

LATVIJAS BANKA
EIROSISTĒMA

FINANCIAL STABILITY REPORT 2018



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Financial stability: the condition in which the financial system (financial intermediaries, markets and market infrastructures) is capable of withstanding shocks, without significant disruptions in the financial intermediation process and the supply of general financial services.

Systemic risk: the risk that the inability of one participant to meet its obligations will cause other participants to be unable to meet their obligations when they become due, potentially with spillover effects threatening the stability of or confidence in the financial system, economic growth and welfare.

The purpose of the "Financial Stability Report" is to raise public awareness of development of the Latvian financial system and draw attention to systemic risks representing potential threats to the stability of the Latvian financial system.

The "Financial Stability Report" analyses and evaluates the performance of the Latvian financial system and risks, in particular focussing on the credit institution operation on the basis of financial market data available up to the end of March 2018, economic data available up to the end of March 2018 or at the moment of compiling the current report and credit institution, NBFS and financial infrastructure data available up to the end of March 2018. Forecasts are also based on the most recent available data.

The "Financial Stability Report" uses the division of credit institutions into two groups since Latvia's credit institution sector is composed of two different segments. Group 1 comprises credit institutions which granted more than 50% of their loan portfolio to domestic customers and received more than 50% of their deposits from domestic customers over the past three years. The major portion of funding of these credit institutions consists of deposits by domestic customers and financing provided by their Nordic parent banks. Group 2 is made up of other credit institutions which primarily provide services to foreign customers and receive deposits from foreign customers.

Data on the branches of foreign banks registered in the Republic of Latvia have been disregarded for the purposes of calculating ROE, the total capital ratio, Tier 1 capital ratio, Common Equity Tier 1 ratio, the liquidity ratio set by the FCMC; nor have they been used for liquidity and credit risk sensitivity and stress tests.

Curly brackets enclose year-on-year data.

Charts and tables have been compiled on the basis of the following data sources: Charts 1.1 and 1.2 – the EC, Charts 1.3 and 1.4 – Bloomberg, Table 1.1 – financial statements of credit institutions, Chart 1.5 – the CSB, Chart 1.6 – the EC, Chart 1.7 – the CSB, Chart 1.8 – estimates by Latvijas Banka based on data of Latvijas Banka, Chart 1.9 – estimates by Latvijas Banka based on data provided by Latvijas Banka, the CSB and FCMC, Chart 1.10 – estimates by Latvijas Banka based on data provided by Latvijas Banka and the CSB, Chart 1.11 – Latvijas Banka and Bloomberg, Chart 1.12 – estimates by Latvijas Banka based on data provided by the CSB, Latio Ltd., Ober Haus Real Estate Latvia Ltd. and Arco Real Estate Ltd., Chart 1.13 – Eurostat, Chart 1.14 – the CSB, Charts 2.1 and 2.2 – Latvijas Banka, Chart 2.3 – Latvijas Banka, Chart 2.4 – Latvijas Banka and the FCMC, Charts 2.5–2.7 – Latvijas Banka, Chart 2.8 – the FCMC, Chart 2.9 – Latvijas Banka, Chart 2.10 – estimates by Latvijas Banka based on data of the FCMC, Charts 2.11–2.14 – Latvijas Banka and the FCMC, Table 2.1 – the FCMC and ECB, Table 2.2 – estimates by Latvijas Banka based on data provided by Latvijas Banka, Chart 2.15 – estimates by Latvijas Banka based on data of Latvijas Banka, Charts 2.16–2.20 – Latvijas Banka, Chart 2.21 – the FCMC, Chart 2.22 – estimates by the ECB, FCMC and Latvijas Banka based on data provided by the FCMC, Chart 2.23 – estimates by Latvijas Banka based on data provided by the FCMC, Chart 2.24 – estimates by the ECB, FCMC and Latvijas Banka based on data provided by the ECB and FCMC, Tables 2.3 and 2.4 – estimates by Latvijas Banka, Chart 3.1 – estimates by Latvijas Banka based on data provided by Latvijas Banka, the FCMC and CSB, Chart 3.2 – estimates by Latvijas Banka based on data of Latvijas Banka, Chart 3.3 – estimates by Latvijas Banka based on data provided by the CSB, Chart 3.4 – estimates by Latvijas Banka based on data provided by Latvijas Banka and the CSB, Charts 3.5 and 3.6 – Latvijas Banka, Chart 3.7 – estimates by Latvijas Banka based on data provided by the European Insurance and Occupational Pensions Authority (EIOPA), FCMC, Lietuvos bankas and Pensioniskeskus, Chart 3.8 – estimates by Latvijas Banka based on data provided by the OECD and the Law on State-funded Pensions, Charts 3.9 and 3.11 – estimates by Latvijas Banka based on data of the FCMC, Charts 4.1–4.3 and A1.2–A2.5 – Latvijas Banka, Chart A2.1 – the credit institution survey conducted by Latvijas Banka, Chart A2.2 – Latvijas Banka and the CSB, Charts A2.3–A2.5 – Latvijas Banka, Tables A3.1 and A3.2 – the FCMC, Charts A4.1–A4.3 – the credit institution survey conducted by Latvijas Banka.

CONTENTS

EXECUTIVE SUMMARY	4
1. MACROFINANCIAL ENVIRONMENT AND LENDING GROWTH	7
Box 1. Early impact of tax regulation changes on financial performance of non-financial corporations	11
Box 2. Amendments to the state support programme for house purchase	15
2. DEVELOPMENT AND RISKS OF THE CREDIT INSTITUTION SECTOR	17
Box 3. Developments in Group 2 credit institutions	17
Box 4. Changes in the credit institution sector in relation to the establishment of Luminor Bank AS	21
Box 5. Changes in liquidity requirements	23
Box 6. Liquidity stress test results	24
Box 7. Changes in the regulatory framework related to evaluation of asset quality and supervisory provisioning	27
Box 8. Changes in total capital requirements of credit institutions in 2018	34
Box 9. Credit risk shock-absorption capacity	35
3. DEVELOPMENT AND RISKS OF THE NON-BANK FINANCIAL SECTOR	39
Box 10. Growth prospects of crowdfunding in Latvia: risks and opportunities	41
4. SYSTEMICALLY IMPORTANT PAYMENT AND SETTLEMENT SYSTEMS	48
APPENDICES	
1. Heatmap: analytical tool for the analysis of systemic financial stability risks in Latvia	52
2. Latvijas Banka's survey-based assessment of household borrowers	57
3. Performance indicators of credit institutions	60
4. Credit institution survey on the potential financial stability risks and the financial stress index	63

ABBREVIATIONS

AML/CTF – anti-money laundering and counterterrorist financing	FinCEN – Financial crimes enforcement network
AS – joint stock company	GDP – Gross Domestic Product
BRRD – Directive 2014/59/EU of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms and amending Council Directive 82/891/EEC, and Directives 2001/24/EC, 2002/47/EC, 2004/25/EC, 2005/56/EC, 2007/36/EC, 2011/35/EU, 2012/30/EU and 2013/36/EU, and Regulations (EU) No 1093/2010 and (EU) No 648/2012 of the European Parliament and of the Council	IT – information technologies
CCB – countercyclical capital buffer	LCD – Latvian Central Depository
CDS – credit default swap	LCR – liquidity coverage ratio
CIS – Commonwealth of Independent States	LGD – loss given default
CIT – corporate income tax	Ltd. – limited liability company
CRD IV – Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC	LTV – loan-to-value
CRPC – Consumer Rights Protection Centre	MFI – monetary financial institution
CRR – Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012	ML/TF – money laundering and terrorist financing
CSB – Central Statistical Bureau of Latvia	NBFS – non-bank financial sector
CSD SE – Central Securities Depository Societas Europaea	NPL – non-performing loan
DENOS – the securities settlement system of LCD	OECD – Organisation for Economic Co-operation and Development
DGF – Deposit Guarantee Fund of Latvia	O-SII – other systemically important institution
EBA – European Banking Authority	PD – probability of default
EC – European Commission	PIT – personal income tax
ECB – European Central Bank	ROA – return on assets
ESRB – European Systemic Risk Board	ROE – return on equity
EU – European Union	RWA – risk-weighted assets
EURIBOR – euro interbank offered rate	SH – solvent household
FCMC – Financial and Capital Market Commission	SREP – supervisory review and evaluation process
	SRMR – Regulation (EU) No 806/2014 of the European Parliament and of the Council of 15 July 2014 establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund and amending Regulation (EU) No 1093/2010
	SRS – State Revenue Service
	TARGET2 – the second generation of TARGET (Trans-European Automated Real-time Gross settlement Express Transfer system)
	TARGET2-Latvija – a component system of TARGET2 in Latvia whose operation is ensured by Latvijas Banka in conjunction with the national central banks of the ESCB participating in TARGET2
	UK – United Kingdom
	US – United States of America
	VAS – state joint stock company
	VH – vulnerable household

