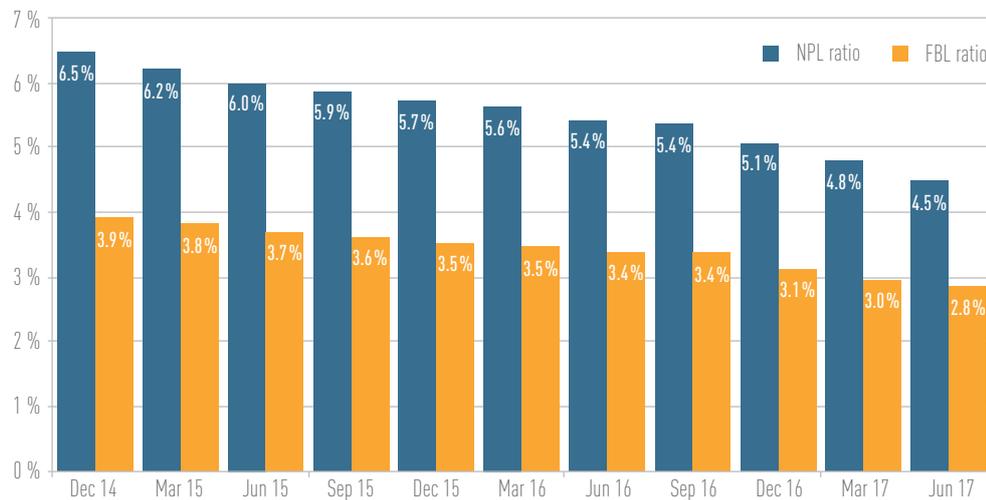
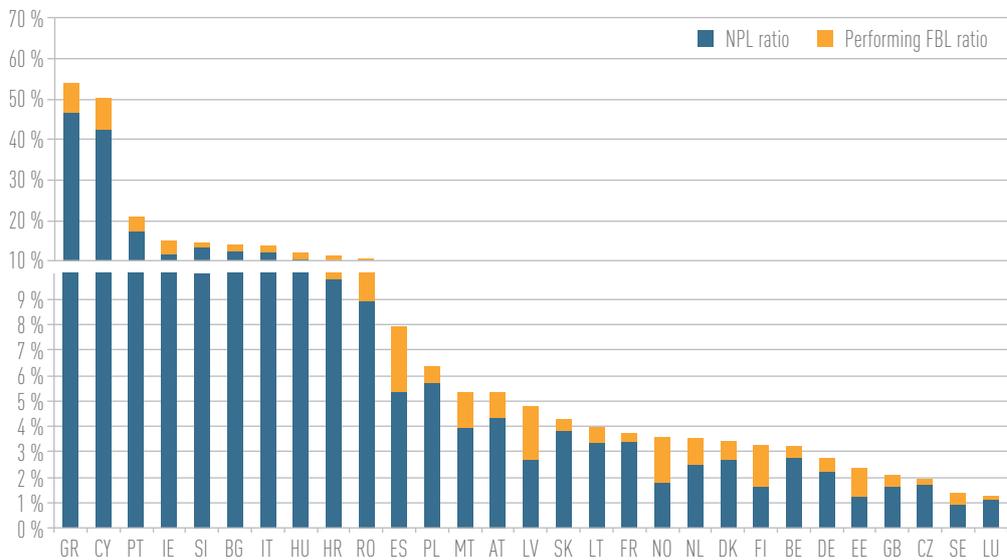


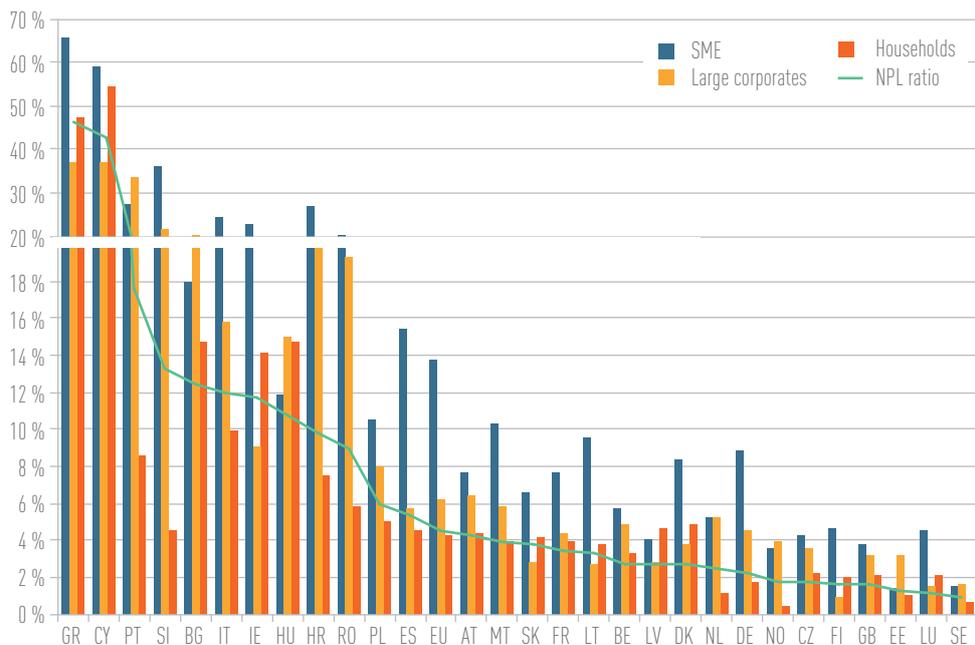
Figure 20: A composite credit weakness ratio of non-performing and performing forbore loans by country, Q2 2017
 Source: EBA risk indicators.



NPL ratios for large corporates have decreased in many jurisdictions as well. For the EU, the ratio has declined from 8.9 % in December 2014 to 6.2 % in June 2017. The

NPL ratio of loans to households has also decreased since December 2014, from 5 % that month to 4.3 % in June 2017 (Figure 21).

Figure 21: Non-performing loan ratios by sector, Q2 2017
 Source: EBA risk indicators.

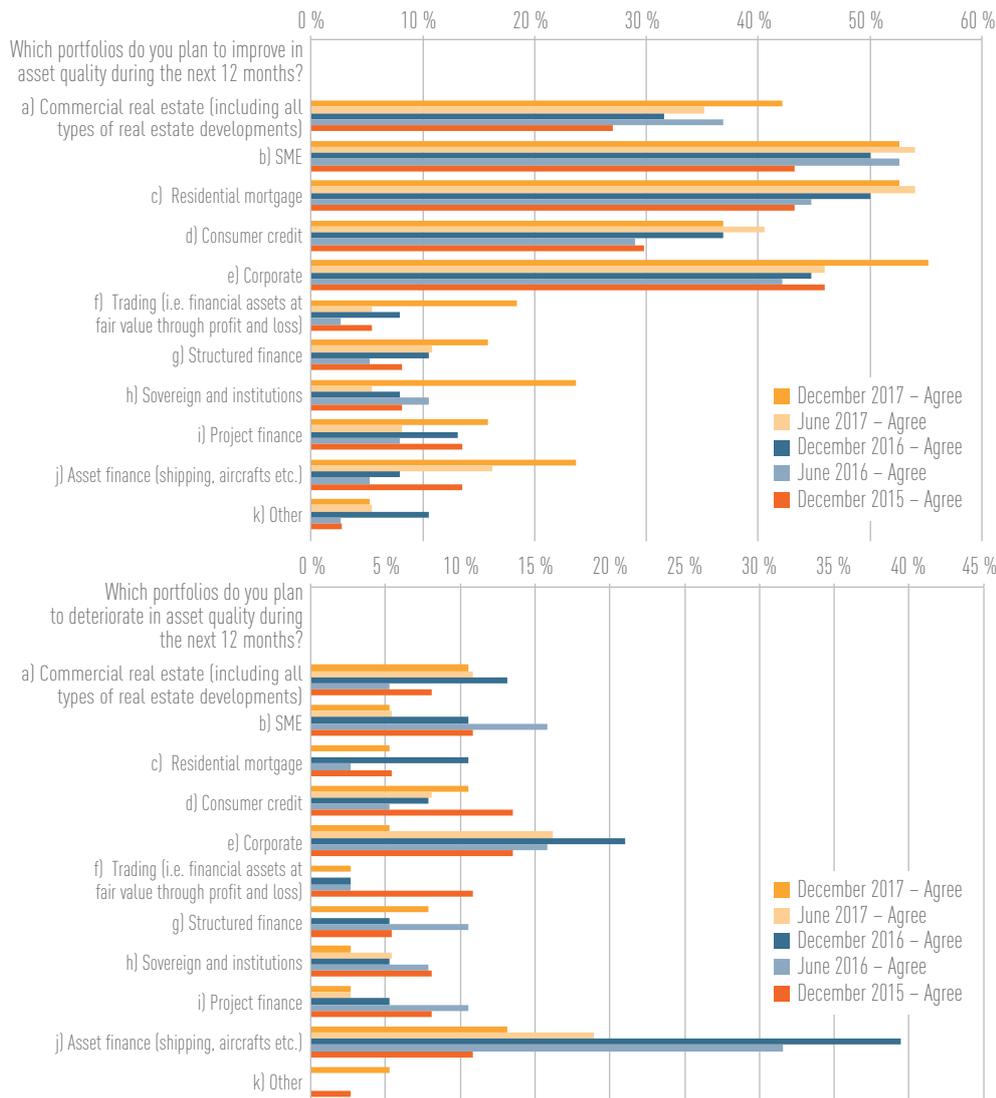


Asset quality is expected to improve further

For the next 12 months the RAQ responses suggest that banks' asset quality might improve; more than 50 % are in agreement. Compared to the results in the previous periods, banks expect particular improvements in the commercial real estate portfolio

(agreement rate above 40 %, 10 pp higher than in June 2016) and corporate portfolio (agreement rate of 55 %, 13 pp higher than in June 2016) (Figure 22). Banks do not expect much deterioration in any of the portfolios. The highest agreement rate on deterioration is for asset finance portfolios (12 %).

Figure 22: Portfolios which are expected to improve or deteriorate in asset quality, Q2 2017
 Source: EBA RAQ for banks.



Expected default frequency — Exposures towards the non-financial sector

Expected default frequencies (EDFs) are an estimate of the probability of default (PD) for individual counterparties during the forthcoming year for firms with publicly traded equity. The EDFs are based on equity prices and data from the companies' financial statements. The combination of the PDs with financial supervisory reporting (Finrep) data on exposures towards non-financial sectors by country of exposure (only EU) allows the establishment of a simplified early warning system (EWS). This system identifies the riskiest combination of sectors and geographies, i.e. those with the highest estimated 1-year PDs, and the level of exposures of EU banks towards them. It also allows for the monitoring of those exposures that are significant at EU or national levels and that are associated with a high PD.

There are several caveats in the estimation of the PD for the purpose of the EWS, mainly related to specific sectors, such as

the real estate sector in the EU. Respective sector exposures are significant in EU banks, but they are mainly towards non-listed companies, which are not directly covered by the EDFs ^[19].

According to Q2 2017 data, the largest exposures of EU banks remain those towards the real estate sector (27 % of total), with a rather low PD. The second-largest sector in terms of EU exposures (more than EUR 600 billion, 14 % of total European non-financial exposures) is the manufacturing industry, which has still a low PD. The third-largest sector (more than EUR 500 billion, 12 % of total relevant exposures) is wholesale and retail trade, showing a PD similar to the manufacturing sector. The breakdown of the total exposures by country and sector (Figures 23 and 25) has remained stable for almost all countries compared to Q2 2016.

^[19] Also as Moody's Analytics' CreditEdge has updated its model this year (EDF9), some EDFs have significantly changed compared to last year's estimation for some sectors.

Figure 23: Total exposures of European banks (by country of origin) towards EU non-financial sectors (by sector of the counterparty)

Source: EBA supervisory reporting, EBA calculations.

Sector	PD median 2017 (%)	Total exposure 2017 Q2	% of total	Total exposure 2016 Q2	% of total	% change 2017 vs 2016 volumes
L Real estate activities	0.31 %	1,181,153	26.8 %	1,177,149	26.6 %	0.3 %
C Manufacturing	0.18 %	611,454	13.9 %	618,429	14.0 %	-1.1 %
G Wholesale and retail trade	0.25 %	545,081	12.4 %	531,657	12.0 %	2.5 %
F Construction	0.58 %	302,158	6.8 %	319,041	7.2 %	-5.3 %
H Transport and storage	0.20 %	249,274	5.6 %	267,592	6.0 %	-6.8 %
S Other services	0.03 %	247,456	5.6 %	221,395	5.0 %	11.8 %
M Professional, scientific and technical activities	0.35 %	238,225	5.4 %	237,904	5.4 %	0.1 %
N Administrative and support service activities	0.32 %	193,837	4.4 %	189,301	4.3 %	2.4 %
D Electricity, gas, steam and air conditioning supply	0.11 %	183,185	4.2 %	189,935	4.3 %	-3.6 %
A Agriculture, forestry and fishing	0.20 %	170,470	3.9 %	174,583	3.9 %	-2.4 %
I Accommodation and food service activities	0.12 %	119,829	2.7 %	114,940	2.6 %	4.3 %
J Information and communication	0.29 %	105,746	2.4 %	108,597	2.5 %	-2.6 %
Q Human health services and social work activities	0.13 %	101,888	2.3 %	102,428	2.3 %	-0.5 %
E Water supply	0.41 %	47,202	1.1 %	48,205	1.1 %	-2.1 %
B Mining and quarrying	1.72 %	45,118	1.0 %	53,134	1.2 %	-15.1 %
R Arts, entertainment and recreation	0.09 %	28,531	0.6 %	27,986	0.6 %	1.9 %
P Education	0.96 %	21,151	0.5 %	24,015	0.5 %	-11.9 %
O Public administration and defence, compulsory social security	0.04 %	21,064	0.5 %	19,384	0.4 %	8.66 %
TOTAL		4,412,823	100.00 %	4,425,673	100.00 %	-0.29 %

PDs decreased in 2017 in all sectors. The riskiest sectors in Q2 2017 remain mining and quarrying as well as education, with a 1-year median PD of 1.72 % and 0.96 %, respectively. For all other sectors, median PDs are below 0.6 %. Banks' exposures in the two riskiest sectors are not significant (1 % and 0.5 %, respectively) (Figures 23 and 24). However, British, Greek and

Norwegian banks have relatively high exposures to the mining and quarrying sector (measured as the share of their total exposures, 1.9 %, 1.5 % and 3.9 %, respectively) that have slightly decreased with respect to last year. British and Irish banks have exposures of 1.9 % and 1.5 % respectively towards the education sector (Figure 25).

Figure 24: EDF quartile distribution by sector (non-financial) at EU level compared to EU banks' total exposures towards non-financial corporations by sector

Source: EBA supervisory reporting, Moody's, EBA calculations.

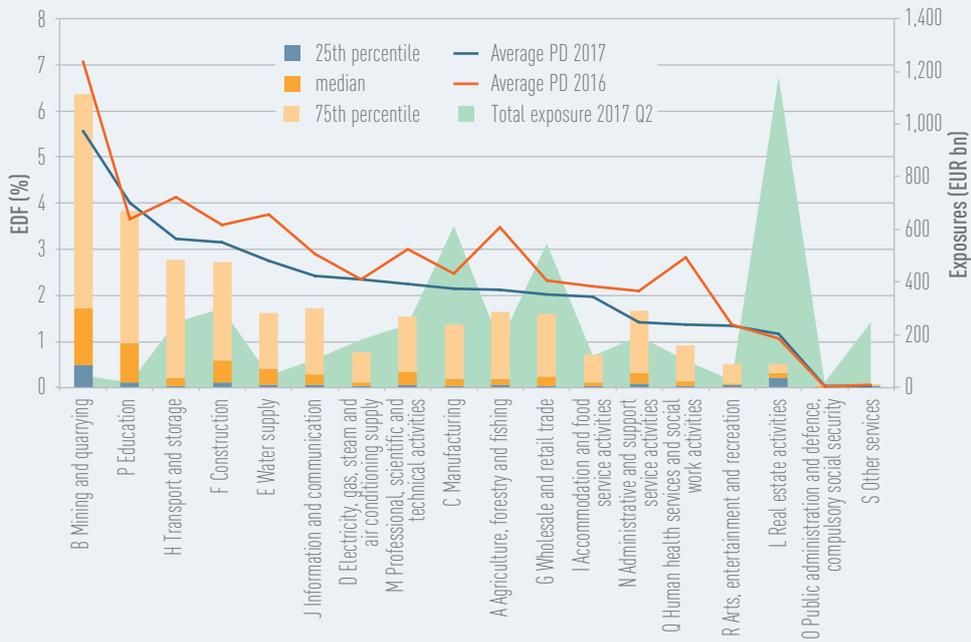


Figure 25: Exposures in Europe towards non-financial sectors by banks' country of origin (as a percentage of total) and sector EDF median (Q2 2017)

Source: EBA supervisory reporting, EBA calculations.

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S	Total
AT	1.9 %	0.9 %	16.2 %	3.9 %	0.8 %	10.6 %	13.7 %	4.1 %	3.8 %	1.7 %	29.3 %	6.8 %	2.3 %	0.5 %	0.1 %	1.3 %	0.7 %	1.4 %	100 %
BE	4.0 %	0.5 %	12.6 %	3.9 %	2.0 %	10.2 %	13.5 %	5.8 %	1.2 %	2.2 %	15.5 %	6.1 %	5.7 %	0.7 %	0.5 %	7.2 %	0.7 %	7.7 %	100 %
BG	5.3 %	1.0 %	22.7 %	4.2 %	1.1 %	8.9 %	26.6 %	4.8 %	3.9 %	1.0 %	13.5 %	3.6 %	1.4 %	0.0 %	0.0 %	0.5 %	0.5 %	1.0 %	100 %
CY	1.6 %	0.7 %	6.8 %	0.5 %	0.1 %	23.7 %	20.0 %	1.8 %	12.7 %	1.7 %	22.3 %	3.7 %	1.1 %	0.0 %	0.9 %	1.4 %	0.5 %	0.6 %	100 %
CZ	3.8 %	1.1 %	24.0 %	6.0 %	1.0 %	4.0 %	17.4 %	5.9 %	0.9 %	1.9 %	22.1 %	4.0 %	2.2 %	0.1 %	0.1 %	0.6 %	1.1 %	3.8 %	100 %
DE	0.9 %	0.5 %	12.5 %	8.1 %	1.9 %	2.8 %	9.4 %	8.2 %	1.1 %	2.1 %	36.7 %	6.4 %	4.6 %	0.1 %	0.3 %	2.2 %	0.3 %	1.7 %	100 %
DK	2.7 %	0.9 %	10.0 %	1.8 %	0.4 %	2.6 %	7.4 %	3.5 %	0.9 %	1.3 %	56.6 %	2.6 %	3.2 %	0.1 %	0.1 %	1.1 %	0.2 %	4.6 %	100 %
EE	7.5 %	1.3 %	13.4 %	4.3 %	0.5 %	3.6 %	12.4 %	8.4 %	2.7 %	0.9 %	33.6 %	6.1 %	2.7 %	0.0 %	0.2 %	0.9 %	0.8 %	0.7 %	100 %
ES	2.0 %	0.9 %	15.5 %	5.8 %	0.8 %	14.5 %	17.3 %	5.5 %	5.5 %	3.0 %	11.7 %	5.4 %	3.1 %	0.2 %	0.6 %	1.8 %	0.8 %	5.5 %	100 %
FI	2.7 %	0.7 %	10.9 %	7.3 %	1.4 %	3.6 %	7.8 %	3.9 %	0.7 %	1.5 %	52.2 %	1.8 %	1.8 %	0.0 %	0.1 %	0.8 %	0.5 %	2.4 %	100 %
FR	5.4 %	0.9 %	12.7 %	3.3 %	0.8 %	4.9 %	13.7 %	5.0 %	2.5 %	2.4 %	24.2 %	5.6 %	4.7 %	1.4 %	0.4 %	2.1 %	0.6 %	9.6 %	100 %
GB	4.7 %	1.9 %	13.2 %	2.4 %	1.3 %	7.3 %	11.6 %	4.9 %	4.1 %	3.3 %	21.8 %	5.4 %	6.3 %	0.2 %	1.9 %	3.5 %	1.1 %	5.1 %	100 %
GR	1.7 %	1.5 %	19.5 %	5.6 %	0.2 %	12.6 %	25.6 %	3.8 %	8.8 %	1.8 %	7.2 %	3.2 %	1.3 %	0.0 %	0.2 %	1.7 %	1.0 %	4.3 %	100 %
HR	6.6 %	0.4 %	20.4 %	4.1 %	1.6 %	7.6 %	19.8 %	4.9 %	12.6 %	1.8 %	10.1 %	6.2 %	1.8 %	0.0 %	0.2 %	0.5 %	1.0 %	0.5 %	100 %
HU	6.0 %	0.3 %	23.0 %	2.1 %	1.3 %	5.7 %	20.7 %	9.5 %	3.3 %	1.2 %	16.0 %	4.3 %	2.1 %	0.1 %	0.1 %	0.9 %	0.4 %	3.0 %	100 %
IE	6.1 %	0.8 %	12.9 %	1.6 %	0.4 %	4.9 %	10.1 %	4.7 %	8.1 %	3.4 %	30.8 %	1.6 %	4.4 %	0.0 %	1.6 %	4.7 %	1.5 %	2.3 %	100 %
IT	1.8 %	0.8 %	25.0 %	4.0 %	1.0 %	10.4 %	14.6 %	5.4 %	2.6 %	2.9 %	15.7 %	5.4 %	2.5 %	0.2 %	0.1 %	1.5 %	0.6 %	5.5 %	100 %
LT	3.2 %	0.2 %	16.0 %	12.0 %	0.3 %	4.3 %	21.4 %	7.6 %	2.5 %	2.0 %	24.4 %	1.5 %	1.9 %	0.5 %	0.1 %	0.3 %	0.2 %	1.7 %	100 %
LU	13.9 %	0.2 %	8.6 %	1.4 %	0.3 %	6.7 %	8.7 %	4.7 %	0.9 %	1.7 %	10.8 %	5.6 %	30.3 %	0.4 %	0.5 %	2.4 %	0.4 %	2.4 %	100 %
LV	12.2 %	0.2 %	12.3 %	2.6 %	1.3 %	1.8 %	11.3 %	11.7 %	2.5 %	3.3 %	32.1 %	1.7 %	1.5 %	0.7 %	0.1 %	0.4 %	0.3 %	4.0 %	100 %
MT	0.2 %	0.0 %	12.2 %	7.1 %	1.1 %	8.6 %	16.3 %	6.9 %	8.7 %	3.6 %	9.3 %	4.3 %	1.9 %	2.4 %	0.5 %	2.0 %	1.1 %	13.8 %	100 %
NL	9.5 %	1.7 %	9.2 %	2.0 %	1.1 %	4.5 %	11.2 %	6.1 %	1.6 %	1.6 %	27.5 %	5.1 %	6.8 %	0.3 %	0.2 %	3.7 %	0.6 %	7.4 %	100 %
NO	2.6 %	3.9 %	9.9 %	3.7 %	0.4 %	10.7 %	7.4 %	11.8 %	1.3 %	4.3 %	30.8 %	6.5 %	3.6 %	0.1 %	0.7 %	1.3 %	0.6 %	0.5 %	100 %
PT	3.5 %	0.4 %	16.0 %	2.8 %	1.6 %	15.5 %	13.9 %	7.1 %	5.4 %	1.7 %	10.6 %	6.5 %	2.5 %	0.0 %	0.6 %	1.7 %	1.3 %	9.0 %	100 %
SE	3.3 %	1.2 %	7.1 %	3.8 %	0.7 %	3.9 %	5.8 %	4.7 %	1.0 %	2.4 %	51.2 %	5.2 %	2.7 %	0.5 %	0.2 %	0.8 %	0.5 %	5.0 %	100 %
SI	1.0 %	0.7 %	27.3 %	3.6 %	1.2 %	6.4 %	17.6 %	18.8 %	3.6 %	5.1 %	6.3 %	3.9 %	1.2 %	0.0 %	0.1 %	1.3 %	1.2 %	0.8 %	100 %
SK	3.6 %	0.1 %	15.4 %	10.8 %	2.5 %	4.1 %	22.7 %	7.4 %	0.4 %	2.0 %	14.1 %	4.0 %	5.6 %	0.0 %	0.0 %	0.5 %	0.6 %	6.2 %	100 %
EDF median	2.13 %	5.57 %	2.14 %	2.34 %	2.75 %	3.16 %	2.02 %	3.23 %	1.98 %	2.43 %	1.16 %	2.24 %	1.41 %	0.04 %	4.00 %	1.37 %	1.35 %	0.04 %	

A: Agriculture, forestry and fishing

B: Mining and quarrying

C: Manufacturing

D: Electricity, gas, steam and air conditioning supply

E: Water supply

F: Construction

G: Wholesale and retail trade

H: Transport and storage

I: Accommodation and food service activities

J: Information and communication

L: Real estate activities

M: Professional, scientific and technical activities

N Administrative and support service activities

O Public administration and defence, compulsory social security

P Education

Q Human health services and social work activities

R Arts, entertainment and recreation

S Other services

Dispersion in coverage ratios remains

The average coverage ratio has increased by 1.1 pp since June 2016 to 45 %, while in the first half of 2017 the rise has been marginal (+0.2 pp). The upward trend of the ratio has been once again driven by a more pronounced reduction in the denominator (total NPLs) than the reduction of the numerator (Figure 26).

Nonetheless, coverage ratios still differ across EU countries with values ranging between 26 % and 68 % (Figure 27). An analysis of the short term historic time series shows that a sudden increase in coverage ratios at bank level is usually followed by a higher reduction in NPLs in the following quarters. For example, this was noticed in banks in Croatia, Romania and Slovenia. If this trend continues a similar pattern may unfold for Cyprus in the following quarters.

Figure 26: Coverage ratio — specific allowances for loans to total non-performing loans — 5th and 95th percentiles, interquartile range and median; numerator and denominator trends [December 2014 = 100]

Source: EBA risk indicators.

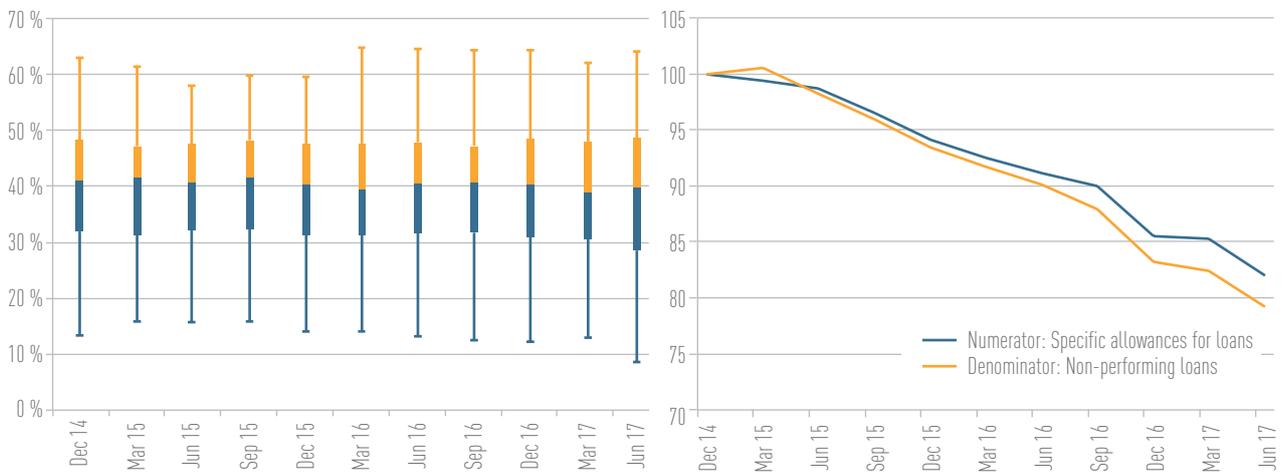
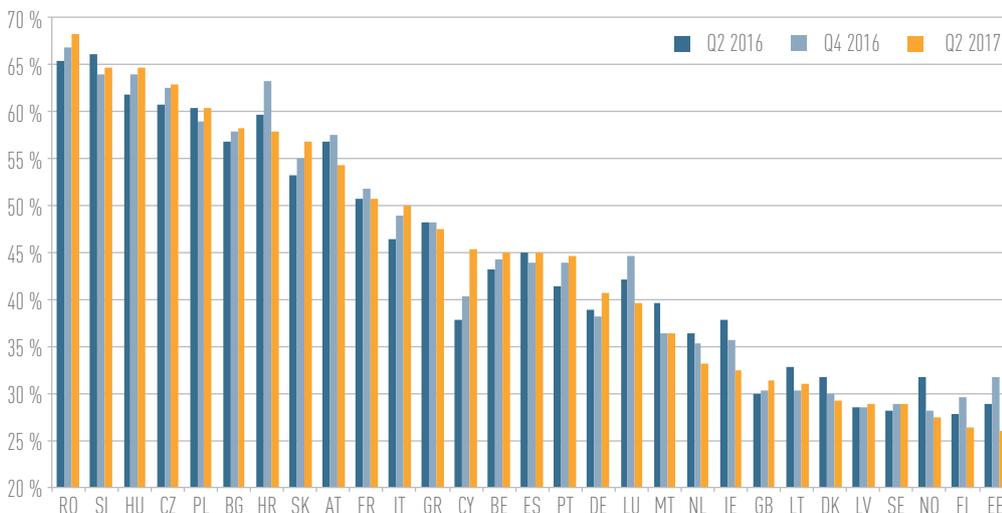


Figure 27: Coverage ratio — specific allowances for loans to total non-performing loans — country dispersion — weighted average by country

Source: EBA risk indicators.



NPL resolution picking up, but further action is needed

Both supervisors and banks have increased efforts to tackle outstanding legacy NPLs. Nonetheless, with almost EUR 900 billion of NPLs still on banks' balance sheets, at the current rate of reduction, NPLs will not reach the pre-crisis level in a short time.

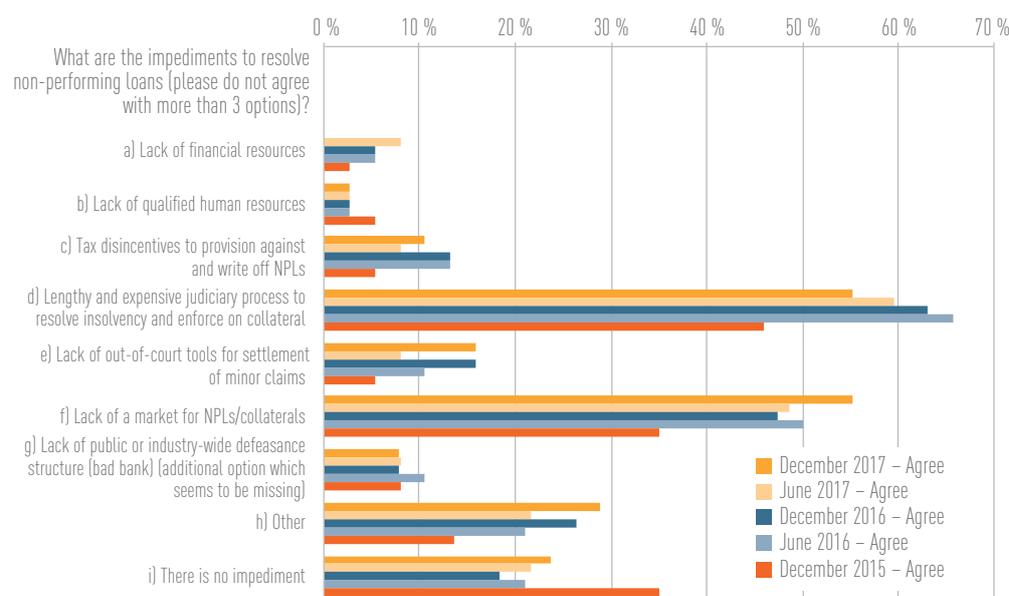
According to banks' answers to the RAQ, the main impediments to resolving NPLs are lengthy and expensive judiciary processes, followed by the lack of markets for NPLs (and collaterals) (Figure 28). In fact, banks see the development of secondary market as even more important than a year ago ^[20]. In

this regards, the EBA has been invited by the Council of the European Union to contribute to its Action Plan to tackle non-performing loans in Europe (see Box 'State of play of EBA Work on non-performing loans') ^[21].

^[20] EBA risk assessment report (<http://www.eba.europa.eu/documents/10180/1315397/EBA+RISK+ASSESSMENT+REPORT.pdf/46d91b9a-f393-4b54-96eb-df06ca01bec5>).

^[21] The areas of work are discussed in detail in the EBA report on the dynamics of non-performing exposures in the EU banking sector (<https://www.eba.europa.eu/documents/10180/1360107/EBA+Report+on+NPLs.pdf>) and the December 2016 RAR (http://www.eba.europa.eu/documents/10180/1315397/EBA+Risk+Assessment+Report_December+2016.pdf).

Figure 28: Impediments to resolving non-performing loans
Source: EBA RAQ for banks.



State of play of EBA work on non-performing loans

On 11 July 2017 the Council of the European Union concluded an Action Plan to tackle non-performing loans in Europe. The Council stressed that a comprehensive approach combining a mix of complementing policy actions, at national level and at the European level where appropriate, is the most effective way to address the existing stock of NPLs as well as the emergence

and accumulation of new NPLs on banks' balance sheets, in particular in all four of the following policy areas: (i) supervision; (ii) structural reforms of insolvency and debt recovery frameworks; (iii) development of secondary markets for distressed assets; and (iv) fostering restructuring of the banking system. The EBA, along with other bodies and institutions, has been invited by the Council to contribute to the action plan with a number of initiatives and action points.

The planned initiatives and action points undertaken by the EBA can be categorised into three main strategic themes: (i) supervisory guidance; (ii) data; and (iii) secondary market development.

(i) Supervisory guidance

In order to enhance supervisory guidance the EBA will issue Guidelines on NPL management and on banks' loan origination monitoring and internal governance.

The guidelines on NPL management will be consistent with the Single Supervisory Mechanism (SSM)'s guidance to banks on non-performing loans which was published earlier this year, with an extended scope applying to all banks in the EU.

The guidelines on loan origination, monitoring and internal governance will address issues such as transparency and borrower affordability assessment in particular. The guidelines will leverage on existing national experiences where relevant, and on existing EBA-related work on loan origination and affordability.

Both sets of guidelines will be published in summer 2018.

(ii) Data

In order to strengthen the data infrastructure with uniform and standardised data for NPLs the EBA is developing templates on loan tape monitoring and will implement enhanced disclosure requirements on asset quality and NPLs to all banks (in 2018).

The standardised NPL templates could be used by banks and investors in legacy asset transactions for valuation and due diligence purposes. The templates will rely as much as possible and contain cross-references to the existing reporting framework (e.g., supervisory reporting, ECB/European Securities and Markets Authority's (ESMA's), asset backed securities (ABS) templates, Anacredit).

(iii) Secondary market development

In order to stimulate the development of secondary market for NPLs, the EBA is contributing to the work of the European Commission on developing a blueprint for asset management companies (AMCs). The blueprint, which is expected to be published in early 2018, will provide guidance on how national AMCs can be set up within existing banking and State aid rules building on best practices learned from past experiences in Member States. It will set out common principles for the relevant asset and participation perimeters, asset-size thresholds, asset valuation rules, appropriate capital structures and governance and operational features.

In a further contribution to the development of secondary markets, the EBA, in cooperation with other bodies and institutions, is considering the feasibility of, and possible options for, the setting up of NPL transaction platforms and a repository for data collected via the standardised EBA NPL templates.

Figure 29 tracks the progress made in some jurisdictions last year in terms of increasing the coverage ratios and reduction of NPLs. As argued in the previous RAR reports, an intuitive movement in the chart of banks with high NPL ratios would be clockwise: moving from quadrant 1 (high NPL ratio, low coverage) to quadrant 2 by increasing the coverage ratio and then, when sufficient coverage of NPLs is achieved, moving to quadrant 3 before reaching quadrant 4 (low NPL ratio, decreased coverage ratio). While the chart should be interpreted with caution since, for instance, it does not provide information on capital buffers available or on changes in collateral values, it helps identify possible areas for intervention, especially connected to banks in the first and second quadrants.

The analysis shows that EU countries are at different stages of this process and, although some improvements are clear, further efforts are still needed. In fact, for some jurisdictions, the reduction of NPLs is still moderate, despite the high starting level. However, the recent increase of coverage ratio may allow them to move further into quadrant 2 and towards quadrant 3. Moving from quadrant 2 to 3 also requires pursuing measures and reforms for facilitating price discovery, thus contributing to aligning the book and market values of NPLs.

About 30 % of banks responding to the RAQ expect impairments to increase in the next 12 to 18 months (Figure 30). This is the highest rate of agreement since the beginning of the RAQ partly reflecting the impact of the implementation of IFRS 9.

Figure 29: NPL ratio versus coverage ratio by country
 [* movements show Q2 2016 and Q2 2017 ⁽²²⁾]
 Source: EBA risk indicators.

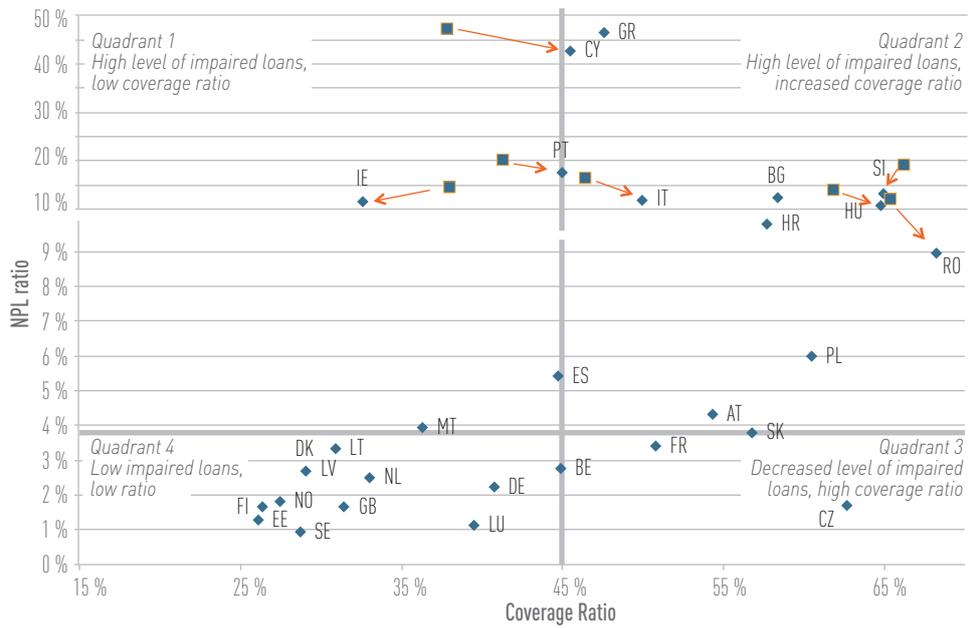
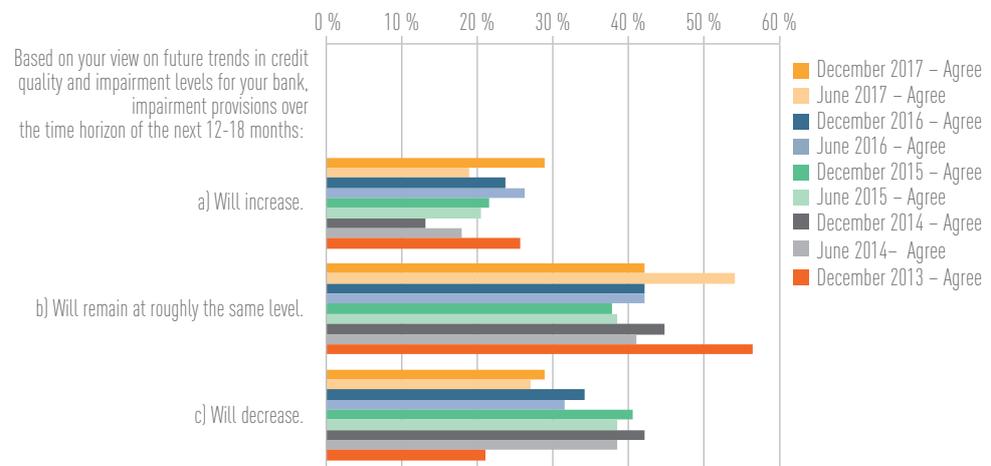


Figure 30: Provisioning expectations for the next 12-18 months
 Source: EBA RAQ for banks.



⁽²²⁾ The arrows indicate the seven biggest moves between Q2 2016 and Q2 2017 in terms of decrease of NPLs (decrease greater than 2 pp). For these seven countries, squared dots show the 2016 value.

3. Liability side

Bank funding markets were stable in the first three quarters of 2017, and most European banks had easy access to funding markets. Funding has continued to be positively influenced by accommodative monetary policy stances, including central banks' asset purchase programs, and search for yield. In general, no major constraints could be observed to the issuance activity for secured and unsecured funding. Spreads for debt and capital instruments were on an overall declining trend in the first three quarters of 2017.