EXECUTIVE SUMMARY

The Latvian credit institution sector has historically consisted of two distinct groups: credit institutions mostly providing services to domestic customers¹ and those providing services primarily to foreign customers². **The most significant changes in the Latvian financial system development have been observed with respect to Group 2 credit institutions.** In 2016 and 2017, the assets and financing (mostly deposits by foreign customers) of these credit institutions declined by approximately one third, while the share of the payments executed by foreign customers decreased even more. This was determined by the reinforcement of AML/CTF measures in Latvia and globally³ as well as the suspension of the direct US dollar correspondent banking relationships by the cooperation partners. In 2018, the operations of Group 2 credit institutions decreased even more (inter alia, credit institutions reduced the share of high-risk customers, as well as US dollars in their operations). Furthermore, ABLV Bank, AS, the largest credit institution providing services to foreign customers, announced self-liquidation following the ML/TF risk mitigation measures carried out by the US⁴. In April 2018, additional AML/CTF measures were carried out in Latvia, including the establishment of a prohibition to carry out transactions with shell companies. Consequently, the activity of credit institutions providing services to foreign customers will continue to decline. Thus, Latvia's regulatory framework for AML/CTF is currently one of the most stringent in Europe. Group 2 credit institutions have so far managed to absorb the contraction of business volume, while maintaining high liquidity and capital ratios. This was supported by the profit reserves built during the previous periods as well as by the individual additional capital and liquidity requirements established by the supervisor. However, with profits declining rapidly and the overall risk tolerance changing, **the future of Group 2 credit institutions depends on their ability to adjust their business models.** These credit institutions are not entirely homogeneous, and they are pursuing an active dialogue with the FCMC on their future business models.

The limited linkage of Group 2 credit institutions with other credit institutions and the domestic economy mitigates the propagation of the direct risks related to these credit institutions to the rest of the financial system, the continuity of financial intermediation as well as the real economy. **However, extensive provision of services to higher-risk customers poses reputational risks, creates additional costs to and increases the involvement of resources for the rest of the financial sector and the state in general. Therefore, in order to strengthen the financial stability, consistent risk mitigating measures are essential,** even if they would reduce GDP growth in the short-term. Bank and non-bank financial institutions and supervisory authorities have to ensure a high level of compliance with the AML/CTF requirements, and higher-risk

¹ Group 1 comprises credit institutions which have granted more than 50% of their loan portfolio to domestic customers and have received more than 50% of their deposits from domestic customers over the past three years. At the end of March 2018, the share of the Group 1 credit institutions in the domestic credit market was 88% and that in the domestic deposit market – 93%.

² Group 2 credit institutions which primarily provide services to foreign customers and receive deposits from foreign customers.

³ AML/CTF requirements were raised and the capacity of supervisory authorities was expanded, compliance control audits were conducted in credit institutions and the range of their customers was reviewed, risk mitigation procedures were carried out and the resources necessary for meeting more stringent requirements were increased (see Box "The introduction of stricter AML/CTF requirements in Latvia" published in Latvijas Banka's Financial Stability Report 2017).

⁴ In February 2018, FinCEN issued a proposed rule to designate ABLV Bank, AS as being of primary AML/CFT concern and impose on it a prohibition to open or maintain a correspondent account in the United States directly or on its behalf, pursuant to Section 311 of the US Patriot Act. The FinCEN announcement had an immediate effect on the operation of ABLV Bank, AS: the counterparties suspended their cooperation with ABLV Bank, AS and deposits began their outflow. The liquidity buffers of ABLV Bank, AS were high; due to the reputational blow, however, its ability to sell its liquid assets was constrained. Restrictions were imposed on the debit operations of ABLV Bank, AS. With the period of deposit unavailability exceeding the set time limit, the ECB determined that ABLV Bank, AS was or would become a financially troubled credit institution. Meanwhile, the Single Resolution Board announced that the resolution of ABLV Bank, AS was not in the public interest. ABLV Bank, AS announced its intention to start self-liquidation. Within the time period established by law, the repayment of the guaranteed deposits from the resources of ABLV Bank, AS commenced without the use of DGF funds.

business volume has to be manageable to avoid potential risks with respect to ML/TF, reputation, liquidity, etc. Moreover, market participants should contribute to the financing of the costs related to the supervision of the above risks in proportion with their ML/TF risk level.

Latvia is a small and open economy, and any changes in the external macroeconomic environment might significantly affect its financial stability. Currently they can be viewed as overall positive: **external demand is growing and external risks are declining**. However, euro area economic sentiment is volatile and various geopolitical risks continue to sustain uncertainty.

At the regional level, concern about the high level of household debt and the imbalanced development of the real estate market in Norway and Sweden persists. Both countries have seen a moderate adjustment in house prices, while the household debt continues to grow. A notable adjustment in real estate prices and a related slowdown of growth might, via confidence and trade channels, have an adverse impact on borrowers, lending and financial indicators of credit institutions in Latvia. Economic growth, fiscal situation and the financial indicators of the related Nordic credit institutions remain strong in both countries, thus strengthening their potential risk-absorption capacity.

Higher external demand contributes to the improvement of the domestic macrofinancial environment: the economic expansion is buoyant, the income and creditworthiness of borrowers continue to grow and the credit risk of the domestic loan portfolio keeps shrinking. As of 2018, several amendments with respect to Latvia's taxation system, inter alia, the taxation of personal income and CIT, have taken effect. Overall, they will facilitate an improvement in borrowers' creditworthiness and create opportunities for businesses to strengthen their capitalisation and boost their investment.

At the same time, factors restricting further growth, such as the shortage of adequately skilled labour and the lack of productive investment, are gaining relevance. Increasing labour shortages might dampen the growth potential and aggravate the pressure on labour costs. Moreover, the investment supporting productivity growth is still relatively modest.

Domestic lending is gradually recovering; however, its overall development is still rather sluggish, with both borrowers and lenders remaining cautious. Despite the climbing real estate prices, minor changes in the housing affordability ratio and real estate market activity as well as the rather weak mortgage lending development suggests that the lending and real estate markets are at the initial stages of their financial cycles, and **the cyclical risks remain low**. Consequently, the CCB rate still stands at 0%.

With the income of households and non-financial corporations rising, domestic deposits continue to grow as well, almost completely covering the domestic lending portfolio of Group 1 credit institutions. The liquidity ratios of Group 1 credit institutions exceed the minimum supervisory requirements, and the financial and liquidity risks of these credit institutions remain subdued. Their capitalisation and return ratios are also quite high overall. Stress test results suggest that **the ability of Group 1 credit institutions to absorb the potential macroeconomic shocks is high. In view of economic growth in Latvia and abroad, the profitability outlook of Group 1 credit institutions are overall improving.** At the same time, they should take account of the increasing competition from both credit institutions and non-banks, the growing burden of various requirements as well as the need to continue to invest in digitalisation and the development of new services.

With Nordea Bank AB and DNB ASA merging their operations in the Baltic States and establishing Luminor Bank AS, a significant participant has emerged in Latvia's market in terms of size (the second

largest credit institution in the country) which will be transformed into a branch of the Luminor Bank AS headquartered in Estonia over time. Luminor Bank AS is under the direct supervision of the ECB, it has been identified as an O-SII and the highest-level O-SII buffer requirement of 2.0% has been applied to it.

As a result of full implementation of the O-SII requirement and a change in the methodology for setting individual requirements, the weighted average buffer requirement for credit institutions has increased. As from 30 June 2018, all financial institutions identified as O-SIIs shall comply in full with their O-SII buffer requirements (1.5%–2% of RWA). Since the end of 2017, the individual weighted average buffer requirement set by the FCMC has increased as a result of the change in the FCMC methodology for setting individual requirements for FCMC-supervised credit institutions. In the future, the capital of credit institutions could be affected by the expected amendments to EU legislation following the revision of CRD IV/CRR, BRRD and SRMR.

The NBFS has seen dynamic development. Households continue to increase their savings in the state-funded pension scheme and private pension plans. At the same time, the number of households building up voluntary long-term savings remains small. In 2017, the pension plan management fees were restricted and the minimum validity period of life insurance contracts was extended (for the purpose of receiving personal income tax refunds). **Loans granted by non-banks are increasing at a more rapid pace than those granted by credit institutions**, and their role in lending to the economy is growing. Despite the restrictions on total costs of consumer credit established in 2016, household interest payments on non-bank short-term loans remain quite high. Overall, however, the level of the NBFS assets is still relatively low, while the continuity of accessibility of the NBFS services is high.