In terms of funding, EU banks have continued to adopt a mixed strategy with however a slight reduction of the market funding in favour of deposits from households and non-financial corporations and central banks' liquidity.

Issuance volumes of debt and capital instruments were more unevenly distributed across the first three quarters of 2017 than in previous years. After very active funding markets in the first quarter of 2017, when banks often

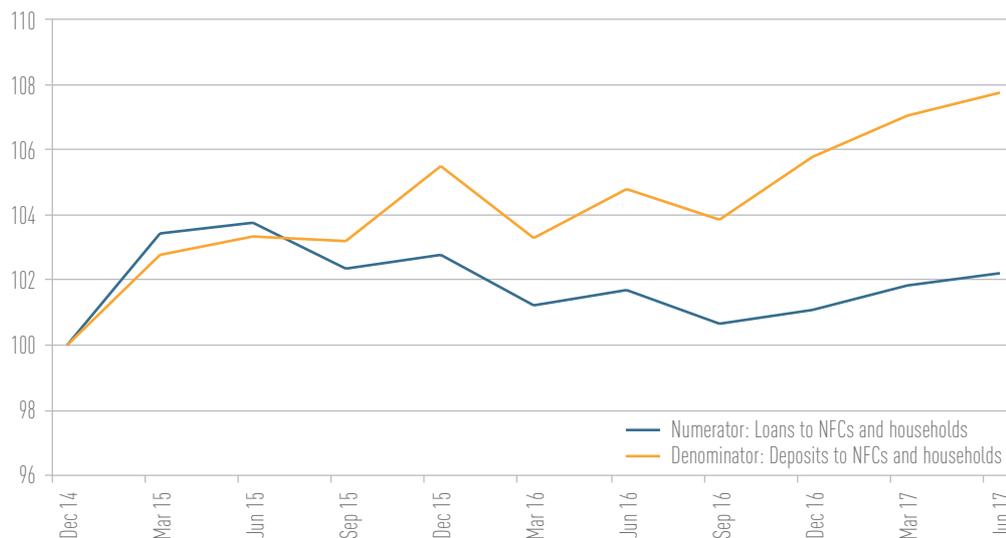
brought forward their funding plans for the year, volumes declined in the second quarter, but increased again in the third quarter. Efforts to expedite funding plans in the first quarter were to some extent attributable to expectations of market volatility around elections in member states in the second quarter.

Funding mix of EU banks: increasing deposits and central bank liquidity, decreasing market-based funding

In the period June 2016–June 2017 total liabilities went down by 6.7 %. The relevance of deposits in bank funding mixes has increased, despite the historical low levels of deposit rates. Supervisory data shows that the share of customer deposits in total liabilities has risen (from 49.8 % in Q2 2016 to 53.7 % in Q2 2017), confirming that overall the EU banks' strategy focused more on stable funding. The increase of deposits has resulted in a decrease of the loan-to-deposit ratio from 120.5 % in June 2016 to 117.5 %, as of June 2017, its lowest level since December 2014.

Figure 31: Loan-to-deposit ratio: numerator and denominator

Source: EBA risk indicators.



The share of debt securities issued in total liabilities has slightly decreased from 19.0 % in Q4 2016 to 18.8 % in Q2 2017.

More generally, overall funding needs have been markedly influenced by the last tender of the ECB targeted Long-Term Refinancing Operation (TLTRO II) in March 2017. The TLTRO II encountered substantial demand from EU banks as it provided a free option to secure funding for 4 years at a very attractive rate. Volumes of ECB TLTRO have risen to EUR 764 billion at the end of Q3 2017 from EUR 514 billion at the end of Q3 2016 (Figure 32). On the other hand, funding volumes attained through the ECB’s main refinancing operation decreased from EUR 39 billion at the end of Q3 2016 to EUR 4 billion at the end of Q3 2017.

The widespread use of ECB long-term funding has led to a shift in the funding strategy of EU banks, which have reduced reliance on market funding and particularly senior preferred debt. In parallel, the upcoming regulatory requirements have continued to influence EU banks’ funding strategy, with volumes of loss-absorbing senior debt, in particular bail-in-able instruments such as senior non-preferred debt, increasing markedly in the first three quarters of the year. This was supported by the fact that legislation to issue senior non-preferred debt has been introduced in some Member States in

anticipation of upcoming bank recovery and resolution directive (BRRD) requirements.

Market-based funding: benign market conditions, declining issuances

Reflecting stable market conditions, spreads tightened in the first three quarters of 2017, in particular in the first six months following elections in member States. Itraxx data for European financials for both senior unsecured and subordinated debt indicates limited spread volatility and narrowing spreads since the beginning of the year (Figure 33).

The market liquidity has mostly displayed resilience throughout the year amid very low volatility. However, concerns about potential vulnerability to the banks’ refinancing capacity still persist in case of a sudden rise in the financial markets’ volatility. In such a benign environment, the focus of market based funding in the first three quarters of 2017 has been on unsecured funding, strongly driven by the issuance of instruments meant to comply with upcoming MREL and TLAC requirements.

As far as secured debt is concerned, its volume has decreased in the period under review as the covered bond market remained subdued, impacted by the slowdown of ECB’s covered bond purchase program (CBPP3) and market expectations of the central bank tapering.

Figure 32: Main refinancing operations, marginal lending facility, LTRO, lending to euro area
 Source: ECB data warehouse.

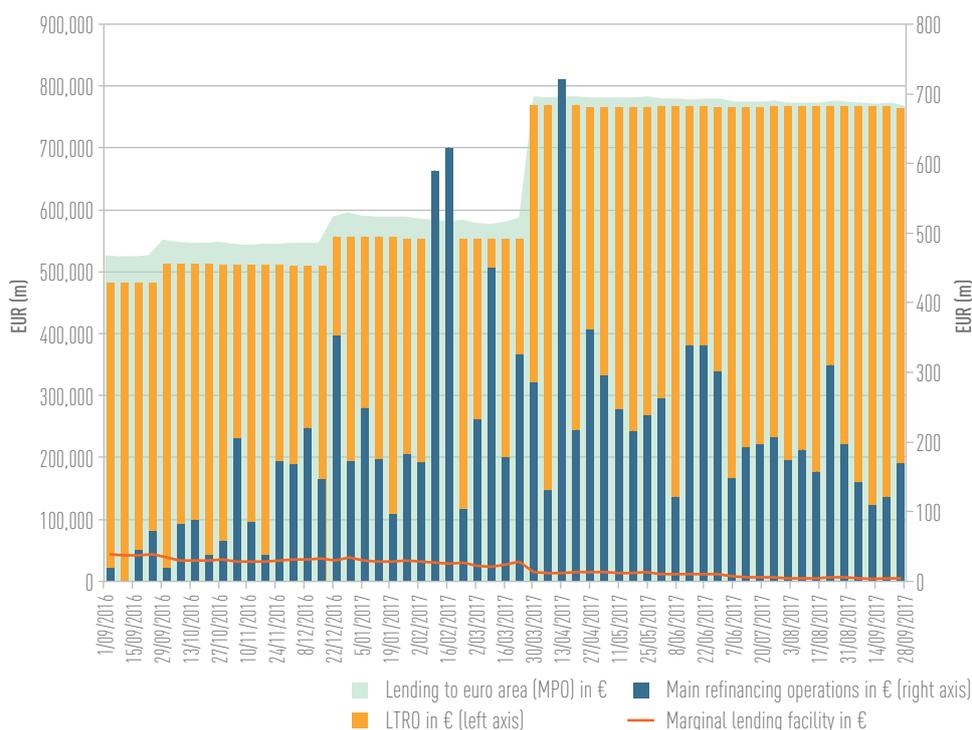
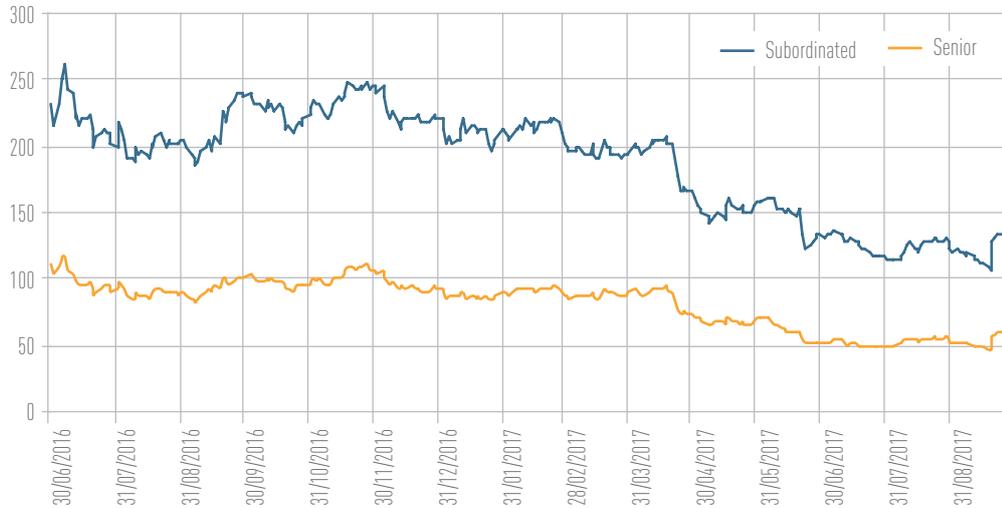


Figure 33: iTraxx financials (Europe, senior and subordinated, 5 years, bp)⁽²³⁾

Source: Bloomberg



Building bail-in-able capacity

Banks increasingly focus their funding strategies on building loss-absorbing capacity; nevertheless most banks have still to issue further MREL eligible instruments to meet BRRD requirements. The EBA has estimated the possible MREL funding needs of banks at between EUR 186 billion and EUR 276 billion under different buffer scenarios ⁽²⁴⁾.

In the first half of 2017 issuance of MREL-eligible instruments was mainly concentrated on large banks in core sovereigns.

⁽²³⁾ Starting from September 2017, Itraxx index has been revised (eg. bail-in-able have been included).

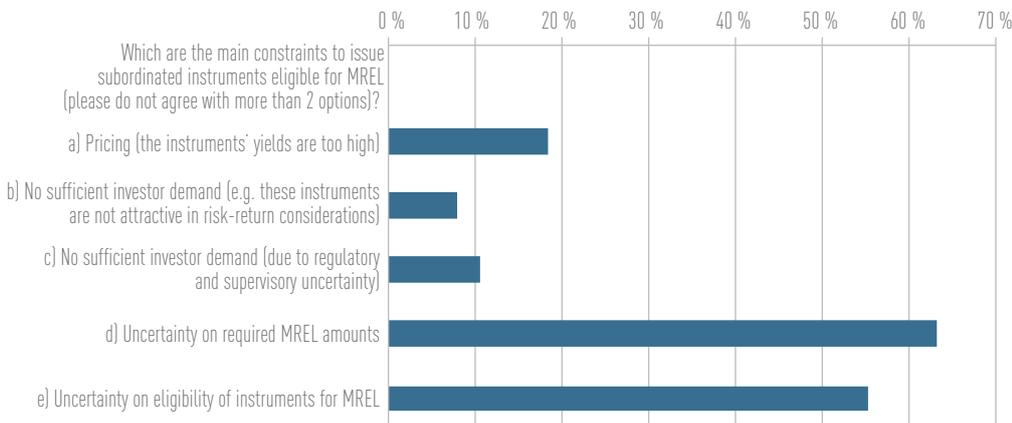
⁽²⁴⁾ EBA Final Report on MREL of 14 December 2016, for a sample of 133 banks from 18 Member States.

Looking forward, the ability of markets to absorb the volumes of loss-absorbing instruments to be issued by banks in order to meet their MREL requirement at prices that do not affect medium-term viability banks will be an important element of the MREL framework.

Respondents to the RAQ noted that delays in issuing MREL-eligible instruments were often associated with uncertainty on both regulatory policy and the authorities’ actions, including detailed MREL eligibility criteria of instruments in different jurisdictions, and a pending determination of actual levels of required MREL amounts for each bank. Only a small minority of respondents (11 %) are concerned about possible insufficient demand for new issuances.

Figure 34: Constraints to issuing subordinated instruments eligible for MREL

Source: EBA RAQ for banks.



Outlook for market-based funding

On the basis of market data, a non-negligible portion of debt instruments issued by banks will mature in the short and medium term. As of October 2017, volumes of debt securities maturing within the last weeks of 2017 and in 2018 are substantial at over EUR 500 billion, and at over 350 billion for each of 2019 and 2020. As the asset side of the balance sheet is to a large extent long-term driven, the significant share of market instruments maturing in the short and medium term could raise some concerns about maturity mismatches (Figure 35).

Responses to the RAQ for banks indicate that the institutions intend to focus on building loss absorbing capacity: attaining more instruments eligible for MREL is the most relevant funding strategy for banks going forward, as over 50 % of responding banks have stated. The relevance of senior unsecured as well as secured funding accordingly decreases. Although the increase of retail deposit volumes is no longer the most important funding strategy, it remains the second most relevant one (34 % of responding banks).

Figure 35: Bonds – aggregate debt maturity profile – 20 year breakout as of October 2017 (billion EUR)
Source: SNL financial data, EBA calculations ⁽²⁵⁾.

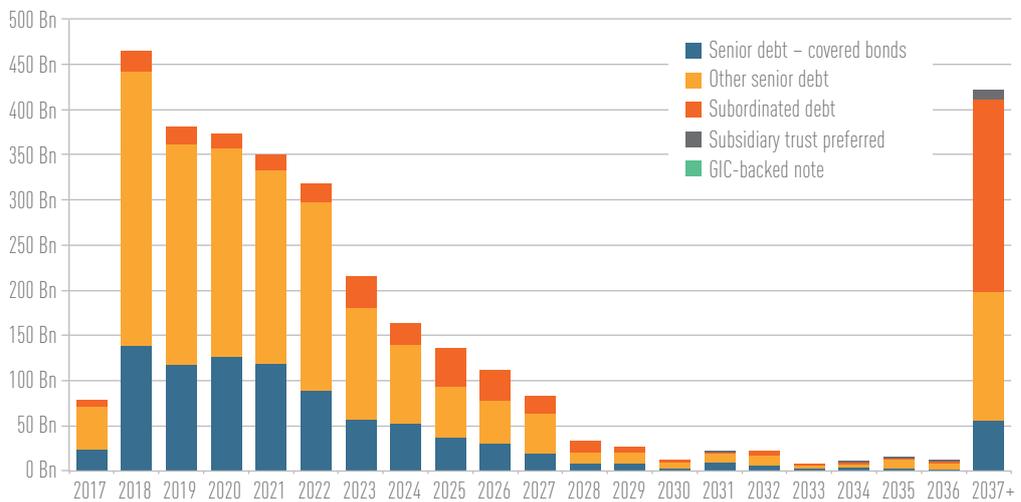
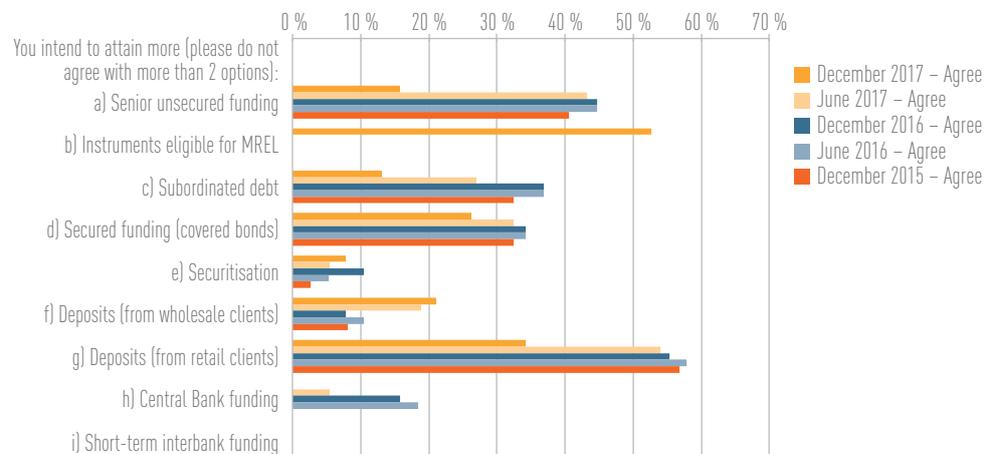


Figure 36: Intentions to attain more funding via different funding instruments
Source: EBA RAQ for banks.



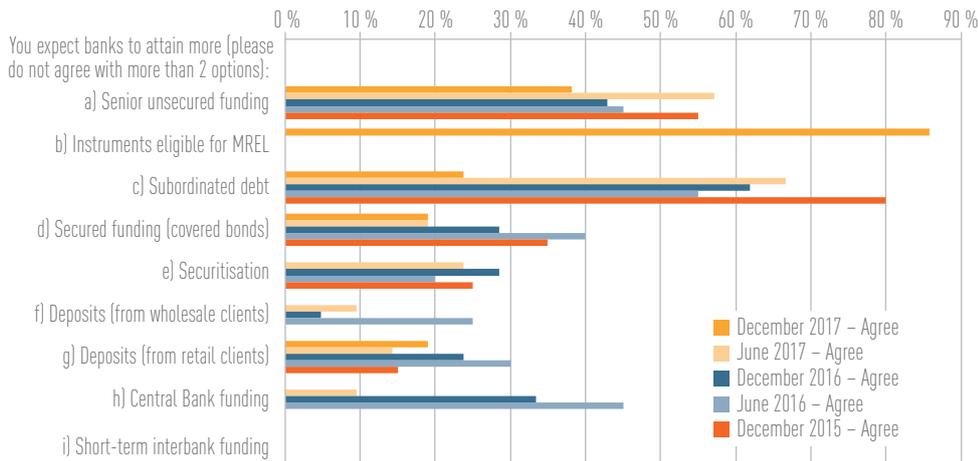
⁽²⁵⁾ The debt maturity profile includes debt in the form of listed securities. All data is euro-denominated and it has been aggregated for 43 banks.

Market analysts confirm the importance of instruments eligible for MREL in the funding strategy for banks going forward, with 86 % respondents having such expectations. Their views differ from banks' intentions as regards the relevance of senior unsecured

funding, which is the second most important source of funding market observers expect banks to attain. In turn, market observers attribute less relevance to attaining more deposits than banks do.

Figure 37: Expectations on banks' funding channels

Source: EBA RAQ for market analysts.



Bank funding plans

To monitor bank funding, banks are required to submit to the EBA data on balance sheet forecasts for 3 years, with a focus on loan portfolios and funding sources

(deposits, wholesale and public sector funding), as well as actual and forecasted liquidity coverage ratio. The data is based on harmonised definitions and templates developed by the EBA.

Figure 38: Expected growth of selected liability classes in the EU

Source: EBA bank funding plans.



Funding trends as observed in the first three quarters of 2017 are, on an aggregate basis, broadly in line with plans banks outlined in their funding plan submission to the EBA in the second half of 2016⁽²⁶⁾. Banks anticipated that planned issuance volumes of unsecured and in particular secured debt securities in 2017 would decrease, and in aggregate be below the average of actual volumes attained in 2015 and 2016. Banks also anticipated a contin-

⁽²⁶⁾ EBA report on funding plans.

ued EU-wide deposit growth of households and non-financial corporates, as observed in the first half of 2017.

On an aggregate basis, banks in most Member States seem optimistic about their plans to increase long term secured and unsecured funding, as well as deposits from households and non-financial corporates in 2018 and 2019. Their plans are ambitious; however, in 2015 and 2016 were able to successfully achieve the growth rate of deposits they set in their plans.

3.1 Asset encumbrance trend

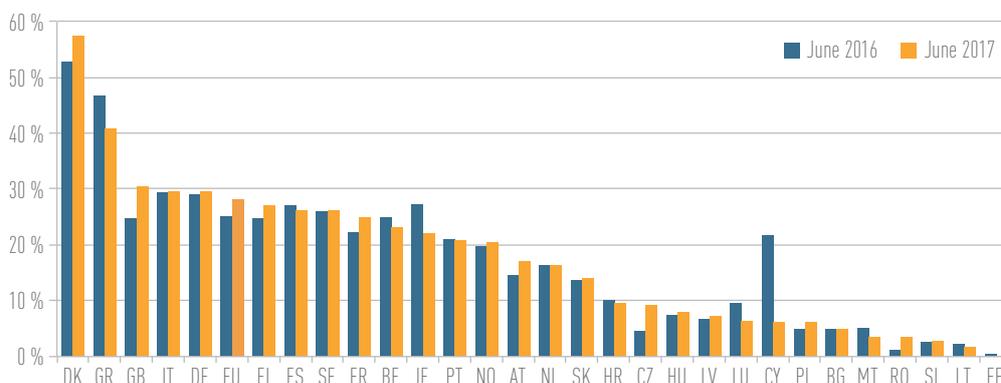
As of 30 June 2017, the asset encumbrance ratio ⁽²⁷⁾ was equal to 28.0 % (25.2 % in June 2016); dispersion among countries and banks remains wide. The highest levels of encumbrance (80–90 %) are reported by specialised mortgage institutions.