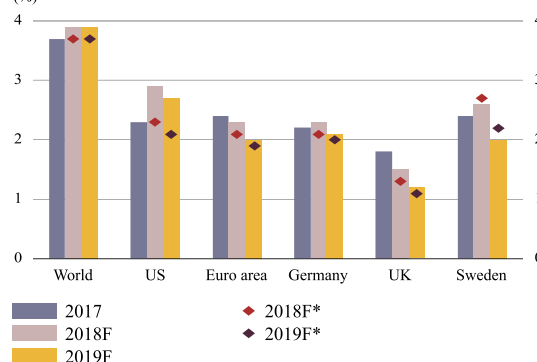
Results of the risk assessment of the systemically important financial market infrastructures TARGET2-Latvija and DENOS, carried out by Latvijas Banka, point to **low liquidity and operational risks in those systems**. The above infrastructures provide efficient and secure payment and settlement environment to their participants and the entire financial system, and their smooth operation facilitates financial stability.

1. MACROFINANCIAL ENVIRONMENT AND LENDING GROWTH

External macrofinancial risks to financial stability are generally on the downside, since the outlook for economic growth in major trade partners and across the world has improved. According to the EC forecast⁵, the growth of global GDP in 2017 amounted to 3.8%, with a near-term outlook of around 4% (see Chart 1.1) boosting also the strengthening of Latvia's external demand. Global growth is spurred by trade expansion and accommodative monetary policy of the leading central banks. Despite the lately observed divergence (the ECB, the central banks of the EU member states and the Bank of Japan are going on with their accommodative policies, while the Bank of England and the US Federal Reserve System have launched their monetary policy normalisation processes), monetary policies of the leading central banks overall facilitate favourable financing conditions.

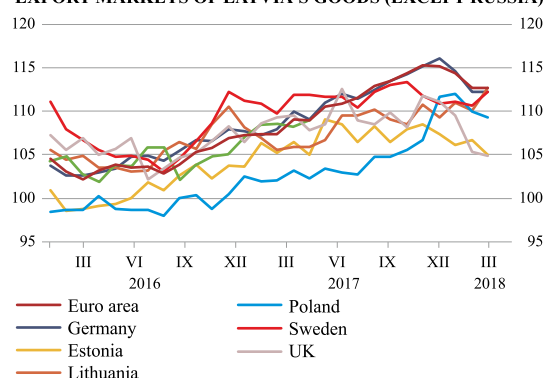
Overall economic growth in the euro area has strengthened. Nevertheless, the economic sentiment indicators declined again in early 2018, and several risk factors are likely to have an adverse effect on stabilisation of economic growth. In 2017, the euro area economy recorded the highest GDP growth over the last 10-year period (2.4%), and confidence indicators reached a record high. In the near term, a similar growth is expected to persist (see Chart 1.1). However, the declining economic sentiment indicators in the euro area in early 2018 (see Chart 1.2) and the rising financial market volatility are the reminders of risks, both to sustainable growth and financial stability, in the euro area. A number of global geopolitical factors, including rising protectionism in the US with a potential of substantially affecting Europe's competitiveness and deteriorating global trade fundamentals, domestic political developments within the euro area, the UK's exit from the EU and uncertainty about the speed of the US monetary policy normalisation may have serious implications for the euro area economic development and the pace of risk premium adjustments in financial markets.

Chart 1.1
ANNUAL REAL GDP CHANGES AND EC FORECASTS (%)



Note. F – May 2018 forecast, F* – November 2017 forecast.

Chart 1.2
ECONOMIC SENTIMENT INDICATORS IN MAJOR EXPORT MARKETS OF LATVIA'S GOODS (EXCEPT RUSSIA)



Sentiment in the global financial market has become more volatile, with concerns about the resilience of risk appetite still in place. In general, the development of financial market continues to be boosted by notable measures of the supportive accommodative monetary policy and strong global growth. At the beginning of 2018, stock indices were at a record high levels or close to them. At the same time, the steep fall in stock prices and rise in continuously low volatility indicators at the beginning of February⁶ (see Chart 1.3) suggest that sentiment and volatility in financial markets may

⁵ European Economic Forecast. Spring 2018. European Commission Institutional Paper, No. 077, May 2018.

⁶ The February stress episode in financial markets was in part associated with a better-than-expected US economic data release on the back of growing concerns about stronger inflation pressures and respectively faster monetary policy normalisation. The increasing stress and volatility in financial markets brought about substantial losses to volatility related financial instruments, thus aggravating the financial market adjustment.

change fast, particularly so in unprecedented monetary policy normalisation circumstances. So far, benchmark bond yields grow slowly and do not point to sharp revisions of risk premiums.

The cyclical upswing in the euro area encourages improvement of bank financial indicators. The share of bad credits in the euro area banking sector is shrinking, thereby increasing bank profitability. In 2017, the euro area bank average ROE⁷ grew up to 6.0% (3.5% in 2016). Capitalisation of banks has also strengthened, thus reducing vulnerability to shocks. As on the back of accommodative monetary policy the demand for loans is rising and lending conditions for supply and credit institutions are not so tight, lending to the private sector is slowly reviving in the euro area.

Meanwhile, risks to the euro area financial stability have not substantially softened overall. Although market analysts predict that the euro area banking sector's profitability may be further improving, it is still restricted by the relatively low cost efficiency and inadequate diversification opportunities of income sources. In addition, the share of NPLs on some euro area bank balance sheets remains high.

Some euro area countries experience a rise in housing and commercial real estate prices, which, coupled with increased lending and bulky household and non-financial corporation debt, figure as a potential source of vulnerability for euro area banks.

The possibility of sharp repricing of risk premiums remains among the main risks for the euro area financial stability. Sudden developments or data releases inconsistent with market expectations can promote a sharp and unexpected market response and intensify vulnerability in the banking sector (e.g. high asset valuation in combination with a heavy public and private debt burden). Concerns about the development of the European banking sector are reflected also in the weaker dynamics of the banking sector stocks vis-à-vis the dynamics of the Broad Stock Market Europe Index (see Chart 1.3).

Chart 1.3
STOCK PRICE INDICES AND THE US STOCK MARKET VOLATILITY INDEX
(2016 = 100)

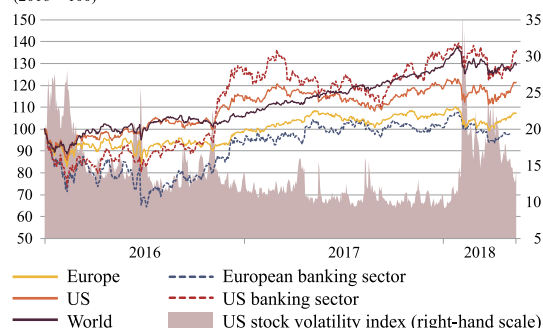
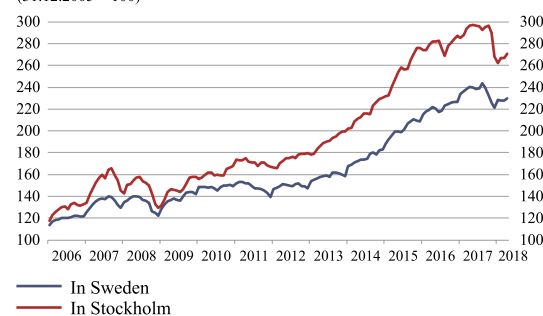


Chart 1.4
ACCUMULATED INCREASE OF HOUSING PRICES IN SWEDEN
(31.12.2005 = 100)



Risks related to deteriorating macrofinancial situation in Russia are curbed, meanwhile tensions arising between many countries, on the one hand, and Russia, on the other, augment the negative risks related to global progress. Recovery of the Russian economy was spurred by oil and other commodity price rises. Revival of the Russian demand and expansion of imported volumes largely contribute to the upswing in Latvia's external demand. At the same time, Russia's economic recovery solely on the basis of rising oil prices, with no structural reforms implemented and in geopolitical risk heightened situation is proceeding very slowly and may prove unsustainable.

On the regional scale, concerns about high household indebtedness and imbalanced growth of real estate market are still in place in Sweden and Norway. Housing prices, rising significantly over several years, have generated a risk of notable price adjustments in Sweden and Norway. In 2017, housing markets of the two countries saw modest price adjustments, with a rebound following in early 2018. In April 2018, housing prices in Sweden by 5.5% lagged behind the historical high recorded in August of the previous year (see Chart 1.4), meanwhile apartments in Stockholm

⁷ ECB data on ECB directly supervised banks.

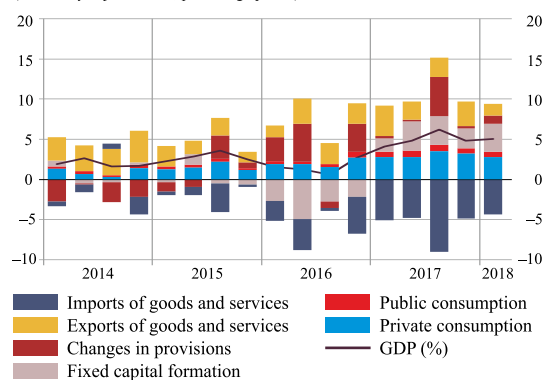
were 8.8% cheaper vis-à-vis the record high in March 2017. Norway went through a somewhat more moderate price decline. Healthy price adjustments are generally welcome, and in part these current declines are on account of the growing construction supply and effects of macroprudential measures implemented to curb the augmentation of household debt.

Household indebtedness in Sweden and Norway is still high and continues to increase at a faster rate than household disposable income. Previously, both countries implemented sets of macroprudential measures aimed at reducing vulnerability of the banking sector and households. In March 2018, Sweden introduced a requirement of additional amortisation for new borrowers with high debt-to-income ratios (debt 4.5 times bigger than income). Adequate and sufficient macroprudential and economic policy measures for risk addressing are vital for financial stability across the entire Nordic and Baltic region.

It is important for real estate price declines to be gradual and balanced in Sweden and Norway, so that no shocks for the Nordic and Baltic economies arise. The Nordic economies and financial systems are very closely intertwined. The Nordic Region has been even more closely interrelated via the financial sector's channel, and namely, the plan of Nordea Bank AB to move the headquarters from Sweden to Norway, thus also potentially facilitating the spreading of risks among countries. A sharp downside revision of real estate prices and the related deceleration of growth in the Nordic countries are likely to have an adverse impact, via confidence and trade channels, on borrowers, lending and financial performance of credit institutions in Latvia.

Retaining a benign global macrofinancial landscape is a positive factor to ensure that price adjustments

Chart 1.5
BREAKDOWN OF REAL GDP ANNUAL CHANGES
(seasonally adjusted data; percentage points)



in the real estate market take place without extra shocks. Smooth real estate price dynamics coupled with macroprudential and economic policy measures would curb a further increase in household vulnerability. The economic growth, fiscal situation and financial performance of affiliated banks remain resilient in both countries (see Table 1.1) and increase their risk-absorbing abilities. These factors underpin the high-degree confidence of investors in the Nordic banks, thereby encouraging favourable conditions for attracting financing.

The domestic macrofinancial environment has improved. In 2017, growth of the Latvian economy accelerated and real GDP amounted to the highest level of the last six years (5.0% according to seasonally and calendar adjusted data). The high GDP growth rate (5.1%) persisted also in the first quarter of 2018. Investment activity, strengthening on account of more intensive absorption of the resources of EU funds and broad-spectrum investment projects with a varied funding structure, is a significant contributor to the growth (see Chart 1.5). Investment volumes, at the same time, are not sufficiently large as yet to add momentum to the growth of productivity. Private consumption continues to support the advance in GDP, primarily on account

Table 1.1
CONSOLIDATED RATIOS OF NORDIC BANK GROUPS FOR THE FIRST QUARTER OF 2018
(Q4 2017 data in brackets)

Ratio	Swedbank	SEB	Nordea	DNB
Tier I capital ratio (%)	24.8 (25.0)	19.0 (18.8)	19.8 (18.4)	16.6 (16.0)
ROE (%)	15.4 (13.1)	11.6 (11.8)	(13.9)	11.0 (10.9)
Standard & Poor's long-term credit rating	AA– (AA–)	A+ (A+)	AA– (AA–)	A+ (A+)
Moody's Investors Service long-term credit rating	Aa3 (Aa3)	Aa2 (Aa3)	Aa3 (Aa3)	Aa2 (Aa2)

of robustly rising wages. An additional momentum to growth is also provided by a more expansionary fiscal policy (amendments to tax regulation, renewal of government investment, faster indexing of pensions, and wage growth in the public sector). Meanwhile, the performance of exporting sectors is improving on account of accelerating global growth and strong external demand. With investment, consumption and exports expanding, economic sentiment indicators rose in 2017 as well (see Chart 1.6). Despite a marginal decline in early 2018, they still linger above the long-term average level. By sector, construction, with its activity reviving after a drop in 2016, and industry are contributing most to the GDP growth.

In 2018, economic growth will remain relatively buoyant, though its pace will decelerate somewhat. According to the forecast of Latvijas Banka, real GDP will post 3.9% growth. Deceleration of economic growth will be on account of weakening contribution from the financial sector's value added due to the narrowing performance and profitability of credit institutions servicing foreign clients (see Box 3).

Meanwhile, the importance of factors hindering further development, e.g. shortages of adequate workforce and productive investment, is increasing. Ever growing shortages of workforce may subdue the growth potential and amplify pressures on labour costs, thereby affecting medium-term profitability and competitiveness of enterprises.

Household financial soundness is improving, primarily on account of income growth (by 4% in real terms in 2017; see Chart 1.7), amid sustained economic advance, falling unemployment and elevating demand for workforce not met by qualifications of the existing labour. From the beginning of 2018, the increase of household disposable income is affected also by the amended tax policy (higher minimum wage⁸, differentiated untaxable minimum, lower PIT rate on income for some categories of taxpayers⁹). The buoyant deposit growth (8.2% in 2017) implies that household financial soundness has been improving.

⁸ From 380 euro to 430 euro.

⁹ The lowest PIT rate of 20% is applicable to labour remuneration up to 1 667 euro per month.

Chart 1.6
ESI IN LATVIA
(points)

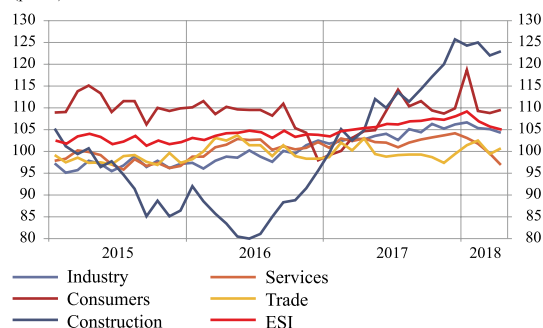
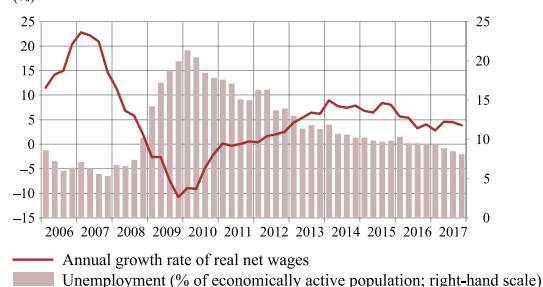


Chart 1.7
UNEMPLOYMENT AND REAL NET WAGES
(%)



Likewise, household long-term savings under pension schemes and life insurance continue to increase¹⁰, yet the attained level remains low.

Amid rising incomes, quite low interest rates and growing value of mortgage collateral, financial vulnerability of household borrowers continues on a downward trend. Towards the end of 2017, the ratio of household liabilities to MFIs and leasing companies to GDP and to disposable household income contracted, to stand at 20.6% and 33.5% respectively. Borrowers are repaying loans gradually, and the share of housing loans, granted in the post-crisis period when credit institutions' lending standards became tighter, is growing. Volumes of bad household debt and written-off loans and hence also the gap between calculated and recognised interest income are shrinking, and the number of private insolvency cases is stabilising. The results of household borrowers' survey compiled by Latvijas Banka also suggest that financial resilience of household borrowers is improving, thereby minimising credit institutions' risks related to household credit portfolio (see Annex 1).

¹⁰ Pension scheme and life insurance savings of households increased by 12.1% in 2017.

Financial soundness of non-financial corporations has also improved.

Turnover has been growing in all sectors, driven by a more robust economic activity both domestically and abroad. Non-financial corporation turnover posted an increase of 11.7% in 2017. The pickup in turnover was the largest in construction due to absorption of EU funds and private investment growth. Overall, profitability¹¹ has also improved (from 3.7% in 2016 to 4.4% in 2017), while some sectors (e.g. transport and storage, accommodation and catering) reported a fall in this indicator. Profit growth has a positive impact on the capital of non-

financial corporations. As it increased at a faster pace than debt, the debt burden indicators of non-financial corporations are improving¹². The ratio of total non-financial corporation debt to GDP stood at 68.3% at the end of 2017. However, the pace of improvement in profitability and other performance indicators of non-financial corporations in 2017 should be treated with caution, because they may, in part, depend on the influence of a one-off factor, i.e., business adjustment to the new CIT regime which came into effect in 2018 (see Box 1).

¹¹ Profit before taxes to turnover ratio. Profit before taxes is adjusted to exclude major one-off effects of accounting.

¹² At the end of 2017, liabilities to capital ratio was 1.5 against 1.6 in the previous year. Interest coverage ratio improved from 6.7 times in 2016 to 9.6 times in 2017.