A relatively high level of encumbrance — as in previous years — is reported in jurisdictions with large and established covered bond markets (most notably Denmark and Sweden), a high share of central bank funding in countries severely affected by the sovereign debt crisis (e.g. Greece) or a high share of repo financing and collateral requirements for over-the-counter derivatives (e.g. the UK).

Some countries that were more severely affected by the sovereign debt crisis still have high encumbrance levels, but markedly declining compared with last year (from 22 % to 6 % in Cyprus, from 47 % to 41 % in Greece). However, due to the relatively low volume of assets in these countries, the decrease had only a marginal effect on the EU aggregate encumbrance ratio; in fact, the rise in the aggregate ratio was driven by smaller increases in some jurisdictions with large banking sectors. Also for this reason, the modest increase in the level of asset encumbrance reported until the second quarter of 2017 is not an immediate cause for concern in the EU funding structure, as this change is in line with similar changes observed in the sample over time.

⁽²⁷⁾ The asset encumbrance ratio is defined as the ratio of encumbered assets and collateral received relative to the total assets and the total collateral available for encumbrance

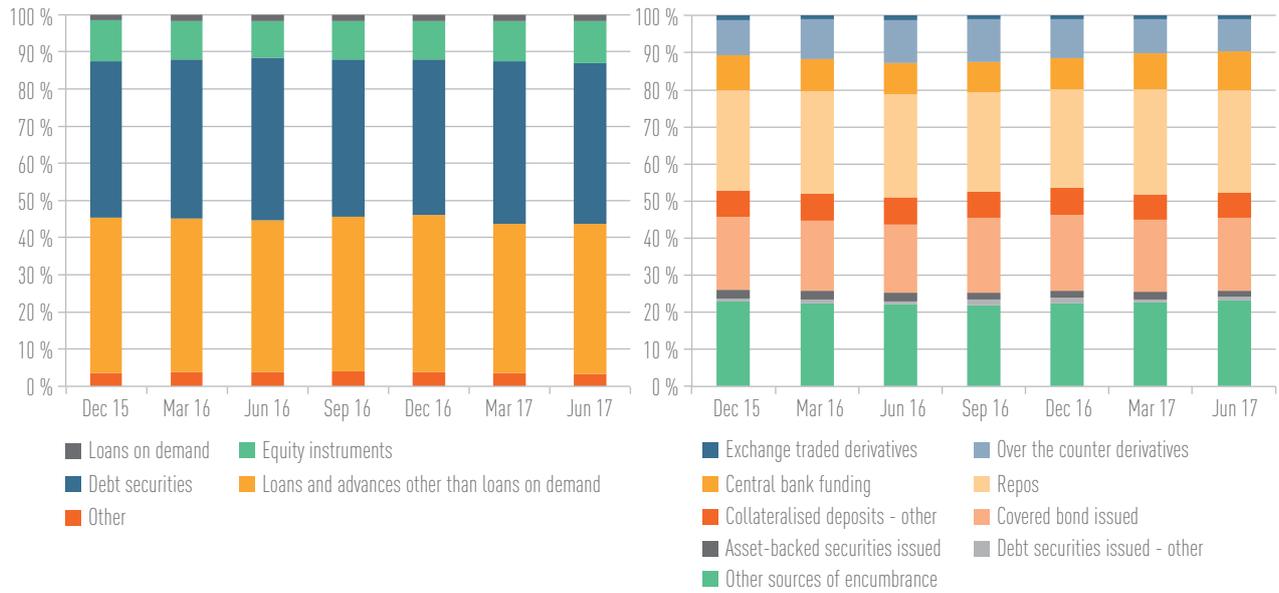
Figure 39: Weighted average asset encumbrance by country
Source: EBA calculations.



The largest portion of encumbered assets and collateral was made up of debt securities and loans, respectively at 43 % and 40 % of total encumbered assets and collateral in June 2017. Among other asset classes, equity instruments formed 11 % of the share, with an increasing trend over the year (see Figure 40).

The main sources of asset encumbrance – i.e. balance sheet liabilities for which collateral was posted by institutions across the sample – were repos (28 % of the total sources in June 2017). The shares of central bank funding (10 %) and covered bonds issued (20 %) increased over the period for the whole sample.

Figure 40: Encumbered assets and collateral by type; distribution of the sources of encumbrance
Source: EBA calculations.



4. Capital

Capital ratios have slightly improved

European banks have continued to strengthen their capital position but at a slightly slower pace than in previous years with capital ratios at their highest level since 2014. As of June 2017 the total capital ratio had increased by 80 bps since June 2016, reaching a new high of 18.6 % (see Figure 41).

The same trend is also evident for the CET1 ratio, which stood at 14.3 % as of June 2017. Compared to June 2016, the ratio has increased by 70 bps. The AT1 component has also increased slightly (from 1.2 % to 1.4 %), in aggregate approaching the regulatory level of 1.5 %^[28], while the T2 components remained largely steady (falling from 3 % to 2.9 %)^[29]. As of June 2017, leverage ratio was

5.3 % (5.1 % if a fully phased-in definition of Tier 1 capital is used).

On a fully loaded basis (i.e. assuming that no transitional provisions defined in the CRR were in place), the CET1 ratio stood at 14.0 %, increasing by 90 bps when compared to June 2016 (see Figure 42). The gradual phasing in of the CRR capital rules led to a steady decline of the impact of the transitional provisions which, as of June 2017, stood at 30 bps compared to 50 bps 1 year earlier.

Many transitional provisions of the new capital requirements in the CRR/CRD will be phased out in December 2017, in particular those related to minority interest and deductions from own funds. Hence, the gap between the CET1 ratios in Figure 42 should become negligible.

^[28] On the basis of bank-by-bank data, only for 25 % of the banks included in the sample AT1 is equal or above 1.5 %; hence 75 % of the banks of the sample has still room to further increase this capital component.

^[29] On the basis of bank-by-bank data, for 59 % of the banks included in the sample T2 is equal or above the regulatory level of 2 %.

Figure 41: Evolution of capital ratios
Source: EBA risk indicators.

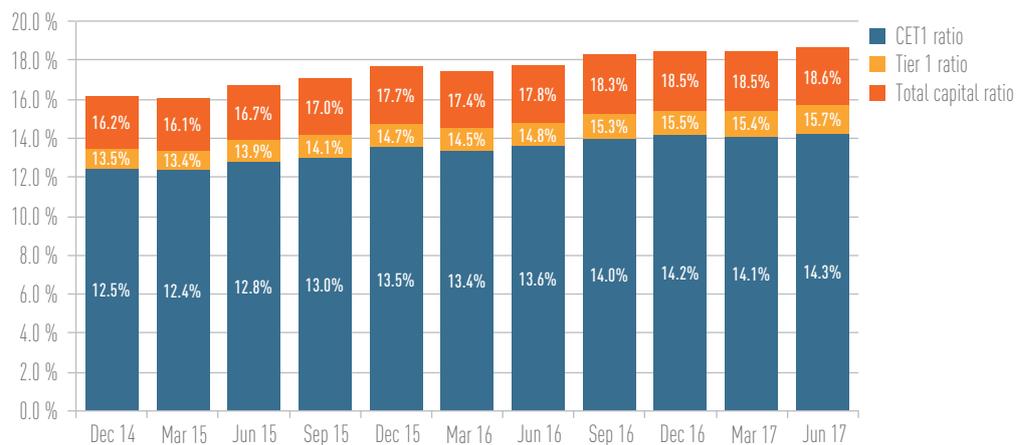
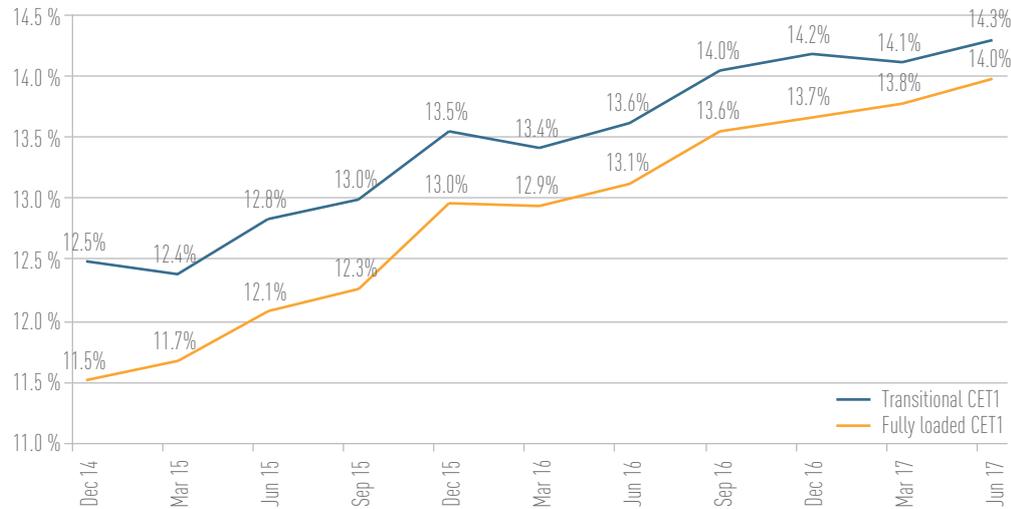


Figure 42: Evolution of transitional vs fully loaded CET1 ratios

Source: EBA risk indicators.

**Transitional provisions related to IFRS 9**

IFRS 9, which replaces the current requirements of IAS 39, will determine a change in some credit loss provisioning, with a move from an incurred loss model to an expected credit loss model.

The main impact of IFRS 9 on own funds seems to be driven by the estimation of ECL provisions for exposures that have experienced a significant increase in credit risk but are not defaulted. Based on a survey among European banks undertaken by the EBA in 2017, banks estimate that the first application of the IFRS 9 will cause the

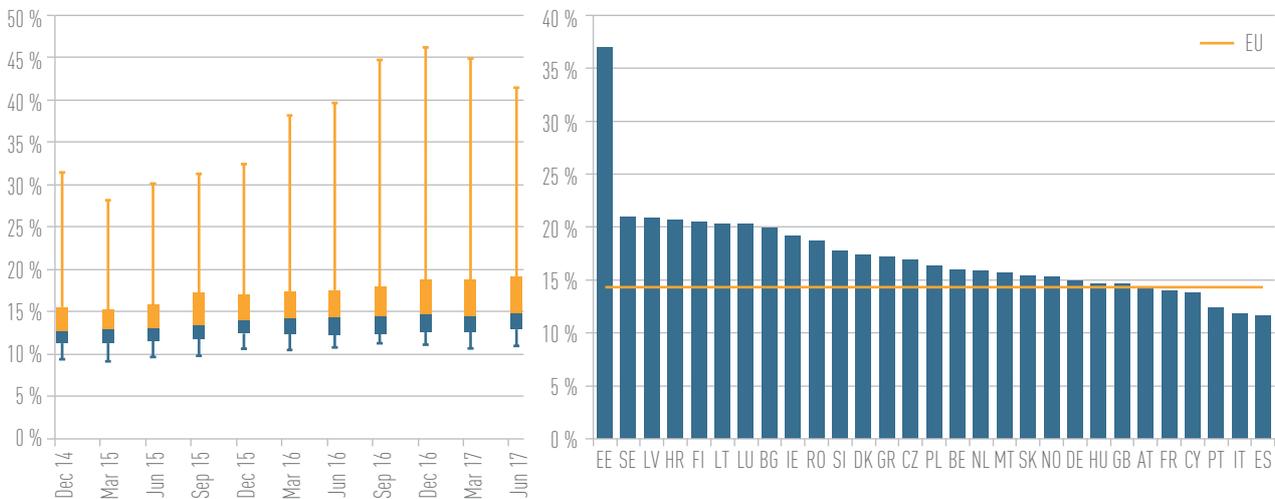
CET1 ratio to decrease, on average, by 45 bps. Banks expect the impact to be mainly linked to loans and advances to households and non-financial corporations.

The application of IFRS 9 in 2018 is likely to introduce a new type of transitional adjustment to own funds. A regulation is currently being developed by European legislators with the objective to lessen the impact of IFRS 9 on capital ratios during a period of 5 years. During this period, specified percentages of 'new' provisions due to adoption of IFRS 9 can be added back to CET1 capital.

While banks' capital ratios have improved across the sample, the dispersion among banks has remained significant (see Figure 43). As of June 2017, only eight banks (representing 8 % of total assets of all banks in the sample) reported a CET1 ratio below 11 % while 65 % of the sample (40 % of assets) reported CET1 ratios above 14 %.

Dispersion across countries is also still significant (see Figure 43). Several banks in smaller countries in central, eastern and northern Europe 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.

Figure 43: CET1 ratio dispersion — 5th and 95th percentiles, interquartile range (left-hand side) and by country (right-hand side)
 Source: EBA risk indicators.



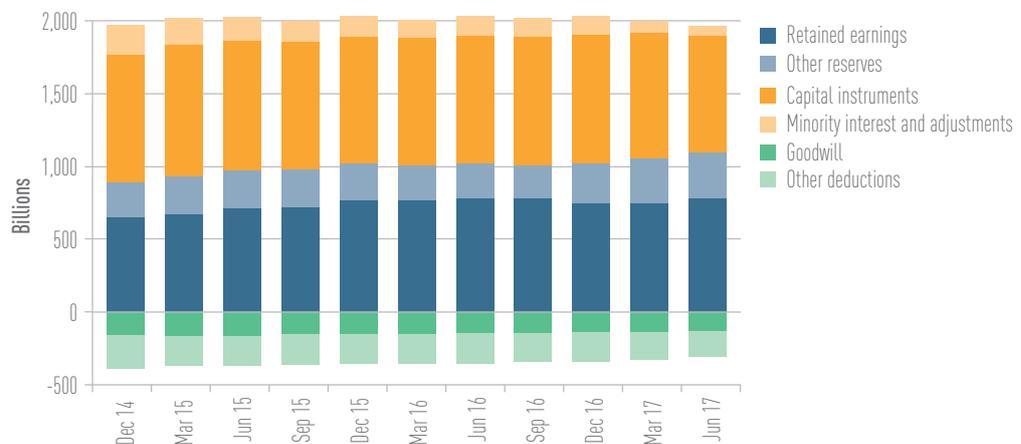
Capital levels have slightly decreased

The level of capital eligible as CET1 as of June 2017 has slightly decreased (- 1.5 %) compared to 1 year previously (see Figure 44), thereby reaching the same level as 2 years ago. At the same time, the composition of capital items keeps moving towards a greater reliance on retained earnings and other reserves, which together make up 66 % of total common equity versus 61 % 1 year previously. However the capital instruments, albeit decreasing since June 2016, remain the main component of the CET1 capital at 48 %. The change in composition means that banks have relied more on retaining part of

their profit than on issuing new shares in the last year.

The increase in retained earnings and other reserves has been offset by a decrease in capital instruments. In the capital instruments bucket, the decline has been mainly driven by paid-in capital and share premiums. These premiums have been on a downwards trend for the last 2 years with the period since June 2016 particularly pronounced (- 5 %), since they have probably been used to cover annual losses. Share buy-back programmes could be a possible explanation for the decline of paid-in capital.

Figure 44: Evolution of capital positions
 Source: EBA reporting.



RWA amounts have declined significantly

The improvement of capital ratios over the period under review has been mainly driven by the decline of risk weighted assets (RWA) (see Figure 45) amounts, which have decreased by 6 % since June 2016 (and by 11 % since June 2015). While the decrease is evident across all types of risk, it is particularly driven by credit risk exposures, which account for more than 80 % of total risk. The downward trend stems from the decrease of some types of assets (e.g. debt securities, NPLs^[30]) and the increase of coverage ratio. In addition, some major banks have disposed assets and business lines. While credit valuation adjustments (CVA) have also decreased significantly (by 28 % since June 2016), they account for only 2 % of total risk exposure amounts and thus have a limited impact overall. As far as market risk is concerned, the ongoing decrease suggests that banks are continuing to reduce the share of their trading activities. This downward trend confirms the strategy of many EU banks gearing towards a reduction of their risk exposure amount mainly through asset sales and shrinking the size of their activities in non-core markets.

^[30] See Chapter 2 (Asset side) on the evolution of debt securities and NPLs.

Outlook for risk exposures and capital

Last year, more than 50 % of respondents indicated that asset deleveraging was part of the banks' strategy; in fact, in the period under analysis, risk exposures actually decreased. Given that, according to the latest RAQ only 39 % of banks are planning to de-leverage further; hence, the decline of risk exposures could possibly be less pronounced in the near future ^[31].

In line with the recapitalisation exercise, EU banks have markedly strengthened their capital position in recent years, especially by issuing CET1 instruments. This has allowed them to shore up market confidence in the EU banking sector and meet regulatory requirements.

In the near future, banks do not expect to issue more CET1 instruments. On the basis of the RAQ for banks the percentage of banks which do envisage issuing CET1 instruments in the following 12 months has decreased to 10.5 %; in 2015 it stood at 19 % (Figure 46).

^[31] See Chapter 2 (Asset side) for questions about deleveraging in the RAQ for banks.

Figure 45: Evolution of risk weighted assets
Source: EBA reporting.

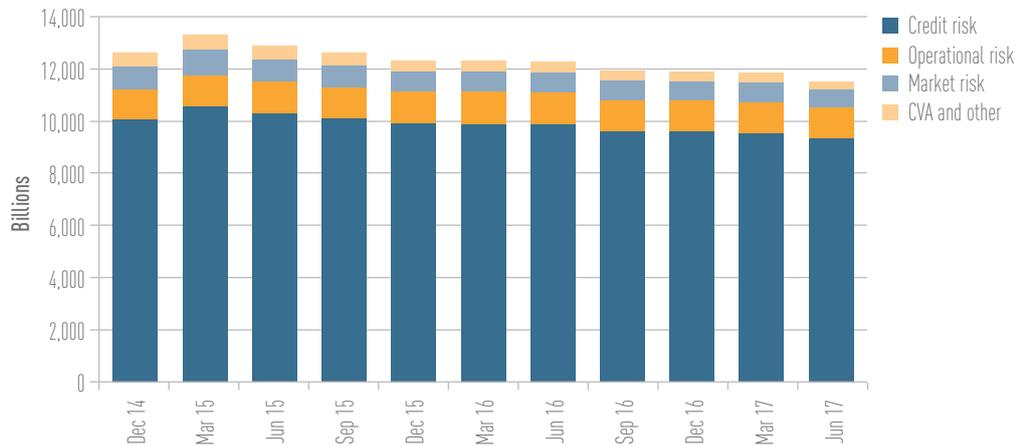
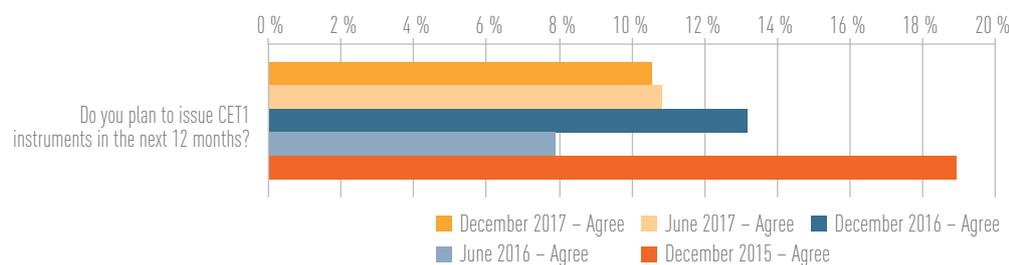
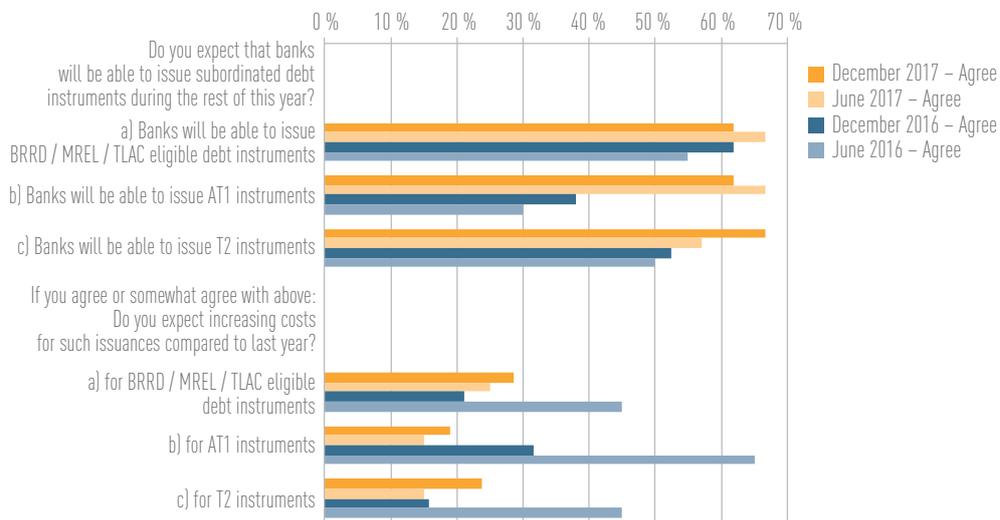


Figure 46: CET1 issuance plans
Source: RAQ for banks.