BOX 1. EARLY IMPACT OF TAX REGULATION CHANGES ON FINANCIAL PERFORMANCE OF NON-FINANCIAL CORPORATIONS

Latvia's CIT policy has undergone significant changes: as of 2018, reinvested profits are exempt from CIT, while CIT on distributed profits has been increased; the deferred income tax has been abolished, and CIT advance payments are cancelled. The changes are aimed at promoting a higher equity ratio on the balance sheets of non-financial corporations, thereby enhancing opportunities for the latter to receive financing for development (including from credit institutions), and at reducing the share of shadow economy on account of an extra stimulus for non-financial corporations to make investments and not to hide profits.

The new CIT regime affected the financial performance of non-financial corporations in 2017. Previously, the CIT rate on corporate retained earnings was 15%. **As of 2018, CIT is not applied to retained earnings any more, while the CIT rate on dividend distribution is raised to 20%.** In case the accrued profits reported on the balance sheet at end-2017 are paid out in dividends, the previous tax regime shall apply to dividends (CIT is not applied, while PIT retains its 10% rate in 2018 and 2019). In such a way, non-financial corporations planning to pay out dividends were motivated to record larger profit in 2017, applying 15% CIT rate and postponing dividend payments to a later time, without applying 20% tax in accordance with the new CIT regime. Hence in 2018 and 2019, dividend payments may gather pace and be reflected in temporary worsening of total capital indicators of non-financial corporations. Some short-term impact on liquidity indicators is also possible upon paying out dividends: due to the CIT regime changes, the reported profit may fail to reflect the actual cash flow in 2017.

Financial indicators of non-financial corporations were also affected by the abolition, as of 2018, of deferred tax. Non-financial corporations were previously allowed to apply a higher fixed asset depreciation rate for tax purposes, thereby pushing up expenditure and narrowing the CIT-applicable basis in the initial years following the acquisition of a fixed asset. For tax purposes, they could record higher depreciation than in their financial statements and consequently improve liquidity. That is why the financial profit exceeded the amount of taxable income, and financial statements reported the difference as a deferred tax liability. It was particularly typical for non-financial corporations in sectors with a higher fixed asset ratio, e.g. manufacturing and the energy sector. The new CIT regime provides for all temporary differences between the fixed asset financial reporting value and tax basis being abolished. It means that financial

statements will not any longer recognise deferred tax liabilities which have arisen from the difference in fixed asset preliminary depreciation. Non-financial corporations shall write the deferred tax liabilities off their profit or loss statements for 2017, recognising them as revenue and increasing the after-tax profit of non-financial corporations¹³. The write-off of deferred tax liability results in the motivation to pay out dividends in the course of two coming years (using the transition period), thus re-enforcing the impact on aggregated capital and liquidity indicators of non-financial corporations.

¹³ In 2017, the energy and transport and storage sectors improved their return on capital indicators, using deferred CIT write-offs. For instance, AS Latvenergo and VAS Latvijas dzelzceļš reversed the deferred CIT liabilities in their 2017 profit or loss statements for 149 million euro and 22 million euro respectively.

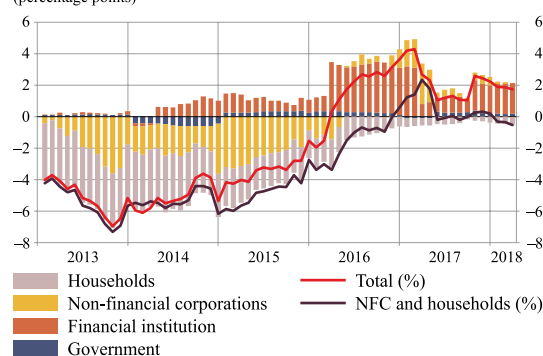
Improvements in insolvency regulation, including amendments to the Insolvency Law of December 2016, have translated into a decreasing number of legal entities' insolvency cases, i.e. it dropped by 19% in 2017. As SRS and the Register of Enterprises of the Republic of Latvia were excluding from their registers the companies that had not engaged in any economic activity for long, the number of liquidated companies has outpaced that of newly registered ones¹⁴.

The relatively buoyant economic growth notwithstanding, lending remains quite sluggish in Latvia.

The pace of annual changes to domestic loans issued by credit institution was –3.3% in March 2018. The loan contraction was due to one-off impact from structural changes in the credit institution sector: in September 2017, prior to merging DNB ASA and Nordea Bank AB operations in Latvia, a fourth of Nordea AB branch domestic credit portfolio was moved to the parent bank in Sweden, thereby decreasing the volume of loans granted by domestic credit institutions to non-financial corporations. However, this move notwithstanding, the annual growth rate of lending remained quite subdued, at only 1.7% (see Chart 1.8). In March, the annual growth rate of lending to non-financial corporations and households stood at –5.4% (excluding the impact from structural changes at –0.5%). In the meantime, loans to financial institutions notably grew, partly on account of financing model alterations at one leasing company, a subsidiary of one credit institution.

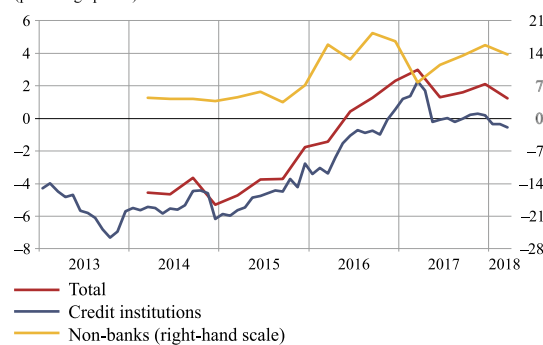
The role of non-bank financial institutions in domestic lending is strengthening. The ratio of non-bank loans to credit institution loans to non-financial

Chart 1.8
ANNUAL RATE OF CHANGE IN DOMESTIC LOANS* AND CONTRIBUTION OF ITS COMPONENTS
(percentage points)



* For the purpose of comparability, one-off effects related to structural banking sector changes have been excluded.

Chart 1.9
ANNUAL RATE OF CHANGE IN LOANS TO DOMESTIC NON-FINANCIAL CORPORATIONS AND HOUSEHOLDS
(percentage points)



* For the purpose of comparability, one-off effects related to structural banking sector changes have been excluded.

corporations and households reached 19% at the end of 2017. If credit portfolios of credit institutions and non-bank institutions are added up, the annual growth rate of loans to domestic non-financial corporations and households in 2017 would gain 1.9 percentage points (2.1%; see Chart 1.9). Non-bank credit portfolios are mainly (74%) made up of finance lease issued by leasing companies (primarily subsidiaries of credit institutions); consequently, the domestic lending growth is actually slightly more buoyant than calculated using

¹⁴ Vis-à-vis 2016, the number of liquidated enterprises picked up 35% in 2017.

only credit institution data (see NFC section on non-bank lending).

However, the inclusion of non-bank lending into analysis of domestic lending does not overall affect the conclusions about lending developments. Even if non-bank loans are accounted for, **the growth of domestic lending is still markedly lagging behind its long-term trend**. Despite the softening of deviation of loan-to-GDP ratio from the long-term trend, the deviation continues to be pronouncedly negative (–27 percentage points; see Chart 1.10). Thus in 2017, the ratio of loans, granted to the domestic private non-financial sector, to GDP was among the lowest in the euro area member states (40%)¹⁵. For lending growth to be sustainable, not only favourable economic landscape but also faster curbing of shadow economy, a more robust legal environment and more progress in the structural reform process are essential.

The volume of new loans by credit institutions is volatile. As household financial situation improves, interest rates remain at record lows, and the state support programme for house purchase is going on, the volumes of new loans to households continue on an upward path. Yet, the annual pace of growth of new loans vis-à-vis 2016 has decelerated notably. Between April 2017 and March 2018, the volume of new loans picked up 5% year-on-year. The dynamics of loans to non-financial corporations, on the other hand, is affected by the volatile demand for large loans, and in the above period the respective loan volumes fell by 10%.

Credit institutions maintain prudent lending standards. According to the results of bank lending survey conducted by the ECB, credit institutions have no plans to modify them substantially. The data from the Credit Register about new loans for house purchase confirm that LTV for these loans is rising gradually: the

Chart 1.10
DEVIATION FROM THE LONG-TERM TREND OF THE RATIO OF PRIVATE NON-FINANCIAL SECTOR'S TOTAL LIABILITIES TO GDP
(percentage points; %)

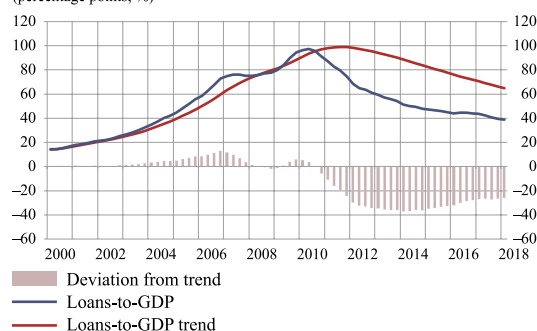
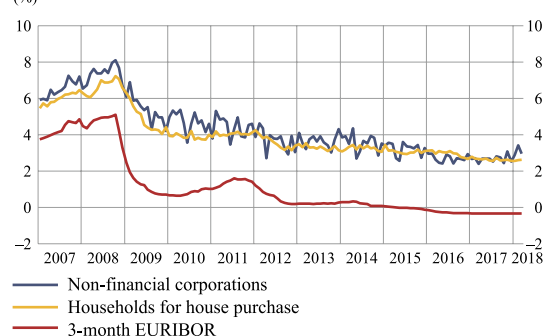


Chart 1.11
INTEREST RATES ON NEW LOANS IN EURO
(%)



ratio of new loans for house purchase with their LTV below 70% is decreasing, while the ratio of new loans with their LTV of 80%–85% is expanding. Intensive use of support under the state guarantee programme for house purchase, with a softer LTV requirement for its participants, may be an explanation. Overall, however, credit institutions are cautious: only 11% of all new loans for house purchase were with their LTV above 85% in 2017.