More generally, concerning capital increase and funding, most of the analysts expect that banks will be able to issue AT1 and T2 instruments, at a non-increasing cost with respect to last year.

Figure 47: Expectations about new issuances of subordinated debt instruments
 Source: RAQ for analysts.



5. Profitability

EU bank profitability has continued to improve. As of June 2017, the average return on equity (RoE) reached 7.0 %, 130 bps higher than in June 2016 and the highest level since 2014. Despite the increase, the current level of RoE still remains below the cost of equity, pointing to a risk that this could be an unsustainable business model in the long term.

The increase of profitability has been driven by a material reduction of impairments and by slight improvements of net operating income and expenses. However, the contraction of costs has still been insufficient to give a substantial boost to the efficiency levels. Dispersion among countries is still high, with some countries performing particularly well (RoE above 15 %) and others with negative or barely positive RoE.

Drivers of increased profitability across the EU

The net interest income still remains the main driver of the EU banks profitability, albeit decreasing somewhat over the period under review. However, the increase in profits came from the substantial reduction of impairments on financial assets, which reached their lowest level since 2014. This decline reflects the progress made by the EU banks in tackling the NPL issue, even if unevenly across Europe (Figure 48).

RoE and return on assets (RoA) present a similar evolution since December 2014, with equity growing at a greater pace than total assets, which led to a more pronounced upward trend of RoA during the period (Figure 49).

Figure 48: Decomposition of RoE (EU aggregate) – solid fill for June 2017, transparent fill for June 2016

Source: EBA risk indicators – EBA calculations.

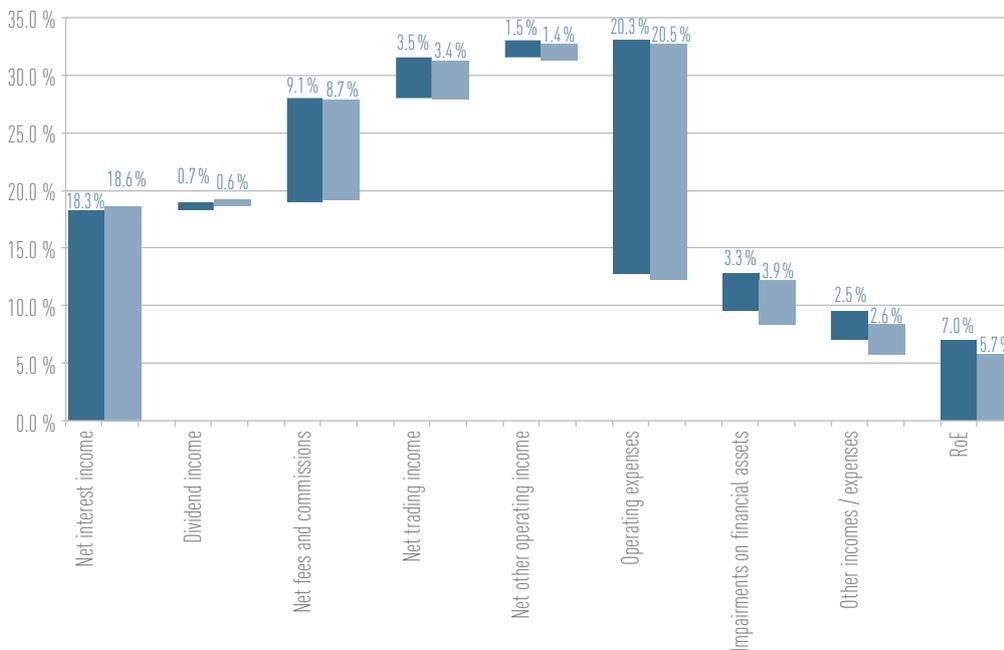
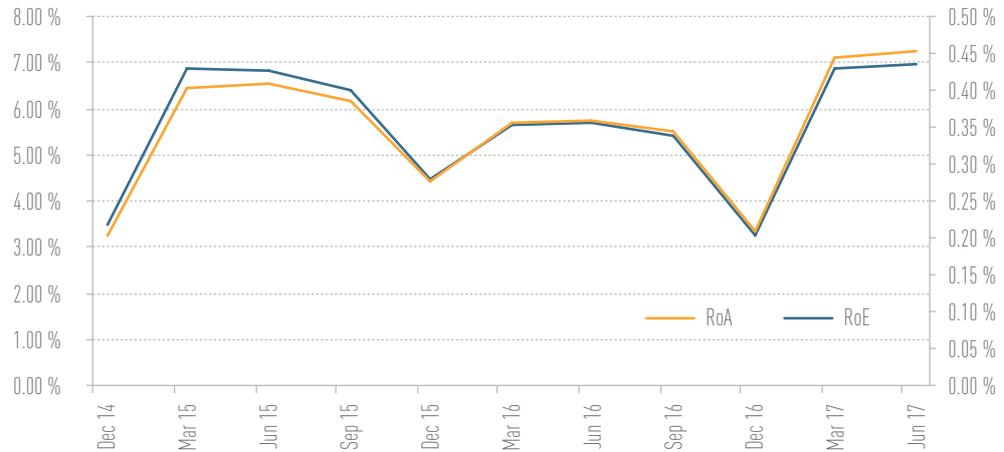


Figure 49: Return on Equity (RoE, left-hand side) and Return on Assets (RoA, right-hand side)
 Source: EBA risk indicators



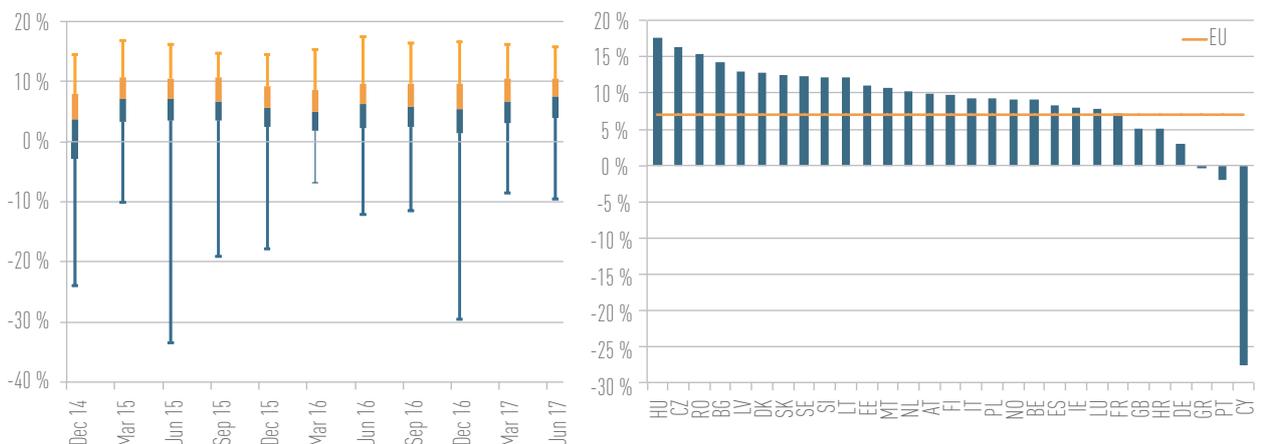
Dispersion of profitability decreased, with the interquartile range reaching a historical low in June 2017. However, differences across countries are still significant (Figure 50, with RoE ranging between -28 % and 18 %). Some 12 % of the banks recorded a net loss in the period, down from 16 % in June 2016.

In some countries, profitability is still lagging behind due to two main factors. In countries such as Greece, Croatia, Cyprus and Portugal, banks are less profitable, mainly because of their high impairments; impairments are

also dragging down profits in Spain and Italy. In Germany and France, as well as Austria, operating expenses significantly affect banks' ability to generate net income efficiently, in order to thrive in the future.

Other countries (Bulgaria, Czech Republic, Hungary and Romania) are far more profitable than the average; their profitability has been driven by net interest income, low impairments and, for most of them, low cost-income ratio.

Figure 50: RoE country dispersion as of June 2017; ROE: 5th and 95th percentiles, interquartile range and median
 Source: EBA risk indicators and EBA calculations.



Slight changes in the income structure, efficiency improvement lagging behind

The lingering low-rate environment continues to weigh on EU banks' income coming from traditional lending activity. Despite the increase in the volume of loans, net interest income has decreased due to the continuing reduction of the loan-deposit spread, which has reached its lowest level since 2014. Further drivers (e.g. decrease of debt securities held, new issuance of loss-absorbing senior debt) may also have affected the NII trend. However, the decrease in the NII

(-1.6 percentage points) has been offset by a rise of the net fees and commissions (+ 0.8 percentage points) (Figure 51).

Net trading income has increased moderately in the period: the sharp increase in the gains from the held-for-trading portfolio was partially offset by the strong decrease in the gains from the other investment portfolios. To adapt to the challenging environment, EU banks have continued to streamline their costs: the cost-income ratio went down to 61.5 %, from 62.7 % in June 2016 (Figure 52).

Figure 51: Evolution of the net interest income (left-hand side) and net fees and commission to total operating income (right-hand side)

Source: EBA risk indicators – EBA calculations.

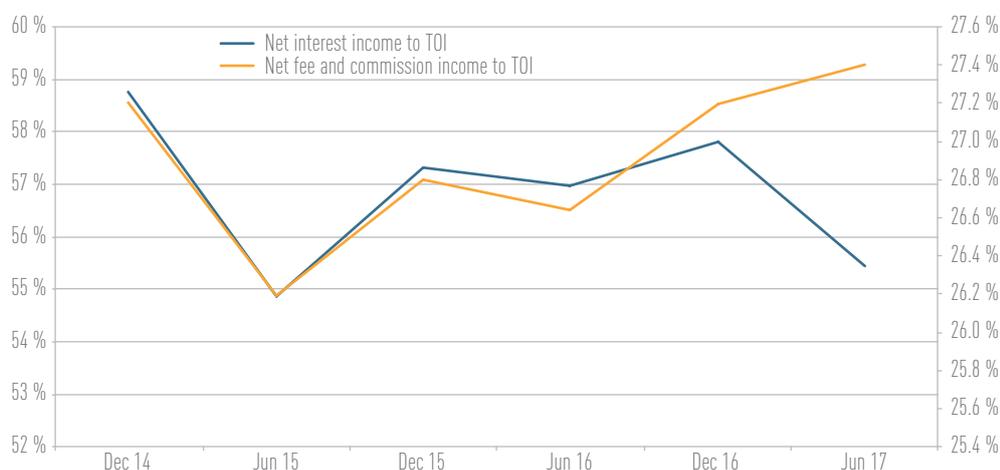


Figure 52: Evolution of the main sources of income as a percentage of total operating income

Source: EBA risk indicators – EBA calculations.

Ratios	Jun-16	Jun-17
Net interest income	57.0%	55.4%
Dividend income	1.8%	2.0%
Net fee and commission income	26.6%	27.4%
Net gains on financial assets and liabilities	10.3%	10.6%
Cost-income ratio	62.7%	61.5%
Impairments on financial assets to TOI	11.8%	9.9%

However, the ratio between operating expenses on total assets, which measure efficiency with respect to the size of the banking activity, has shown only modest improvements (Figure 53). In general, the indicator has had no evident trend since 2014, fluctuating between 1.27 % and 1.37 %; it increased only moderately in the last 12 months, as assets went down more than costs.

Profitability is still insufficient to guarantee long-term sustainability

The actual level of RoE (7 %), though increased in the year, seems to be insufficient to guarantee long-term sustainability of the business model. In the RAQ for banks a large number of respondents (some 70 %) stated that they can operate on a longer-term basis with a RoE greater than 10 %, much higher than the current average for the EU (Figure 54).

Figure 53: Evolution of the operating expenses on total assets

Source: EBA risk indicators – EBA calculations.

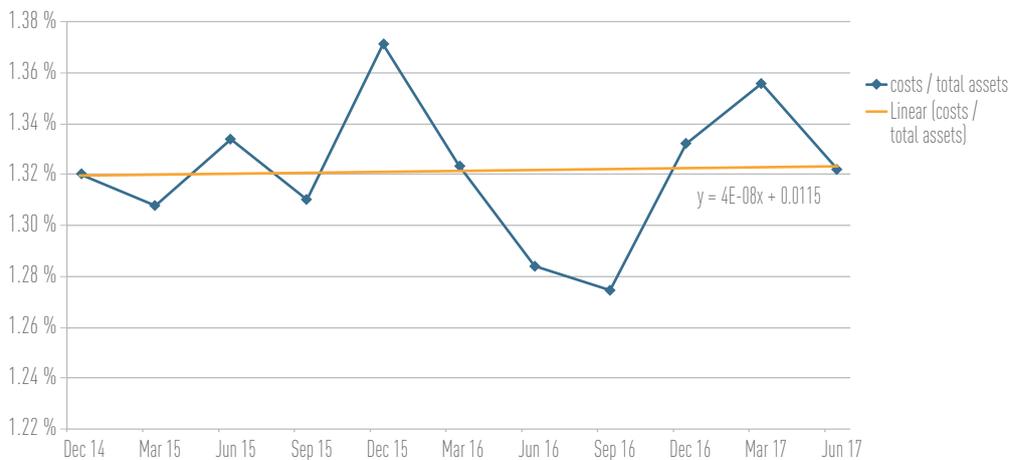
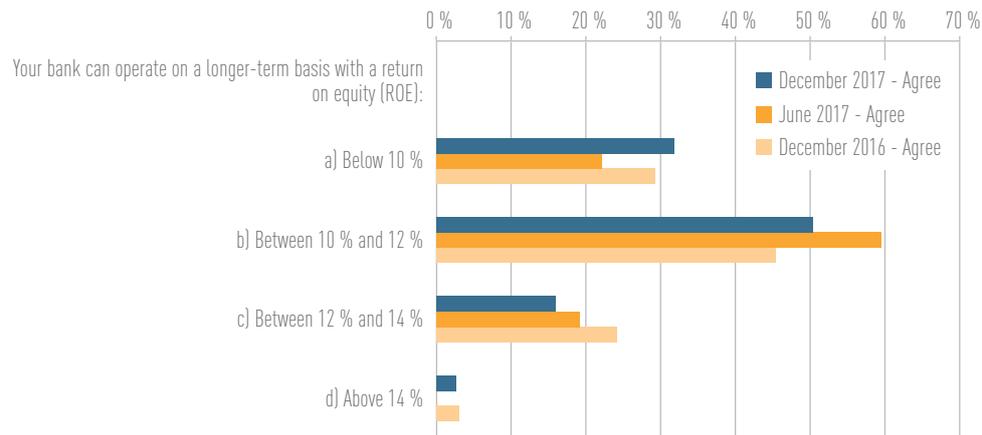


Figure 54: RAQ for banks: long-term sustainable RoE

Source: EBA RAQ for banks

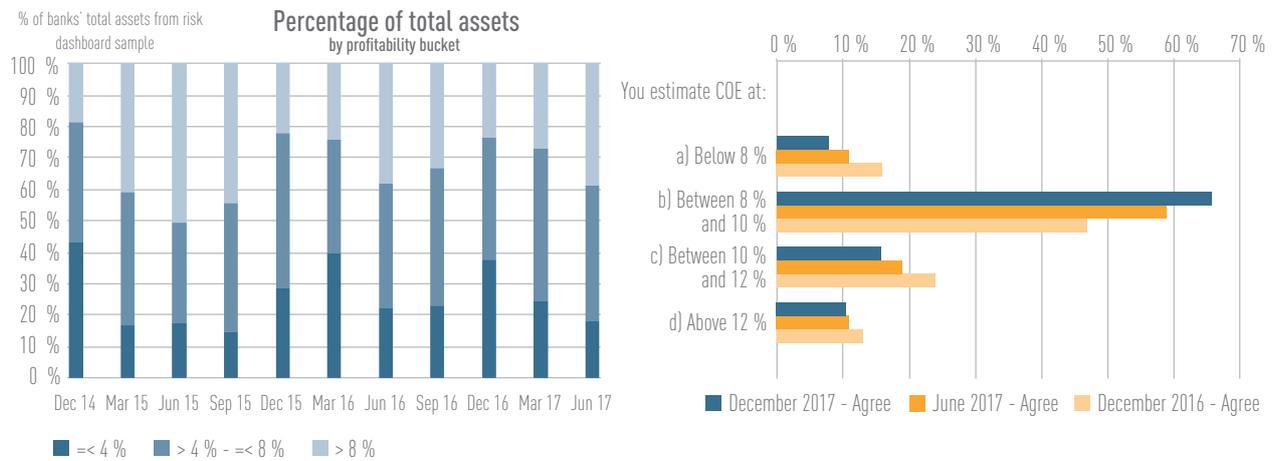


Furthermore, there is still a large gap between the percentage of banks with a ROE below 8 % (57 % of banks, 60 % of total assets) and those which declare to have a cost of equity greater than 8 % (91 % of the RAQ sample) (Figure 55).

On an aggregate basis, and by focusing only on variables controlled by banks^[32], at the current yield banks would reach the break-even point between net interest income and operating expenses only with an average decrease of costs of 6.2 %; in the last 12 months, costs decreased by 0.8 %.

^[32] Analysis limited to NII and loans related to households and nonfinancial corporations.

Figure 55: RoE by bucket and percentage of banks' total assets; estimated cost of equity
 Source: EBA risk indicators and EBA calculations; RAQ for banks.



Banks' cost of equity — Levels and drivers

The gap between RoE and CoE appeared after the beginning of the global financial crisis, and has continued ever since. By using the Capital Asset Pricing Model (CAPM), the CoE for the EU banks stood at around 11 % in the Q1 2017, which is substantially higher compared to the same period last year, when it was 7.5 %.

Looking more closely into the CAPM a company's CoE is seen to depend on the riskiness of its business, which is driven by systemic factors, such as region of operation and industry sector, as well as idiosyncratic ones that include the company's strategy and its business model.

Systemic factors (beta), which are the main reason for the recent rise in the CoE, are connected to the risk perception of the whole banking sector compared to other sectors. Bank-specific factors such as the direct effect of low interest rates, a more

leveraged and procyclical business, 'spill-over' of notable conduct costs, opaqueness of some business models together with complexity of their security holding structures, high stock of NPLs with potential systemic consequences and regulatory uncertainty are the main reasons for higher systemic risk compared to other sectors.

On the other hand there are idiosyncratic factors, which are connected to individual enterprises. To get a better insight into idiosyncratic risks connected to the way banks conduct business, this box compares the CoE levels across banks' business models. The business models are defined according to the SSM RIA business model classification process. The sample includes 39 banks across the EU, of which 15 diversified lenders, six are Global Systemically Important Banks (G-SIBs), a further six are G-SIB universal banks and 12 are universal banks.

According to the analysis, diversified lenders have the lowest CoE, at 10.8 %, followed

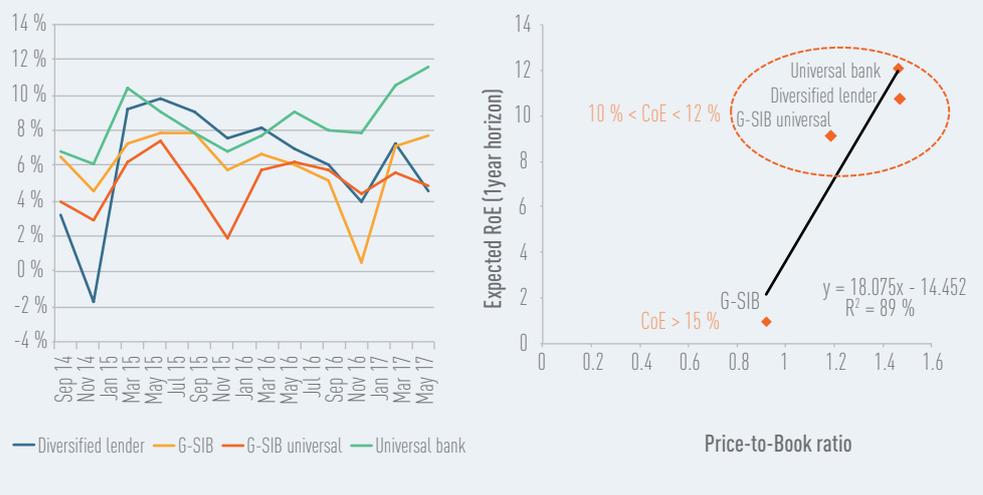
by G-SIB universal banks and 'ordinary' universal banks, at just above 11%. The universal banks have the highest expected RoE, at 12%. However, due to the more volatile nature of their earnings the risk of not reaching the expected profitability is higher compared to diversified lenders.