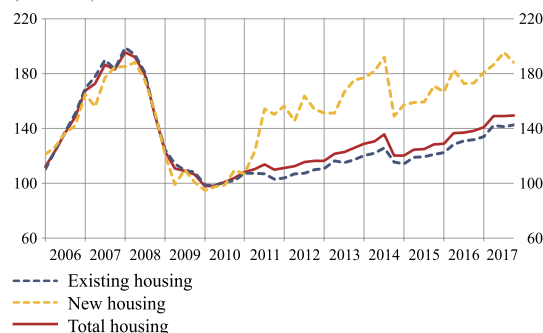
Money market indices remain at record low levels, supported by the accommodative monetary policy of the Eurosystem. Interest rates on new loans kept declining in 2017 (see Chart 1.11). Towards the close of 2017 and in early 2018, interest rates on loans to non-financial corporations rose. This development primarily depended on the changes in the structure of credit institution market. On the back of interest rates generally being at historic lows, interest rate markups are still relatively elevated, and interest rates on new loans in Latvia vis-à-vis those in other Baltic states are higher.

¹⁵ The data are for the end of the fourth quarter of 2017. The credit measure covers MFI loans to non-financial sector and purchased securities – liabilities of non-financial corporations, households and institutions (societies and foundations) serving households to credit institutions. By adding up MFI loans and non-bank loans, loan-to-GDP ratio in September 2017 was 47%, with a –27 percentage point deviation from the long-term trend.

Credit portfolio of domestic non-financial corporations is expected to expand moderately in 2018, while the annual growth rate of loans to households is likely to be positive for the first time since 2008. The ECB survey results suggest that the demand from households and non-financial corporations for loans from credit institutions is strengthening. The household demand for loans will continue to grow moderately. It will be spurred by overall improving financial situation as well as by the state support programme for house purchase for families with children, which is now expanded and includes young professionals (see Box 2). Meanwhile, the repayment volumes of loans granted for house purchase in the pre-crisis period are at a high level (almost on par with newly issued loans) and will still strongly affect household lending. Increase in the demand for loans from non-financial corporations will be supported by the robust economic growth, more intensive absorption of EU funds, expanding investment, and low interest rates. Financial situation of non-financial corporations is expected to improve further also in 2018, thereby increasing their capacity to borrow and boosting lenders' willingness to grant credits to non-financial corporations.

The real estate market has entered the expansion phase. It is supported by the robust economic growth, elevation of household incomes and savings, and the state support programme for house purchase. Despite somewhat slower activity in the real estate market in 2017 in comparison with 2016, real estate prices continued to rise rapidly. The CSB's house index in 2017 picked up 8.1% (see Chart 1.12). Prices for both new and existing housing were moving up. Prices for the existing housing most likely rose due to the growing demand for affordable housing, the limited availability of such housing, and also the effect of the state support programme for house purchase on the demand. The programme enables to attract new buyers who previously were short of financing (for making the first instalment, payment of charges, etc.). In the segment of new housing, on the other hand, the developers of apartment blocks make attempts to adjust to the domestic household purchasing power, offering small-space (economy) apartments on the market: e.g. in 2017 vis-à-vis 2016, the number of new apart-

Chart 1.12
CSB HOUSE PRICE INDICES
(2010 = 100)



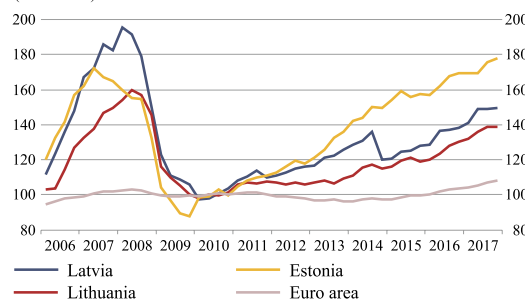
ments posted a 8.7% pickup, whereas the total space of new apartments shrank by 3.5%. On the market of new housing projects, residential leases with redemption rights are offered to the buyers, allowing for complete or partial use of several years' rent as the first down payment, and thus providing private sector solution to the lack of sufficient financial means for obtaining a mortgage loan. The upward pressure on new housing prices should soften, taking into account the forced market re-orientation to the domestic buyer and gradually increasing supply of new housing. According to the issued building permits, the projected total space in apartment blocks to be launched in 2018 exceeds the level of 2017 by 18.9%.

The availability of housing remains broadly unchanged in Latvia, since the changes in the annual growth rate of the CSB's house price index and prices of Riga standard apartments only marginally outpace the changes in wage growth. Even though the pace of housing price elevation in Latvia and other Baltic States is among the highest in the euro area, housing prices in Latvia and Lithuania, according to the Eurostat data, have not reached the pre-crisis level as yet: at the end of 2017 against the historic peak, in the two countries they were by 24% and 13% lower respectively, while in Estonia the price level is already somewhat above that level (see Chart 1.13). As to the availability of housing, since 2010, it has not changed notably in Latvia and Lithuania, while the situation in Estonia has slightly deteriorated.

At the current juncture overall, Latvia's cyclical economic upswing does not pose significant risks to financial stability. While in some euro area countries the economic growth is coupled with risks related to

excessive real estate market price hikes, Latvia's overall stable data for housing availability, continuously low level of household debt, and moderate dynamics of mortgage lending do not send signals of elevation in real-estate-market-related risks. In the years to come, the demand and activity in the real estate and lending markets are expected to increase, driven by the economic growth, higher household incomes, the expanded state support programme for house purchase and private sector's first instalment savings offer.

Chart 1.13
HOUSE PRICE INDICES IN BALTIC STATES AND EURO AREA
(2010 = 100)



BOX 2. AMENDMENTS TO THE STATE SUPPORT PROGRAMME FOR HOUSE PURCHASE

As of 1 March 2018, the state support programme for house purchase was expanded: it is extended also to young professionals (borrowers with the secondary vocational or higher education up to the age of 35) and individuals living together and maintaining at least one child under 24 (previously families with children up to the age of 18 were eligible).

Guarantees to families with children are granted under the same conditions, with only the scope of potential recipients being extended: a person maintaining one child is eligible to a 10% guarantee from the principal amount of the loan for purchase or construction of housing from AS "Attīstības finanšu institūcija Altum" (maximum of 10 thousand euro); the amount of guarantee is up to 15% from the principal amount of the loan (maximum of 15 thousand euro) if there are two children in the family; the amount of guarantee is up to 20% from the principal amount of the loan (up to 20 thousand euro) if there are three children in the family. The loan amount under the programme shall not exceed 200 thousand euro. One-time charge in the amount of 2.5% of the guarantee amount is imposed. Simultaneously, families are eligible to lower stamp duty to be paid to the Land Register for registration of property rights (0.5% of transaction amount; standard charge is 2%).

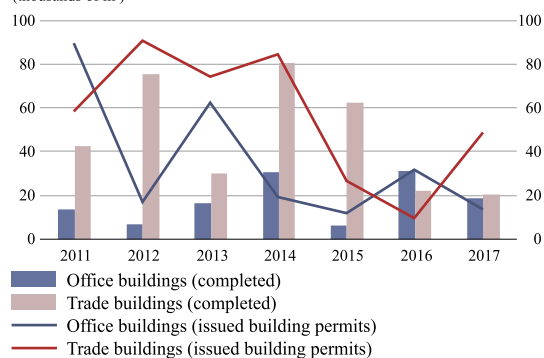
From now on, young professionals can receive a guarantee for purchase or construction of housing in the amount of up to 20% of the loan or up to 50 thousand euro. In contrast to families, young specialists are not granted any stamp duty discount for property registration with the Land Register. At the same time, the amount of young professionals' programme is not limited, as the guarantees are granted on market terms without financing from the state budget (annual charge of 4.8% of the outstanding guarantee amount is applied).

Improvement of the overall economic sentiment also acts as a stimulus to the development of the commercial real estate sector. As official, comparable and homogeneous data is scarce, the analysis of the commercial real estate sector is difficult. In addition, it should be noted that the development of the Latvian commercial real estate sector can be affected by some large projects and transactions, hence heterogeneity is a distinctive feature of this market. Overall, however, the environment of low interest rates and more dynamic

economic growth in the region have given a boost to the recovery of risk appetite associated with the development of commercial property; moreover, the financial sector has shown interest in financing such projects. The CSB data suggest that activity is stronger in the segment of trade facilities, with new trade centres built and the existing ones enlarged. In 2017 year-on-year, five times larger commercial space was to be put into operation. Following an expansion in 2016, office space launched and expected to be

launched contracted in turn (see Chart 1.14). As the share of vacant office space declined in 2017, rent for such space went up somewhat (an increase of 6% according to Ober Haus Real Estate Latvia Ltd. data). Meanwhile, the range of rent for trade space and the share of unoccupied space in trade centres have not notably changed.

Chart 1.14
SPACE IN NEW OFFICE AND TRADE BUILDINGS
(thousands of m²)



2. DEVELOPMENT AND RISKS OF THE CREDIT INSTITUTION SECTOR

The Latvian credit institution sector encountered significant changes, i.e. some major market players have changed, and the segment of credit institutions providing services to foreign customers is undergoing structural changes. With Nordea Bank AB and DNB ASA merging their Baltic operations and establishing Luminor Bank AS, a significant player has emerged in Latvia's market in terms of size (the second largest credit institution in the country). It will be transformed into a branch of Luminor Bank AS headquartered in Estonia (see Box 4) over time. Meanwhile, ABLV Bank, AS, the fourth largest credit institution in the country and the largest one engaged in servicing foreign customers, announced in March 2018 its decision to start self-liquidation following the ECB's determination

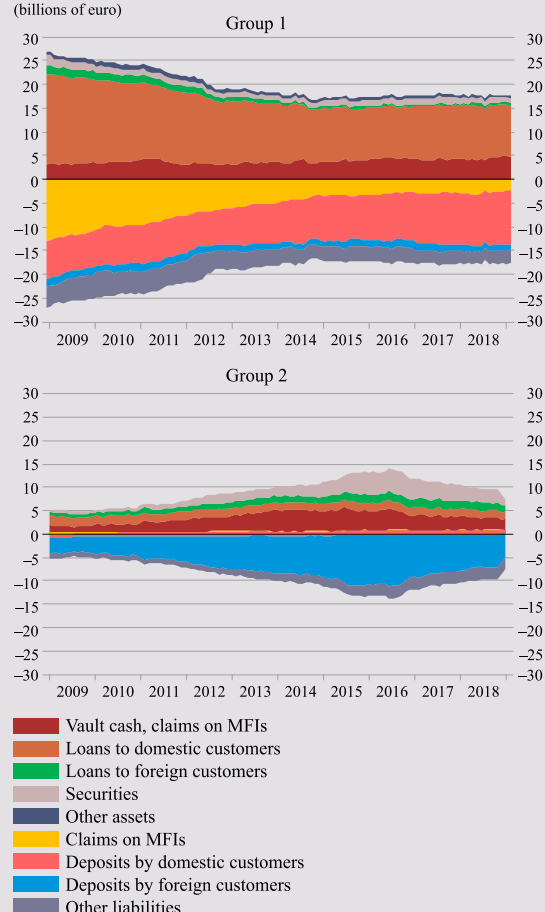
that the credit institution was failing or likely to fail. The decision was made following the liquidity and reputational implications from the US FinCEN notice. Materialisation of risks associated with the provision of services to higher-risk foreign customers as well as the additional measures to reduce ML/TF risks introduced by the amendments (adopted by the Saeima of the Republic of Latvia in April 2018) to the Law on the Prevention of Money Laundering and Terrorism Financing have an effect on operation of the credit institutions providing services to foreign customers as well as they may further affect the number and significance of such credit institutions in the financial sector (see Box 3).

BOX 3. DEVELOPMENTS IN GROUP 2 CREDIT INSTITUTIONS

In terms of business models, the Latvian credit institution sector has historically consisted of two distinct credit institution segments. The core business of Group 1 credit institutions is the provision of financial services to domestic customers, and they are primarily funded by domestic deposits. Meanwhile, Group 2 credit institutions mostly provide services to foreign customers (mainly those of CIS countries) by taking the relative advantage of Latvia's geographical location, economic and historical ties as well as people's language skills. Funding of these credit institutions consists primarily of deposits by foreign customers. The distinctive differences in business models are also reflected in the balance sheet structures of those credit institutions and the resulting different levels of connectedness with Latvia's economy (see Chart 2.1).

Group 2 credit institutions have already been attracting foreign customers for more than 20 years and providing mainly payment-related services to them, with asset management and lending services accounting for a minor part. Deposits received from foreign customers are allocated to correspondent accounts with other credit institutions and in other

Chart 2.1
STRUCTURE OF CREDIT INSTITUTIONS' BALANCE SHEET
(billions of euro)



liquid assets to ensure smooth payment processes and mobilise liquidity as necessary. Commission fees and investment in fixed-income liquid financial instruments constitute the key source of income of the above group.

The share of deposits by foreign customers in total deposits with Latvian credit institutions has been quite notable so far, i.e. 40%–55% (see Chart 2.2). However, its ratio to GDP as well as the value added of the financial and insurance sector is lower than in other countries whose credit institutions typically provide services to foreign customers.

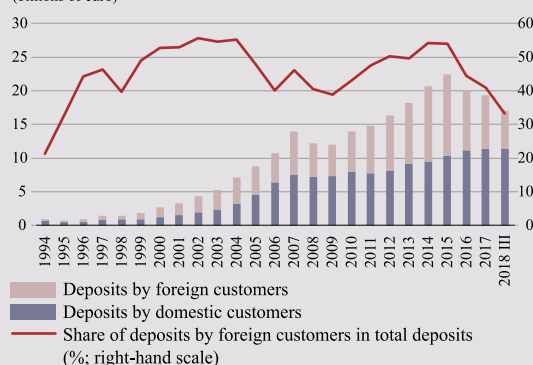
In 2017, the ratio of deposits by foreign customers to GDP (29%) and the contribution by the financial and insurance sector to GDP (4%)¹⁶ in Latvia were considerably lower than, e.g. in Luxembourg (221% and 27% respectively) and in Switzerland (96% and 9.4%)¹⁷. As estimated by Latvijas Banka, the value added provided by Group 2 credit institutions to GDP (profits earned, remuneration of employees and taxes paid)¹⁸ in 2017 constituted about 0.9% of GDP. When excluding ABLV Bank, AS, the largest credit institution of the sector, the value added to GDP is even smaller.

The share of Group 2 credit institutions' assets in the total assets of the credit institution sector has been substantial so far (45% in late 2015 and 32% at the end of March 2018). However, their market share in servicing domestic customers

is relatively small. In late March 2018, Group 2 credit institutions had received 7% out of the total domestic deposits and had granted 12% out of the total domestic loan portfolio¹⁹ (see Chart 2.3). Interbank links between Group 1 and Group 2 credit institutions are insignificant. **The limited linkage of Group 2 credit institutions with the domestic economy and Group 1 credit institutions mitigates the propagation of potential risks to the real economy and risks to the provision of financial intermediation services.** This was confirmed also in early 2018 when ABLV Bank, AS, the largest credit institution of Group 2, had to announce self-liquidation.

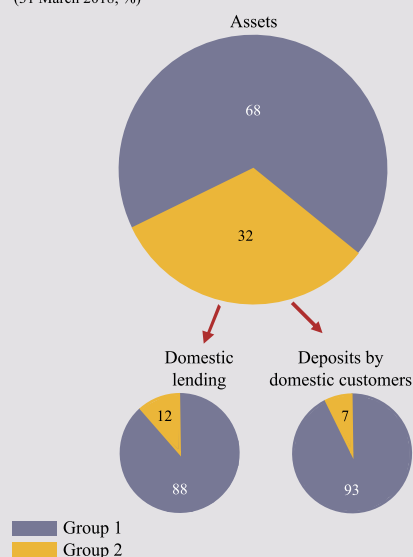
At the same time, the large amount of payments made by foreign customers pose several risks, i.e. an increase in the public short-term external debt; risks of high volatility of deposits by foreign customers; ML/TF

Chart 2.2
DEPOSIT STRUCTURE OF LATVIAN CREDIT INSTITUTIONS
(billions of euro)



The chart contains data on credit institutions and branches of foreign credit institutions in Latvia. The chart contains no data on deposits by the Latvian government.

Chart 2.3
CREDIT INSTITUTION BALANCE SHEET COMPONENTS BY CREDIT INSTITUTION GROUP
(31 March 2018; %)



¹⁶ CSB data for 2017. They cover financial institutions and insurance corporations, including the central bank.