Among systemically important banks, the ones with the universal business model have a higher expected RoE and lower CoE compared to the rest of the G-SIBs. The G-SIBs' CoE stands at around 17% with an expected RoE below 1%.

Many of the CoE developments can also be explained by the past performance. It seems the worst performance in the past 2 years came from the G-SIBs (regardless of whether normal or universal); however, by extrapolating G-SIBs recent performance, expected earnings are much higher than the ones indicated in consensus forecasts. The best performing banks are those with a universal business model, reaching RoEs of close to 12% in June 2017.

Figure 56: EU banks' CoE per business model

Source: EBA supervisory data (left chart), Bloomberg and EBA calculation (right chart).



Traditional lending activity and business model: the intertwined duo.

Banks' operating expenses (20.3% of equity) were still higher than net interest income (18.3%) [33] in June 2017: hence, traditional lending activity has again been unable to generate enough income to cover running costs in 2017.

This persistent trend highlights the necessity for EU banks to search for other levers of structural growth, especially in a context of high competition and erosion of interest rate margins owing to the ultra-low rates.

Therefore, a structural diversification of income sources and/or a more incisive reduction of costs are needed to help banks to im-

prove steadily their profits, given the enduring competition on the traditional lending activity, among banks and also from shadow banking institutions and FinTech companies [34]. However, based on the RAQ answers, a large majority of banks do not envisage making a material change to their business model although they admit that the rapidly growing of FinTechs do markedly impact their business especially in retail banking and payment and settlement.

In fact, some EU banks are considering overhauling their rates-driven business model to structurally increase their revenues and improve efficiency and to restore margins. With a view to this, they are set to move towards more fee-oriented business lines, with digitalisation emerging as the most important

[33] It is based on EU average data and also includes banks whose business model might not be focused on interest, but rather fee and commission income.

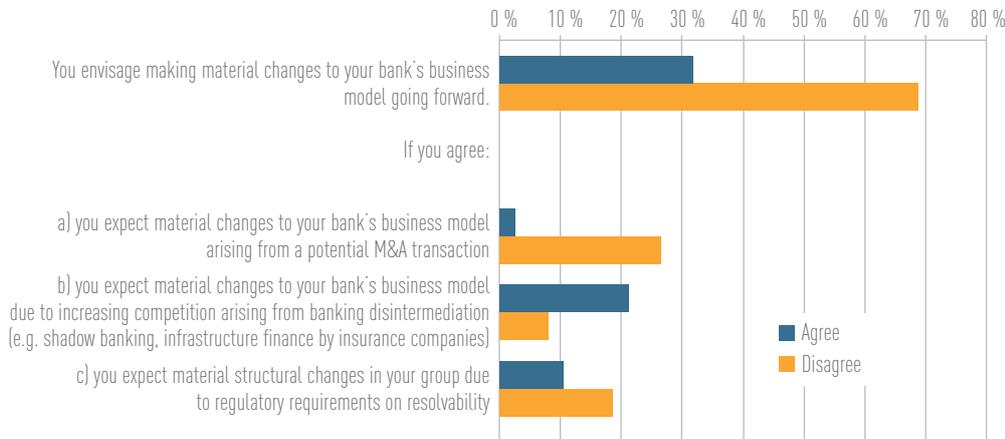
[34] On Fintech companies see Box 'Impact of technology innovation on banks' profitability and on business models', in Chapter 5.

strategy to enhance their competitiveness. This transformation obviously requires a very robust IT architecture and effective processes to be able to deal with big data analytics. Furthermore, EU banks are continuing to carry out proof-of-concept projects to investigate the possible applications of financial technologies, which require high investments. Some banks are also joining banking consortiums around open-source blockchain projects in specific business lines, which can also help them to save costs collectively.

All these new opportunities are accompanied by a number of new pockets of risks, such as cybersecurity ⁽³⁵⁾, that banks have to cautiously mitigate through a sound risk management policy.

⁽³⁵⁾ See Chapter 6 (Operation resilience) for further analysis of ICT risks.

Figure 57: Banks' expectations on their business model change
 Source: RAQ for banks.



Slow structural changes in the EU banking sector.

Within this changing environment, the structure of the EU banking sector is slowly adapting. The size of the sector as a whole, measured by the ratio between total assets and GDP, has noticeably decreased in the last 5 years (Figure 58); however, in comparison with the United States, it seems to be still characterised by an overcapacity.

In the same 5-year period, EU banks have increased their average size (total assets against number of banks) and their activity has become less branch-based; nonetheless, they also lag behind US institutions for these structural indicators.

Notwithstanding the high number and the small size of the EU banks, with respect to the United States, the EU banking sector is still the more concentrated one, on the basis of the Herfindahl index.

Figure 58: EU banking sector structure indicators

Source: SNL on the EBA sample (or listed US banks with full coverage depth by SNL) for total assets and number of offices; SNL (all listed and not listed, with full and summary coverage depth) for the Herfindahl index based on total assets of EU banks and for the number of banks; Eurostat for GDP and number of inhabitants, EBA calculation

Indicators	2011	2016
Herfindahl EU (simple average for countries)	1707	1464
Herfindahl US	808	659
Total assets/GDP (weighted average)	2.10	1.84
Total assets/GDP (simple average EU countries)	1.40	1.30

Indicators	2011	2016
Total assets/GDP (US)	0.74	0.74
Offices per inhabitant (weighted average)	206	188
Offices per inhabitant (simple average EU countries)	185	171
Offices per inhabitant (US)	145	143

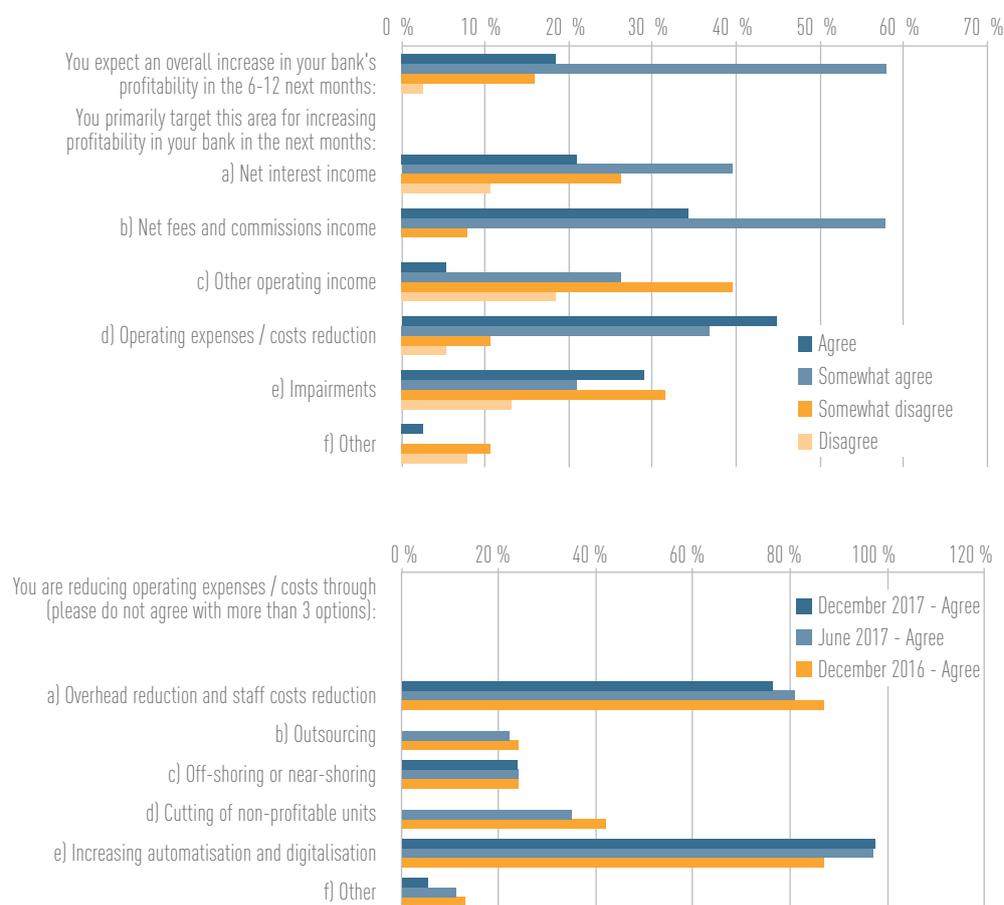
	2011	2012	2013	2014	2015	2016
Number of EU banks	2,918	2,984	3,036	3,052	3,032	2,738
Total assets of EU banks	45,070,812,827	45,979,064,228	43,101,097,945	47,189,111,532	46,577,186,436	45,314,069,437
Average	15,445,789	15,408,534	14,196,673	15,461,701	15,361,869	16,550,062
Number of US banks	1,028	1,053	1,063	1,074	1,075	1,070
Total assets of US banks	14,027,339,198	14,840,782,023	14,485,859,342	17,070,393,538	19,226,728,566	20,806,965,385
Average	13,645,272	14,093,810	13,627,337	15,894,221	17,885,329	19,445,762

Outlook on profitability

For the next 6-12 months, more than 75 % of banks expect an increase of their profits. In particular and in line with the previous RAQs, they forecast an increase of net fees

and commission and a reduction of costs. The majority of banks have declared that they are addressing costs through a reduction of overheads and staff costs and through increasing automatisisation and digitalisation.

Figure 59: Expected evolution of profitability in the coming months and main drivers
 Source: EBA RAQ for banks.



In the recent past, RAQ responses have been a good predictor of the future evolution of the main profitability drivers. In fact, in last year's RAQ most of the banks targeted three areas for increasing profitability — net fees and commission, costs reductions and impairments — and these three areas have actually driven the increase of ROE in the period under analysis (Figure 60).

When it comes to the future, analysts are more confident and optimistic this year regarding EU banks' profitability (Figure 61). In line with the forecasts by the banks, they expect an improvement of overall profitability (81 % of the analysts 'agree' or 'somewhat agree') and cost efficiency in the short run (86 % of the analysts 'agree' or 'somewhat agree'). In the same vein, most analysts do

not expect a further increase of provisions and impairments.

Most of the banks expect greater volatility of profits to come from IFRS 9 implementation ^[36], even though the cumulative losses should be unaffected by the move to the new accounting standard. The increase of volatility should be related to the cliff effect when moving exposures from stage 1 to stage 2 and the periodic reassessment of forward-looking information in the expected credit loss estimation. Further uncertainty on future banks' profitability may come from the development of the Fintech sector.

^[36] <https://www.eba.europa.eu/documents/10180/1720738/EBA+Report+on+results+from+the+2nd+EBA+IFRS9+IA.pdf>

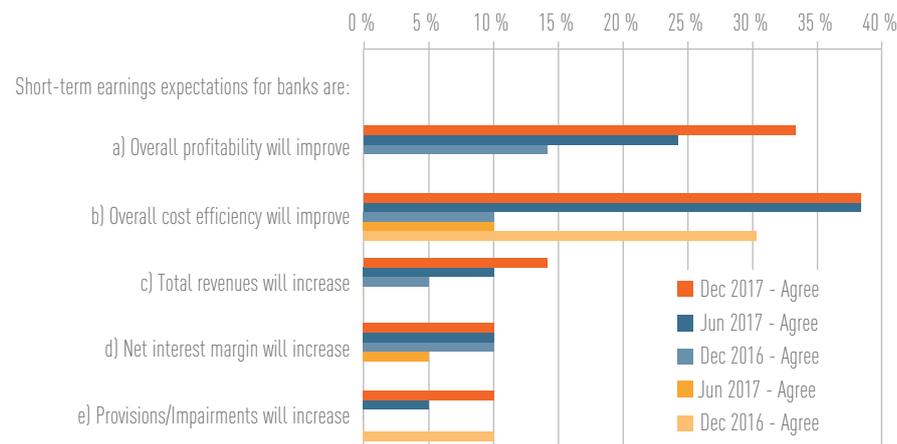
Figure 60: Actual evolution and outlook of the main profitability indicators ^[37]

Source: EBA risk indicators and EBA RAQ for banks — EBA calculations.

Ratios	Data			RAQ (outlook)	
	Jun-16	Jun-17	Actual variations (pp)	2016	2017
Net interest income to TOI	57.0 %	55.4 %	-1.5	↓	↑
Net fee and commission income to TOI	26.6 %	27.4 %	0.8	↑	↑
Cost-income ratio	62.7 %	61.5 %	-1.1	↓	↓
Impairments on financial assets to TOI	11.8 %	9.9 %	-1.9	↓	→

Figure 61: Expected evolution of short-term earnings and main drivers

Source: EBA RAQ for market analysts.



^[37] The 'Expected profitability drivers' columns are based on a RAQ question concerning targeted drivers to increase profits. Green arrow: 'agree' or 'somewhat agree' answers greater than 55 % of the total, for the P & L item considered (e.g. more than 55 % respondents target a decrease of costs to boost profitability); yellow arrow: 'agree' or 'somewhat agree' answers between 45 % and 55 %; red arrow: 'agree' or 'somewhat agree' answers lesser than 45 %.

Impact of technology innovation on banks' profitability and on business models

One of the most important factors for banks in maintaining long-term profitability is their ability to adjust their business models and strategies to the changes in their operating environment. The most recent evolution of the operating environment comes from the development of financial technologies (FinTech) which bring challenges and opportunities from financial innovation, new products and technologies as well as competition.

The evolution of FinTech seems to be forcing banks to rethink their approach to customer interaction as technological and financial innovation is currently a leading force shaping the banking industry and customers' expectations about how to access financial services. Banks are also adapting their business models to meet such expectations in response to the increasing competition from FinTech companies and in the context of an already challenging operating environment characterised by generally low profitability. Currently, this adaptation is enabled through: (a) adjusting products and interaction with customers and employing new technologies and products to increase revenues; (b) adopting new technologies to digitalise/enhance efficiencies in internal processes to reduce costs; or (c) a combination of both.

Incumbent banks, in particular, seem to be reacting to the upcoming competition from FinTech companies as they foresee this as a threat which will lead to decreased revenues, predominantly in retail and payment and settlement business lines, where the current revenues largely rely on mass-market standard solutions and product mix. On the positive side, banks seem to be more optimistic on the opportunities arising from FinTech in asset management and commercial banking, where financial and technology innovation appears to offer the potential for an enlarged customer base and the offering of new products, with an ultimate aim to increase revenues. Moreover, investments in innovative technologies and products are perceived by banks as an effective way to reduce costs predominantly in trading and sales, commercial banking and payment and settlement business lines, areas which seem to benefit most from digitalisation and new technologies.

In addition to the potential opportunities for the incumbent banks to increase revenues, through offering new products or a better customer experience, or to reduce costs, through digitalisation-led and operational efficiency programmes, the rise of FinTech brings challenges from the intense competition and level playing field point of view. In accordance with

the FinTech mapping exercise undertaken by the EBA in spring 2017 and presented in a subsequent discussion paper^[38], FinTech companies appear to provide a wide range of financial services and are particularly dominant in the provision of payments, clearing and settlement services and other activities related to financial services (e.g. credit reference services, comparison services, compliance services) and they thus compete with comparable services offered by banks, albeit with generally lower operating costs. Furthermore, based on the sample of FinTech companies covered by the mapping exercise, it was noted that the regulatory status of FinTech companies appears to be highly varied; a high percentage are designated as unregulated, which may in turn create an issue of whether there is a level playing field in terms of risk management and controls, governance and compliance requirements and costs for the regulated banks competing on the same services.

More generally, cloud-based solutions and smartphone technologies currently appear to be among the major breakthroughs in banking activity; the rise of machine learning, artificial intelligence and blockchain are set to provide opportunities for future developments. The EBA has delivered a number of products related to FinTech innovations, such as the opinion on lending-based crowdfunding^[39] (February 2015) and the recommendations on outsourcing to cloud service providers^[40] (May 2016), and contributed to the Joint Committee of the European Supervisory Authorities' related work such as the report^[41] on automation in financial advice.

In light of the above, the EBA intends to carry out follow-up work in a number of areas (as set out in the EBA FinTech discussion paper): authorisation and regulatory regimes; prudential risks and opportunities for credit institutions, payment institutions and electronic money institutions; the impact of FinTech on the business models of these institutions; consumer protection and retail conduct of business issues; the impact of FinTech on the resolution of financial firms; and the impact of FinTech on anti-money laundering operations and countering the financing of terrorism.

[38] <https://www.eba.europa.eu/-/eba-publishes-a-discussion-paper-on-its-approach-to-fintech>

[39] <https://www.eba.europa.eu/-/eba-recommends-convergence-of-lending-based-crowdfunding-regulation-across-the-eu>

[40] https://www.eba.europa.eu/news-press/calendar?p_p_id=8&_8_struts_action=%2Fcalendar%2Fview_event&_8_eventId=1848356

[41] <https://esas-joint-committee.europa.eu/Pages/News/European-Supervisory-Authorities-publish-conclusions-on-automation-in-financial-advice.aspx>

6. Operational resilience

6.1 ICT-related risks

Operational risks remain an area of concern given the challenges EU banks have to face with the rapid development of financial technologies. Based on the RAQ results, 55 % of respondents foresee an increase in operational risk in their bank compared to 43 % in December 2016 and 35 % in December 2015. Most EU banks are still taking steps to address the weaknesses stemming from technology-driven evolution.

Within types of operational risk, cyber risks and data security issues have been identified as key drivers. A high and growing reliance of banking operations on IT platforms, digitalised prod-

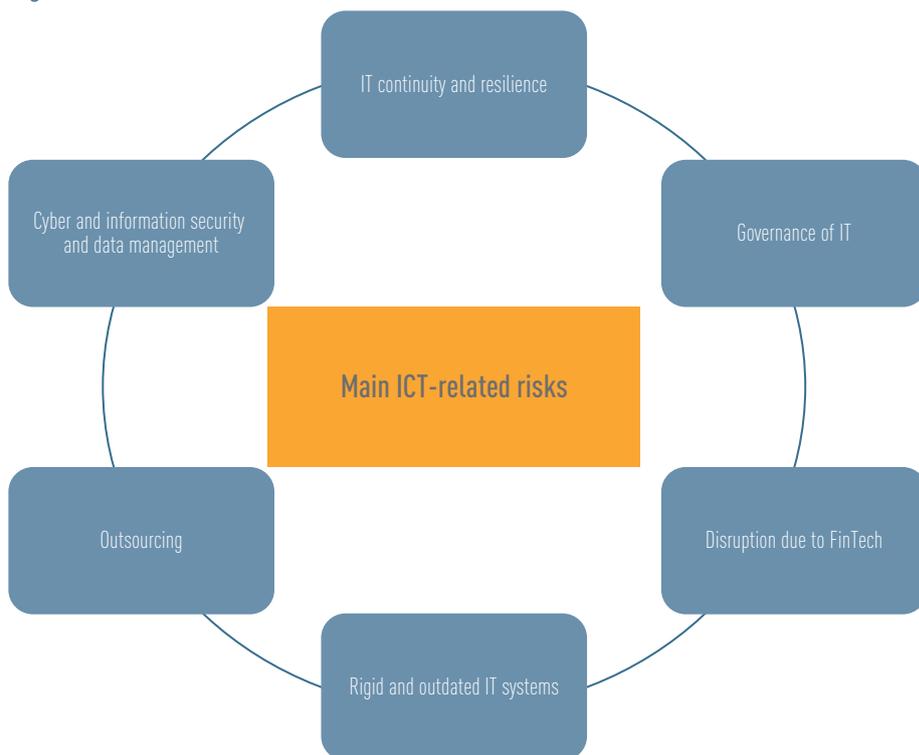
uct channels for banking services, outsourcing to third-party providers of IT-related tasks and functions, and communication networks renders banks vulnerable to operational risks. Accordingly, 42 % of respondents identify cyber risk and data security as the main drivers for increasing operational risk, while 16 % of respondents mention IT failures as an additional driver.

Operational risks stemming from non-compliance with regulatory initiatives are another factor mentioned by 24 % of respondents. For example, banks can be unable to fully comply with the principles for effective risk data aggregation and risk reporting (BCBS 239), particularly in terms of data availability, quality and reliability as well as data governance.

Figure 62: Operational risk in banks and main drivers
Source: EBA RAQ for banks



Figure 63: Main ICT-related risks



ICT resilience and cyber security

Cyber risk is one of the key risks threatening data integrity and business continuity in today’s interconnected financial system. Whereas cyber risk was traditionally mainly seen as an IT security issue at the level of individual banks, the focus has now shifted to the overall operational resilience of banks and the financial system as a whole, and the actual readiness to withstand shocks such as cyberattacks. Cyber risk is a multi-faceted challenge for financial institutions and there is an increasing complexity in the attacks from intruders trying to gain unauthorised access to critical systems and data. Institutions face potential operational, legal and reputational risks related to cyber incidents including business interruptions, data and software loss, cyber extortion, fraud, breach of privacy, network failure liabilities and damages to physical assets, which can result in financial losses. On top of the direct costs related to cyber incidents such as the cost of forensic investigation, there are also a number of indirect costs including negative effects on brand name and customer relationships.

With the increased digitalisation of banking, services moving online and financial institutions becoming more interconnected and dependent on computer networks, an insufficient level of protection against cyber inci-

dents and a failure of critical IT infrastructure could lead to major damages into individual financial institutions and potentially to the entire financial system.

There has been rising interest from banks in operational risk insurance products covering cyber risk, partially driven by a number of major cyber attacks, such as the so called ‘WannaCry’^[42].

6.2 Outsourcing

In recent years, institutions have demonstrated increasing interest in outsourcing business activities in order to reduce costs, focus on core activities and improve efficiency. It is also a way to get easy access to new technologies and to achieve economies of scale. Outsourcing can be applied to many business activities, including information technology (e.g. cloud computing, FinTech) and specific operations (e.g. some aspects of finance and accounting, internal control tasks, back-office activities). IT has become one of the most prevalent outsourced activities. Outsourcing does not eliminate risks but rather raises some new ones related to the

^[42] The WannaCry attack in May 2017 was a ransomware cyber attack which spread to over 150 countries around the world targeting computers using a specific operating system by encrypting data and demanding ransom payments in order to receive the key to decrypt the files.

management of the third party relationship. Indeed increased reliance on the service provider regarding the outsourced activities, in particular with regards to critical activities, may impact on the ability of institutions to manage their risks such as strategic, reputational, compliance and operational risk. In addition, the concentration of outsourcing providers and underlying technical infrastructures could also lead to an increased systemic risk. Therefore all these underlying risks should be mitigated adequately by banks and embedded in a sound and efficient risk management policy.

In response to the growing importance of information technology as a driver of innovation and increasing interest in the use of cloud outsourcing solutions within the banking industry, the EBA has consulted on recommendations on outsourcing cloud service providers and will update the Committee of European Banking Supervisors (CEBS) guidelines on outsourcing, published in December 2006 as a broader piece of work.

6.3 Legal issues and reputational concerns

The implication of detrimental business practices still remain an important opera-

tional risk. Conduct and legal risks are main driver of operational risk to 25 % of respondents to the RAQ.

Banks expect compensation and redress payments to continue to be high, and a further relevance of legal and reputational concerns going forward. Nearly 32 % of respondents to the RAQ (27 % in June 2017) expect litigation costs to be heightened in the next 6-12 months. Market analysts share concerns about legal risks of banks and 24 % of respondents to the RAQ share a view that the legal risk of banks adversely influences the current market sentiment.

The continued relevance of detrimental business practices and implications for profitability are reflected in high compensation and redress payments. Over 40 % of banks responding to the RAQ have made compensation, litigation and similar payments of more than EUR 1 billion since the financial year 2007/2008, and over half of responding banks have made such payments of more than EUR 500 million.

More generally, risks related to changes that can have an impact on legacy contracts should be properly managed to avoid any further substantial increase of conduct costs.

Figure 64: Expected litigation costs

Source: EBA RAQ for banks

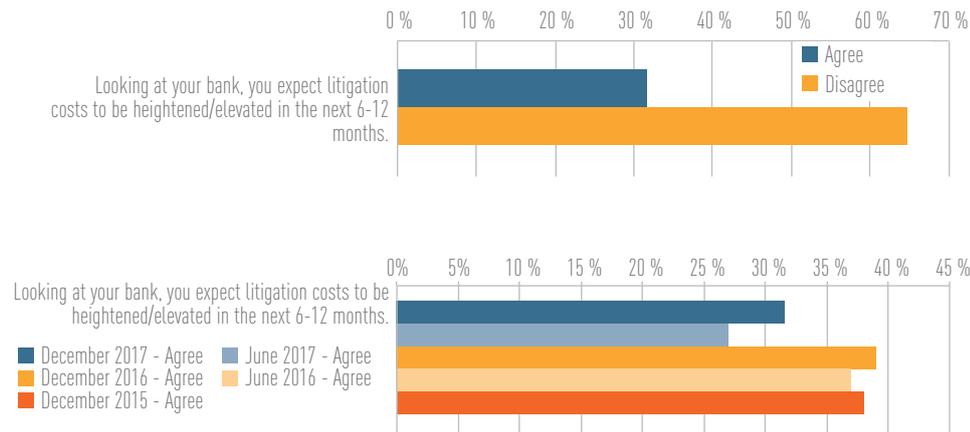
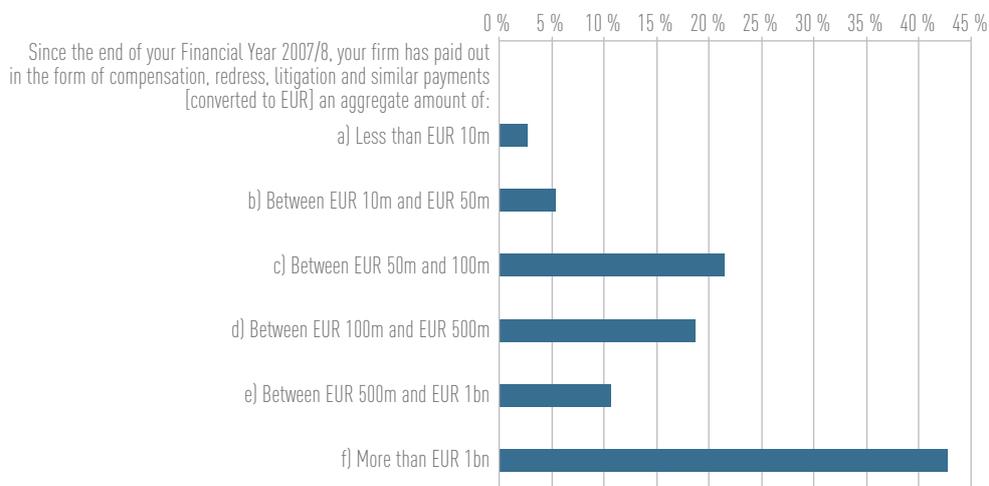


Figure 65: Compensation, redress, litigation and similar payments made since the financial year 2007/2008

Source: EBA RAQ for banks



EURIBOR and LIBOR, alternative reference rates and risks from transition issues

Euribor and Libor are interest reference rates widely used in the EU banking sector as benchmarks for a large volume and broad range of financial products and contracts.

During the financial crisis, uncertainty surrounding the integrity of these interest reference rates represented a potentially serious source of vulnerability that raised significant systemic and consumer protection concerns. For this reason, fundamental reviews of the benchmarks and plans for reform have started in a coordinated manner. At EU level, the reform has resulted in the EU Benchmarks Regulation, which, sets as a general rule that benchmarks should be based on actual transaction-based input data. In this context, the feasibility and viability of adopting alternative reference rates and potential transition issues have been under examination.

In pursuing the objective of moving to transactions-based rates, transition risks and costs should be minimised as much as possible, in particular, risks associated with legacy contracts. These risks and costs may include legal risks arising from litigation and contract frustration and

increased hedging costs (e.g. greater volatility that may occur in more transactions-based reference rates). Changes in the interest reference rate may also trigger significant risks and potentially increased costs for consumers across the EU that have concluded loan agreements pegged to Euribor and other reference rates and may result in consumer detriment.

Therefore, there is a need for careful management of any transition to alternative reference rates to mitigate risks and potential detriment to financial institutions, consumers and to the financial sector overall. One of the policy options launched in September 2017 is the creation of a working group for the euro area, chaired by a private sector representative, which will be tasked with the identification and adoption of a 'risk-free overnight rate' as a basis for a possible alternative to current benchmarks. Also in September, the ECB announced that it will start providing an overnight unsecured index before 2020, widening the set of options for the choice of such alternative rates for the euro area. The new working group will consult market participants and end-users on a regular basis as well as gathering feedback from public authorities. The EBA will continue to identify and provide information about possible risks that may arise in a transition to reformed or new proposed interest reference rates.

7. Policy implications and measures

Notwithstanding the benign macroeconomic and financial environment and the improvements of major risk indicators for the EU banking sector, important structural challenges persist and a sudden shift in market sentiment could have an impact on the EU banking system. In this regard, competent authorities and banks should ensure that internal governance, risk management, capital and liquidity buffers are commensurate with the risks stemming from the current challenging environment. Specific focal areas listed below should help the competent authorities to determine strategic priorities relevant for the institutions in colleges' risk discussion and setting college action plan accordingly.

Uncertainty also stems from the negotiations over Brexit, which could fuel further tensions in the sector in case of an unfavourable outcome. To prevent possible damage and in preparation to respond to a potential cliff-edge event, adequate contingency plans and mitigating actions should be taken well in advance, by competent authorities and financial institutions, to secure the financial stability of the EU banking system. The EBA is already engaged in preparations related to Brexit, and in October issued an opinion⁽⁴³⁾ on certain matters related to the Brexit-related relocation of UK financial institutions.

In 2018 the EBA will conduct an EU-wide stress test exercise. In a phase of relatively benign market conditions, the stress test enables a more forward-looking view and assessment of the resilience of financial institutions to adverse market developments. The exercise will cover 70 % of the EU banking sector as expressed in terms of total consolidated assets as of end 2017 and will assess EU banks' ability to meet relevant supervisory capital ratios at a time of adverse economic shock. The methodology covers all relevant risk areas and, for the first time, will incorporate IFRS 9 accounting standards. The results will inform the 2018 Supervisory Review and Evaluation Process (SREP), challenging banks' capital plans and leading to relevant supervisory outcomes. The exercise will also provide enhanced transparency so that market

participants can compare and assess the resilience of EU banks on a consistent basis.

7.1 Further progress on NPL cleaning is needed

The improvement of asset quality should be speeded up to increase the resilience of banks. Further supervisory actions are needed to support the ongoing cleaning of balance sheets. Close monitoring of actions undertaken by banks to ensure that they are in line with the recent supervisory guidelines is required. Banks are expected to define a clear and consistent strategy to tackle the stocks of NPL. Given the high dispersion of coverage ratios among countries, a rigorous and consistent assessment of the evaluation process, especially for real estate collateral is highly recommended. Additional attention should be paid to banks' underwriting standards, in order to detect potential credit standard loosening which could affect the quality of new loans.

Along with supervisory actions, structural reforms in the different jurisdictions remain crucial to address structural impediments: strengthening the judicial system, increasing the efficiency of bankruptcy procedures and supporting the use of out-of-court restructuring could decisively help to address the substantial overhang. In addition, further improvements towards a better functioning of the secondary market of NPLs are essential. Even though there has been an increasing volume of NPL transactions, secondary market activity is not yet sufficient to materially contribute to NPL reductions. In that respect, the EU Council's initiatives are a significant step forward for tackling NPLs and measures such as Supervisory Guidance, data transparency, the development of the secondary market and the establishment of national AMC solutions in line with State aid rules are heading in the right direction. EBA is concretely supporting EU-wide approach to tackle NPLs. In order to enhance supervisory guidance the EBA will issue Guidelines on NPL Management. Furthermore, the EBA is developing templates on loan tapes monitoring and will implement enhanced disclosure requirements on asset quality and non-performing loans to all banks (in 2018), to strengthen the data infrastructure

⁽⁴³⁾ <https://www.eba.europa.eu/documents/10180/1756362/EB+A+Opinion+on+BREXIT+Issues+%28EBA-Op-2017-12%29.pdf>

with uniform and standardised data for NPLs. The EBA is also contributing to the work of European Commission on Asset Management Companies (AMCs) Blueprint, to stimulate the development of secondary market for NPLs.

7.2 Business model sustainability to enhance profitability

Despite recent improvements, the persistent low profitability of EU banks remains a key concern. EU banking sector faces both cyclical and structural challenges. The low-rate environment and the high level of legacy assets continue to put pressure on banks' intermediation margins. Against this background, banks have to consider the long term sustainability of business models and explore new opportunities to generate long-term sufficient returns as well as further consolidation^[44].

In this context, supervisory authorities are expected to assess cautiously the viability and sustainability of banks' business models to ensure that risks are adequately balanced and the execution risk stemming from the implementation of strategic changes are kept at a minimum. Furthermore, supervisory authorities are requested to pay continued attention to the risk appetite of banks. Indeed the search-for-yield in the current low yield-low volatility environment and ample liquidity can be an incubator of additional risks which could compromise the future performance of banks.

Related aspect of the challenges banks' business model currently face is the effect of Financial Innovation (FinTech) and emerging new technologies/products. Banks should consider the necessity of investments in financial innovation; supervisors should assess the disruptive potential, over time, of FinTech and new market entrants for individual institutions less prone to IT investments.

7.3 IT risk and operational resilience

While operational risk and conduct risk still require close monitoring, the EBA also considers Information and Communications Technology (ICT) as a key risk. In 2017 it published guidelines on ICT risk assessment as part of the SREP, launched a consultation on its recommendations on outsourcing to cloud service providers, and published a Discussion Paper on its approach to financial technology (FinTech). In fact, data management

has progressively become a critical source of risk. Banks and supervisors should encourage the update of out-dated IT systems and address concerns about connectivity and outsourcing to third-party providers. In addition, supervisors should explore with banks the risks the institutions will undertake if embracing and adopting technological innovation in the financial sector (FinTech) (e.g. IT interdependencies between market players and market infrastructure) Furthermore, banks and supervisors should pay particular attention to the risks related to cybercrime and information security risks.

7.4 Funding conditions in preparation for regulatory requirements

Possible changes in monetary policy could have an impact on EU banking sector balance sheets. Banks should adequately reflect in their funding plans that large volumes of secured debt maturing until year-end 2018 may not easily be replaced by long-term central bank funding. As the asset side of the balance sheet is to a large extent long-term driven, the significant share in market instruments maturing in the short- and medium-term raises some concerns about maturity mismatches. Banks should, therefore, aim to lengthen average maturity profiles of funding in relation to their average asset maturity.

Funding quality and the type of funding instruments have become extremely important for banks. Banks are focusing in their funding strategies on building loss-absorbing capacity. However, most banks will nevertheless still have to issue further MREL eligible instruments with a view to meeting BRRD requirements. Supervisors should monitor the ability, in particular of banks with heightened risk perceptions, to issue higher volumes of such instruments going forward at a reasonable cost. An important element of the MREL framework will be the ability of markets to absorb the volumes of loss-absorbing instruments to be issued by banks in order to meet their MREL requirement at prices that do not affect medium-term viability.

^[44] About overbanking: https://www.esrb.europa.eu/pub/pdf/asc/Reports_ASC_4_1406.pdf

Annex I – Samples

Below are the lists of banks that made up the sample population for the risk indicators, transparency exercise and RAQ ⁽⁴⁵⁾.

Name	Country	Risk indicators ⁽⁴⁶⁾	Transparency exercise ⁽⁴⁷⁾		RAQ
			2016 Q4	2017 Q2	
Erste Group Bank AG	Austria	x	x	x	x
Promontoria Sacher Holding N.V.	Austria	x	x	x	
Raiffeisen Bank International AG	Austria	x		x	x
Raiffeisen Zentralbank Österreich AG	Austria		x (*)		
Raiffeisenbankengruppe OÖ Verbund eGen	Austria	x	x	x	
Raiffeisen-Holding Niederösterreich-Wien registrierte Genossenschaft mit beschränkter Haftung	Austria	x	x	x	
Sberbank Europe AG	Austria	x	x	x	
UniCredit Bank Austria AG	Austria	x			
Volksbanken Verbund	Austria	x	x	x	
VTB Bank (Austria) AG	Austria	x	x	x	
AXA Bank Belgium SA	Belgium	x	x	x	
Bank of New York Mellon	Belgium	x	x	x	
Belfius Banque SA	Belgium	x	x	x	
BNP Paribas Fortis SA	Belgium	x			
Dexia NV	Belgium	x	x	x	
Investar	Belgium	x	x	x	
KBC Group NV	Belgium	x	x	x	x
DSK Bank Bulgaria	Bulgaria	x			
First Investment Bank	Bulgaria	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			
Bank of Cyprus Holdings Public Limited Company	Cyprus	x	x	x	x
Cooperative Central Bank Ltd	Cyprus	x	x	x	
Hellenic Bank Public Company Ltd	Cyprus	x	x	x	
RCB Bank Ltd	Cyprus	x	x	x	
Česká spořitelna, a.s.	Czech Republic	x			
Československá obchodní banka, a.s.	Czech Republic	x			

⁽⁴⁵⁾ 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).

⁽⁴⁶⁾ This list refers to the sample of banks used to calculate the Q2 2017 indicators. For lists of reporting institutions on a yearly basis, please see <https://www.eba.europa.eu/risk-analysis-and-data>.

⁽⁴⁷⁾ The banks marked (*) are included in the Transparency exercise in 'All other banks' bucket.

Name	Country	Risk indicators ⁽⁴⁶⁾	Transparency exercise ⁽⁴⁷⁾		RAQ
			2016 Q4	2017 Q2	
Komerční banka, a.s.	Czech Republic	x			
Danske Bank	Denmark	x	x	x	x
Jyske Bank	Denmark	x	x	x	
Nykredit Realkredit	Denmark	x	x	x	
Sydbank	Denmark	x	x	x	
AS DNB Pank ⁽⁴⁸⁾	Estonia	x			
AS LHV Group	Estonia	x	x	x	
AS SEB Pank	Estonia	x			
Swedbank AS	Estonia	x			
Danske Bank Oyj	Finland	x			
Kuntarahoiutus Oyj	Finland	x	x	x	
OP Financial group	Finland	x	x	x	
Banque Centrale de Compensation (LCH Clearnet)	France	x	x	x	
Banque PSA Finance	France		x(*)		
BNP Paribas SA	France	x	x	x	x
Bpifrance (Banque Publique d'Investissement)	France	x	x	x	
Crédit Mutuel Group	France	x	x	x	
CRH (Caisse de Refinancement de l'Habitat)	France	x	x	x	
Groupe BPCE	France	x	x	x	
Groupe Crédit Agricole	France	x	x	x	x
HSBC France	France	x			
La Banque Postale	France	x	x	x	
RCI banque (Renault Crédit International)	France	x	x	x	
SFIL (Société de Financement Local)	France	x	x	x	
Société Générale SA	France	x	x	x	x
Aareal Bank AG	Germany	x	x	x	
Bayerische Landesbank	Germany	x	x	x	x
Commerzbank AG	Germany	x	x	x	x
DekaBank Deutsche Girozentrale	Germany	x	x	x	
Deutsche Apotheker- und Ärztebank eG	Germany	x	x	x	
Deutsche Bank AG	Germany	x	x	x	x
Deutsche Pfandbriefbank AG	Germany	x	x	x	
Deutsche Zentral-Genossenschaftsbank AG	Germany	x	x	x	x
Erwerbgesellschaft der S-Finanzgruppe mbH & Co. KG	Germany	x	x	x	
HASPA Finanzholding AG	Germany	x	x	x	
HSH Beteiligungs Management GmbH	Germany	x	x	x	
Landesbank Baden-Württemberg	Germany	x	x	x	
Landesbank Hessen-Thüringen Girozentrale	Germany	x	x	x	
Landeskreditbank Baden-Württemberg-Förderbank	Germany	x	x	x	
Landwirtschaftliche Rentenbank	Germany	x	x	x	
Münchener Hypothekenbank eG	Germany	x	x	x	

⁽⁴⁸⁾ AS DNB Pank changed to Luminor Bank AS in October 2017.

Name	Country	Risk indicators ⁽⁴⁶⁾	Transparency exercise ⁽⁴⁷⁾		RAQ
			2016 Q4	2017 Q2	
Norddeutsche Landesbank Girozentrale	Germany	x	x	x	x
NRW.Bank	Germany	x	x	x	
State Street Europe Holdings Germany S.a.r.l. & Co. KG	Germany	x	x	x	
Volkswagen Financial Services AG	Germany	x	x(*)	x(*)	
Alpha Bank AE	Greece	x	x	x	x
Eurobank Ergasias SA	Greece	x	x	x	x
National Bank of Greece SA	Greece	x	x	x	x
Piraeus Bank SA	Greece	x	x	x	x
Kereskedelmi és Hitelbank Zrt.	Hungary	x			
OTP Bank Nyrt.	Hungary	x	x	x	x
UniCredit Bank Hungary Zrt.	Hungary	x			
Allied Irish Banks, Plc	Ireland	x	x	x	x
Citibank Holdings Ireland Limited	Ireland	x	x	x	
DEPFA Bank Plc	Ireland	x	x	x	
Permanent TSB Group Holdings Plc	Ireland	x	x	x	
The Governor and Company of the Bank of Ireland	Ireland	x	x	x	x
Ulster Bank Ireland Designated Activity Company	Ireland	x			
Banca Carige SpA - Cassa di Risparmio di Genova e Imperia	Italy	x	x	x	
Banca Monte dei Paschi di Siena SpA	Italy	x	x	x	
Banca Popolare di Milano Scarl	Italy		x(*)		
Banca Popolare di Sondrio	Italy	x	x	x	
Banca Popolare di Vicenza SpA	Italy		x(*)		
Banco BPM S.p.A.	Italy	x		x	
Banco Popolare Società Cooperativa	Italy		x(*)		
BPER Banca S.p.A.	Italy	x	x	x	
Credito Emiliano Holding SpA	Italy	x	x	x	
Credito Valtellinese	Italy		x(*)		
Iccrea Banca Spa Istituto Centrale del Credito Cooperativo	Italy	x	x	x	
Intesa Sanpaolo SpA	Italy	x	x	x	x
Mediobanca - Banca di Credito Finanziario SpA	Italy	x	x	x	
UniCredit SpA	Italy	x	x	x	x
Unione di Banche Italiane SCpA	Italy	x	x	x	
Veneto Banca SpA	Italy		x(*)		
ABLV Bank	Latvia	x	x	x	
AS SEB banka	Latvia	x			
Swedbank AS	Latvia	x			
AB DNB bankas ⁽⁴⁹⁾	Lithuania	x			
AB SEB bankas	Lithuania	x			
Swedbank AB	Lithuania	x			
Banque et Caisse d'Epargne de l'Etat, Luxembourg	Luxembourg	x	x	x	
BGL BNP Paribas	Luxembourg	x			

⁽⁴⁹⁾ AB DNB bankas changed to Luminor Bank AB in October 2017.

Name	Country	Risk indicators ⁽⁴⁶⁾	Transparency exercise ⁽⁴⁷⁾		RAQ
			2016 Q4	2017 Q2	
Deutsche Bank Luxembourg S.A.	Luxembourg	x			
J.P. Morgan Bank Luxembourg S.A.	Luxembourg	x	x	x	
Precision Capital S.A.	Luxembourg	x	x	x	
RBC Investor Services Bank S.A.	Luxembourg	x	x	x	
Société Générale Bank & Trust	Luxembourg	x			
State Street Bank Luxembourg S.A.	Luxembourg	x	x	x	
Bank of Valletta Plc	Malta	x	x	x	
Commbank Europe Ltd	Malta	x	x	x	
HSBC Bank Malta Plc	Malta	x			
MeDirect Group Limited	Malta	x	x	x	
ABN AMRO Group N.V.	Netherlands	x	x	x	x
Coöperatieve Rabobank U.A.	Netherlands	x	x	x	x
de Volksholding B.V.	Netherlands	x	x	x	
ING Groep N.V.	Netherlands	x	x	x	x
N.V. Bank Nederlandse Gemeenten	Netherlands	x	x	x	
Nederlandse Waterschapsbank N.V.	Netherlands	x	x	x	
DNB Bank ASA	Norway	x	x	x	x
SpareBank 1 SMN	Norway	x	x	x	
SpareBank 1 SR-Bank ASA	Norway	x	x	x	
Bank Polska Kasa Opieki SA	Poland	x		x	
Bank Zachodni WBK SA	Poland	x			
Powszechna Kasa Oszczędności Bank Polski SA	Poland	x	x	x	
Banco BPI, SA	Portugal	x	x(*)		
Banco Comercial Português SA	Portugal	x	x	x	x
Caixa Central de Crédito Agrícola Mútuo, CRL	Portugal	x	x	x	
Caixa Económica Montepio Geral	Portugal	x	x	x	
Caixa Geral de Depósitos SA	Portugal	x	x	x	
Novo Banco	Portugal	x	x	x	
Banca Comerciala Romana SA	Romania	x			
Banca Transilvania	Romania	x	x	x	
BRD-Groupe Société Générale SA	Romania	x			
Slovenská sporiteľňa, a.s.	Slovakia	x			
Tatra banka, a.s.	Slovakia	x			
Všeobecná úverová banka, a.s.	Slovakia	x			
Abanka d.d.	Slovenia	x	x	x	
Biser Topco S.a.r.l.	Slovenia	x	x	x	
Nova Ljubljanska Banka D.D., Ljubljana	Slovenia	x	x	x	
UniCredit Banka Slovenija d.d.	Slovenia	x			
ABANCA Holding Financiero	Spain	x	x	x	
Banco Bilbao Vizcaya Argentaria, SA	Spain	x	x	x	x
Banco de Crédito Social Cooperativo SA	Spain	x	x	x	
Banco de Sabadell, SA	Spain	x	x	x	

Name	Country	Risk indicators ⁽⁴⁶⁾	Transparency exercise ⁽⁴⁷⁾		RAQ
			2016 Q4	2017 Q2	
Banco Mare Nostrum	Spain	x	x	x	
Banco Popular Español, S.A.	Spain		x(*)		
Banco Santander SA	Spain	x	x	x	x
Bankinter SA	Spain	x	x	x	
BFA Tenedora de Acciones, S.A.U.	Spain	x	x	x	
Criteria Caixa S.A.U.	Spain	x	x	x	
Ibercaja Banco	Spain	x	x	x	
Kutxabank	Spain	x	x	x	
Liberbank	Spain	x	x	x	
Unicaja Banco S.A.	Spain	x	x	x	
AB Svensk Exportkredit – group	Sweden	x	x(*)	x(*)	
Kommuninvest – group	Sweden	x	x	x	
Länsförsäkringar Bank AB – group	Sweden	x	x	x	
Nordea Bank – group	Sweden	x	x	x	x
SBAB Bank AB – group	Sweden	x	x	x	
Skandinaviska Enskilda Banken - group	Sweden	x	x	x	x
Svenska Handelsbanken – group	Sweden	x	x	x	x
Swedbank – group	Sweden	x	x	x	x
Barclays Plc	United Kingdom	x	x	x	x
Citigroup Global Markets Europe Limited	United Kingdom	x	x(*)	x(*)	
Coventry Building Society	United Kingdom	x	x(*)	x(*)	
Credit Suisse International	United Kingdom	x	x(*)	x(*)	
Credit Suisse Investments (UK)	United Kingdom	x	x(*)	x(*)	
GE Capital International Holdings Limited	United Kingdom		x(*)		
Goldman Sachs Group UK Limited	United Kingdom	x	x(*)	x(*)	
HSBC Holdings Plc	United Kingdom	x	x	x	x
J P Morgan Capital Holdings Limited	United Kingdom	X	x(*)	x(*)	
Lloyds Banking Group Plc	United Kingdom	x	x	x	x
Merrill Lynch UK Holdings Ltd	United Kingdom	x	x(*)	x(*)	
Mitsubishi UFJ Securities International PLC	United Kingdom	x	x(*)	x(*)	
Mizuho International PLC	United Kingdom	x	x(*)	x(*)	
Morgan Stanley International Ltd	United Kingdom	x	x(*)	x(*)	
National Australia Group Europe Limited	United Kingdom	x	x(*)	x(*)	
Nationwide Building Society	United Kingdom	x	x	x	
Nomura Europe Holdings PLC	United Kingdom	x	x(*)	x(*)	
RBC Europe Limited	United Kingdom	x	x(*)	x(*)	
Standard Chartered Plc	United Kingdom	x	x	x	x
The Co-operative Bank Plc	United Kingdom	x	x(*)	x(*)	
The Royal Bank of Scotland Group Public Limited Company	United Kingdom	x	x	x	x
UBS Limited	United Kingdom	x	x(*)	x(*)	
Virgin Money Plc	United Kingdom	x	x(*)	x(*)	
Yorkshire Building Society	United Kingdom	x	x(*)	x(*)	

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
1 - Tier 1 capital ratio	Weighted average	13.5%	13.4%	13.9%	14.1%	14.7%	14.5%	14.8%	15.3%	15.5%	15.4%	15.7%
	First quartile	11.7%	11.6%	12.0%	12.1%	13.1%	12.8%	13.0%	13.0%	13.0%	13.3%	13.6%
	Median	13.6%	13.6%	13.8%	14.1%	14.9%	14.7%	15.0%	15.2%	15.7%	15.8%	16.2%
	Third quartile	16.2%	16.2%	16.8%	17.6%	18.8%	18.1%	18.5%	19.0%	19.9%	19.2%	19.6%
2 - Total capital ratio	Weighted average	16.2%	16.1%	16.7%	17.0%	17.7%	17.4%	17.8%	18.3%	18.5%	18.5%	18.6%
	First quartile	13.8%	13.7%	14.2%	14.4%	14.8%	14.9%	15.1%	15.1%	15.2%	15.3%	16.0%
	Median	16.4%	15.8%	16.6%	16.8%	17.3%	17.2%	17.3%	17.9%	18.5%	18.1%	18.2%
	Third quartile	19.4%	19.5%	20.3%	21.7%	22.9%	22.5%	22.7%	22.6%	23.5%	22.7%	23.9%
Solvency	Weighted average	12.5%	12.4%	12.8%	13.0%	13.5%	13.4%	13.6%	14.0%	14.2%	14.1%	14.3%
	First quartile	11.2%	11.4%	11.6%	11.8%	12.4%	12.5%	12.3%	12.5%	12.5%	12.6%	13.0%
	Median	12.8%	13.0%	13.1%	13.4%	14.0%	14.2%	14.3%	14.6%	14.7%	14.6%	15.0%
	Third quartile	15.5%	15.2%	15.9%	17.2%	17.1%	17.3%	17.6%	17.9%	18.8%	18.8%	19.1%
4 - CET1 ratio (fully loaded)	Weighted average	11.5%	11.7%	12.1%	12.3%	13.0%	12.9%	13.1%	13.6%	13.7%	13.8%	14.0%
	First quartile	10.5%	10.6%	10.6%	11.1%	11.7%	11.8%	11.9%	12.0%	12.0%	12.2%	12.6%
	Median	12.1%	12.3%	12.4%	12.8%	13.6%	14.0%	13.8%	14.2%	14.6%	14.5%	14.7%
	Third quartile	15.1%	15.2%	15.2%	16.1%	16.9%	17.2%	17.6%	17.9%	18.7%	18.6%	19.1%
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%	5.4%	5.1%	4.8%	4.5%
	First quartile	2.1%	2.1%	2.2%	2.2%	2.2%	1.9%	1.9%	1.8%	1.6%	1.5%	1.4%
	Median	5.5%	5.5%	5.8%	5.5%	5.0%	4.9%	4.6%	4.6%	4.1%	3.4%	3.4%
	Third quartile	14.9%	15.4%	14.4%	14.5%	14.8%	14.2%	13.6%	13.1%	13.1%	10.0%	9.0%
Credit Risk and Asset Quality	Weighted average	43.4%	43.0%	43.6%	43.6%	43.7%	43.7%	43.9%	44.3%	44.8%	45.2%	45.0%
	First quartile	31.8%	31.2%	32.1%	32.3%	31.3%	31.2%	31.8%	31.6%	31.0%	30.6%	28.5%
	Median	41.1%	41.7%	40.9%	41.7%	40.3%	39.5%	40.6%	40.8%	40.4%	38.9%	39.8%
	Third quartile	48.2%	47.2%	47.5%	48.3%	47.5%	47.6%	47.9%	47.2%	48.5%	48.0%	48.7%

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
Credit Risk and Asset Quality	7 - Forbearance ratio for loans and advances	3.9%	3.8%	3.7%	3.6%	3.5%	3.5%	3.4%	3.4%	3.1%	3.0%	2.8%
		1.2%	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%	1.2%	1.3%	1.1%	1.0%
		3.3%	3.3%	3.4%	3.2%	2.9%	2.8%	2.9%	2.9%	2.7%	2.5%	2.4%
		8.9%	9.3%	8.7%	8.8%	8.9%	9.3%	8.9%	8.9%	8.5%	8.3%	7.3%
		5.5%	5.3%	5.1%	5.0%	4.9%	4.8%	4.7%	4.6%	4.4%	4.2%	3.9%
		2.0%	1.9%	1.9%	1.8%	1.8%	1.7%	1.6%	1.6%	1.4%	1.4%	1.3%
		4.7%	4.5%	4.5%	4.4%	4.0%	3.8%	3.6%	3.7%	3.2%	3.0%	2.9%
		11.5%	11.9%	11.9%	12.3%	12.0%	11.3%	9.9%	10.2%	8.9%	8.5%	7.4%
		3.5%	6.9%	6.8%	6.4%	4.5%	5.6%	5.7%	5.4%	3.3%	6.9%	7.0%
		-2.8%	3.4%	3.5%	3.5%	2.5%	1.9%	2.3%	2.4%	1.4%	3.0%	3.9%
		3.8%	7.1%	7.0%	6.8%	5.7%	5.0%	6.2%	5.9%	5.5%	6.7%	7.5%
		8.0%	10.6%	10.5%	10.7%	9.1%	8.5%	9.7%	9.7%	9.6%	10.4%	10.4%
Profitability	10 - Return on assets	0.2%	0.4%	0.4%	0.4%	0.3%	0.4%	0.4%	0.3%	0.2%	0.4%	0.5%
		-0.1%	0.2%	0.2%	0.2%	0.1%	0.1%	0.2%	0.1%	0.1%	0.2%	0.2%
		0.2%	0.4%	0.4%	0.4%	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.5%
		0.5%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%	0.6%	0.6%	0.7%	0.8%
		62.9%	60.9%	59.3%	59.9%	62.8%	66.0%	62.7%	63.0%	65.3%	63.9%	61.5%
		45.9%	44.8%	46.3%	46.9%	48.2%	50.7%	49.9%	49.5%	50.0%	49.7%	50.2%
		58.5%	56.8%	55.9%	57.3%	59.2%	63.9%	59.8%	58.9%	61.2%	59.8%	58.0%
		69.7%	66.5%	65.3%	66.3%	67.7%	73.8%	70.7%	70.8%	73.2%	72.5%	69.0%
		58.8%	55.5%	54.9%	56.3%	57.3%	58.8%	57.0%	57.7%	57.8%	55.9%	55.4%
		49.6%	43.2%	45.9%	48.3%	48.9%	51.9%	50.4%	50.4%	49.7%	48.7%	50.1%
		62.2%	58.3%	58.9%	59.9%	61.1%	64.7%	64.1%	62.6%	63.8%	62.7%	61.9%
		75.4%	73.8%	72.7%	77.6%	78.1%	80.7%	77.1%	76.8%	75.5%	75.9%	72.9%
Profitability	13 - Net fee and commission income to total operating income	27.2%	26.6%	26.2%	26.4%	26.8%	27.1%	26.6%	27.1%	27.2%	27.5%	27.4%
		13.7%	13.6%	13.5%	13.3%	12.2%	13.6%	11.8%	12.3%	12.6%	12.6%	13.0%
		22.9%	22.6%	21.7%	21.6%	22.1%	23.3%	22.5%	23.2%	23.1%	23.1%	22.1%
		30.3%	31.4%	30.4%	30.9%	29.9%	32.9%	32.3%	32.6%	32.5%	32.3%	33.1%
		6.7%	7.8%	6.5%	6.2%	5.8%	5.3%	5.4%	6.2%	6.1%	10.1%	9.2%
		-0.5%	-1.0%	-1.3%	-1.4%	-0.6%	-2.0%	-1.2%	-0.3%	-0.1%	0.0%	0.1%
		1.2%	1.0%	1.3%	1.5%	0.9%	0.2%	0.4%	1.0%	1.7%	1.9%	2.2%
		5.4%	9.6%	5.5%	4.4%	4.8%	3.8%	3.5%	4.5%	6.6%	8.4%	7.9%

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
Profitability	Weighted average	1.6%	1.6%	1.6%	1.6%	1.6%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
	First quartile	1.1%	1.0%	1.1%	1.0%	1.1%	1.1%	1.1%	1.1%	1.1%	1.0%	1.0%
	Median	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.4%	1.4%	1.4%	1.4%	1.4%
	Third quartile	1.8%	1.8%	1.8%	1.8%	2.0%	2.1%	2.1%	2.1%	2.0%	2.0%	2.0%
16 - Loan-to-deposit ratio	Weighted average	124.3%	125.1%	124.7%	123.2%	121.0%	121.7%	120.5%	120.1%	118.6%	118.1%	117.5%
	First quartile	96.2%	98.7%	100.1%	98.0%	94.0%	97.4%	96.9%	93.3%	93.8%	94.2%	91.6%
	Median	121.1%	122.2%	120.6%	120.0%	118.3%	119.6%	118.2%	117.0%	116.0%	117.7%	114.7%
	Third quartile	191.8%	188.0%	182.6%	187.0%	179.4%	175.6%	176.0%	181.5%	192.4%	182.6%	172.0%
17 - Leverage ratio (fully phased-in definition of Tier 1) ⁽⁵⁰⁾	Weighted average							5.0%		5.1%	5.0%	5.1%
	First quartile							4.1%		4.3%	4.3%	4.3%
	Median							5.4%		5.4%	5.3%	5.4%
	Third quartile							7.2%		7.3%	7.1%	7.4%
18 - Leverage Ratio (transitional definition of Tier 1 capital) ⁽⁵¹⁾	Weighted average							5.3%		5.5%	5.3%	5.5%
	First quartile							4.4%		4.6%	4.4%	4.4%
	Median							5.8%		5.7%	5.5%	5.7%
	Third quartile							7.2%		7.5%	7.3%	7.6%
19 - Debt to equity ratio	Weighted average	15.9	16.3	15.5	15.3	14.6	15.0	15.3	14.8	14.4	14.4	14.2
	First quartile	11.4	11.6	11.7	11.5	10.9	10.1	10.3	10.1	10.7	10.7	10.1
	Median	14.7	14.3	14.2	13.9	13.7	13.5	13.5	12.9	13.0	12.8	12.6
	Third quartile	19.3	19.8	19.3	18.6	17.7	17.8	18.5	18.0	17.0	17.6	17.1
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%	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%
	Median	24.3%	24.8%	25.3%	24.9%	25.4%	24.6%	24.9%	24.3%	24.6%	25.3%	24.5%
	Third quartile	38.8%	38.4%	36.2%	36.9%	35.7%	36.2%	36.1%	36.9%	37.4%	37.9%	36.8%
21 - Liquidity coverage ratio (%) ⁽⁵²⁾	Weighted average							140.5%		141.2%	144.7%	145.6%
	First quartile							127.1%		128.4%	131.7%	135.8%
	Median							150.3%		154.1%	156.6%	158.6%
	Third quartile							243.3%		243.9%	226.8%	230.9%

⁽⁵⁰⁾ Data not available before September 2016.

⁽⁵¹⁾ Data not available before September 2016.

⁽⁵²⁾ Data not available before September 2016.

GETTING IN TOUCH WITH THE EU

In person

All over the European Union there are hundreds of Europe Direct Information Centres. You can find the address of the centre nearest you at: <http://europa.eu/contact>

On the phone or by e-mail

Europe Direct is a service that answers your questions about the European Union. You can contact this service

- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: +32 22999696 or
- by electronic mail via: <http://europa.eu/contact>

FINDING INFORMATION ABOUT THE EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website at: <http://europa.eu>

EU Publications

You can download or order free and priced EU publications from EU Bookshop at: <http://bookshop.europa.eu>. Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see <http://europa.eu/contact>)

EU law and related documents

For access to legal information from the EU, including all EU law since 1951 in all the official language versions, go to EUR-Lex at: <http://eur-lex.europa.eu>

Open data from the EU

The EU Open Data Portal (<http://data.europa.eu/euodp/en/data>) provides access to datasets from the EU. Data can be downloaded and reused for free, both for commercial and non-commercial purposes.

EUROPEAN BANKING AUTHORITY

Floor 46, One Canada Square,
London E14 5AA

Tel. +44 (0)207 382 1776

Fax: +44 (0)207 382 1771

E-mail: info@eba.europa.eu



Publications Office