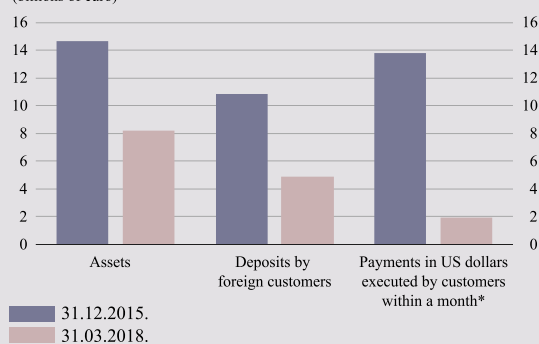
¹⁷ Eurostat data for 2016.

¹⁸ Latvijas Banka's Macroeconomic Developments Report of June 2018.

¹⁹ Also in late 2015, when the share of Group 2 credit institutions' assets in the total assets of the credit institution sector reached its historical highs, their market share in deposits by domestic customers and loans to domestic non-bank customers stood at 10.0% and 13.2% respectively.

and reputation risks, taking into account the provision of services to higher-risk customers which scales up investors' caution and adds a burden to supervisory authorities and the rest of the financial sector. It is already evident that a higher burden of regulatory requirements and other risk reduction measures affect the entire financial sector irrespective of their business model. Meanwhile, the credit institutions whose business model focuses on servicing foreign customers (including high-risk customers) are subject to the potential volatility of funding and additional liquidity, operational, litigation and reputation risks. Given the high share of US dollar payments up to now, they can be significantly affected by the ML/TF risk reduction measures carried out by the US.

Chart 2.4
ASSETS OF GROUP 2 CREDIT INSTITUTIONS, DEPOSITS BY FOREIGN CUSTOMERS AND US DOLLAR PAYMENTS EXECUTED BY CUSTOMERS WITHIN A MONTH
(billions of euro)



* Data for December 2015 and March 2018.

Taking account of the risks related to business model, the FCMC, within its SREP process, has been applying individual additional capital requirements since 2011 and additional liquidity requirements since 2013. The level of individual requirements depends on the risk degree: the total capital and liquidity requirements for certain credit institutions are almost two times the minimum capital requirements.

The AML/CFT requirements and capacity of supervisory authorities have been significantly reinforced in Latvia and globally in recent years. In this environment, the business volume of Group 2 credit institutions has been significantly declining since 2015. Extensive compliance control audits were conducted in Group 2 credit institutions, their customer base was reviewed, risk mitigation procedures were carried out and the resources necessary for meeting more stringent requirements were increased. The contraction of business volume was also aided by the suspension of direct correspondent banking relationships by US credit institutions as part of their risk mitigation measures. Thus, Group 2 credit institutions had to use indirect correspondent banking in transactions involving US dollars, e.g. via other credit institutions, which prolonged execution of payments in US dollars and made it more expensive. Payments in US dollars by customers were 85% less in March 2018 than in December 2015, but deposits by foreign customers fell by 55% (see Chart 2.4).

To mitigate ML/TF risks, more stringent additional measures were adopted in Latvia in April 2018, including prohibition to carry out transactions with the most risky type of customers, i.e. shell companies²⁰ which do not engage in economic activity and create low economic value or do not create it at all and which are registered in a country whose legislation does not lay down an obligation to prepare and submit financial statements.

Group 2 credit institutions have so far managed to absorb the contraction of business volume, while maintaining high liquidity and capital ratios. This was supported by accrued profit reserves built during the previous periods as well as by the individual additional capital requirements established by the supervisor. However, with the business volume contracting, profitability of these credit institutions has been decreasing sharply since 2016. Therefore, they should pursue their efforts in carrying out substantial adaptations of their business model.

²⁰ Paragraph 15¹ of Article 1 of the Law on the Prevention of Money Laundering and Terrorism Financing.

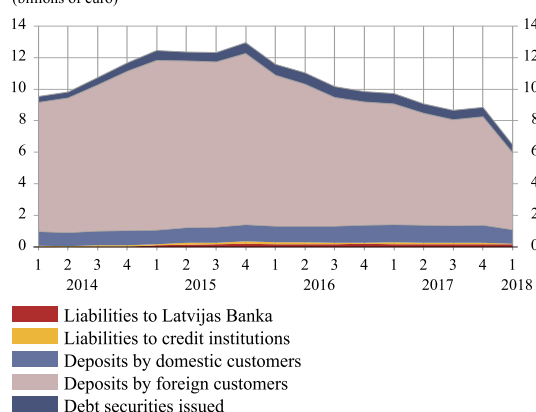
With profit possibilities declining, risk tolerance changing and taking account of changes in the regulatory environment, **the need for change in Group 2 credit institutions' business models is imminent.** The business models of the above credit institutions are not exactly the same. In addition to payment services, most of credit institutions provide also other services (asset management or lending); therefore, development of new business lines is possible. Certain credit institutions are likely to expand their asset management services to foreign customers, some have expressed their intention to provide services of financing foreign trade transactions, service companies of specific sectors (e.g. transport) or focus on the financial technologies (fintech) sector. Following the revision of the customer base, part of Group 2 credit institutions might continue their specialisation in the provision of payment services to customers of a lower risk profile. Certain Group 2 credit institutions could start to focus on servicing domestic customers. However, given the saturated domestic market, most likely, it will be difficult for Group 2 credit institutions to gain a substantial market share in servicing domestic customers. Currently an active dialogue is being conducted between credit institutions and the FCMC on their future business models. Taking account of both the business model problems and the fact that some Group 2 credit institutions are small, a consolidation aimed at optimisation of costs could take place.

Capacity building of supervisory authorities and mitigation of risks associated with servicing risky customers are very important for sustainable development of the financial sector. To enhance the ability of the financial sector to manage ML/TF risks, there is a need for changes both at national and regional levels. To limit ML/TF risks in Latvia and other European countries in an effective manner, **coordinated action is required across the European single market by establishing a single institution responsible for ML/TF risk prevention.** Effective functioning of such an institution requires extensive investigatory and sanctioning powers which would not only allow enhancing security and promoting speedier and more active exchange of information with countries outside the European single market but also mitigating potential market distortion arising from weaker requirements imposed by any country.

One of the major and most evident changes faced by the financial sector is a drop in the amount of financing and business volume of Group 2 credit institutions (see Box 3 and Chart 2.5). Deposits by foreign non-banks have been decreasing since 2015 mainly due to more stringent AML/CTF measures, and at the end of 2017 the deposits were 36.8% lower compared to two years ago. Meanwhile, in first quarter of 2018 deposits by foreign non-banks shrank further by 29.7% (more than a half of this nosedive was due to the decline in deposits with ABLV Bank, AS).

Thus, the share of foreign non-bank deposits in aggregate deposits of the credit institution sector and the ratio of foreign non-bank deposits to GDP have considerably declined, i.e. these indicators were 32.5% and 21.5% respectively at the end of the first quarter of 2018 (42.7% and 35.4% – at the end of the first quarter of 2017 and 53.4% and 51.0% – at the end of 2015). The above indicators will markedly decline when ABLV Bank, AS loses its licence.

Chart 2.5
BREAKDOWN OF GROUP 2 CREDIT INSTITUTION FUNDING
(billions of euro)



Foreign non-bank deposits will continue to follow a downward trend owing to the enforced AML/CTF prevention measures (including the prohibition to carry out further transactions with shell companies). Refusal by credit institutions to serve customers of particularly high risk can be viewed as a significant step towards enhancing sustainable development of Latvia's financial sector.

Contribution by domestic non-bank deposits to funding of Group 2 credit institutions²¹ also shrank.

It was the domestic non-bank deposits with ABLV Bank, AS that fell most notably since repayment of the guaranteed deposits to customers of ABLV Bank, AS was commenced from the bank's own resources without the use of DGF funds in March 2018, following the occurrence of unavailability of deposits. Domestic non-bank deposits with other Group 2 credit institutions also declined (by 12.2% at the end of the first quarter of 2018 compared to the end of the fourth quarter of 2017).

A significant fall in funding in one segment of the credit institution sector results in further shrinkage or modification of that segment. Next steps for Group 2 credit institutions depend on the type and competitiveness of the funding they will attract in the future. Therefore, from the perspective of financial stability, future changes in the structure of financing and assets in this credit institution group have to be observed closely, and it is necessary to assess whether they might pose new risks to financial stability.

Given the limited involvement of these credit institutions in the domestic economy, the decrease in foreign non-bank deposits has had no negative effect on financing of the economy and the provision of financial intermediation services domestically. Reduced activity, lower profit and less taxes paid do mean that part of the financial sector will contribute less to GDP growth (see Box 3).

At the same time, funding trends of Group 1 credit institutions do not show any changes (see Chart 2.6). **Funding of the above credit institutions is primarily made up of domestic non-bank deposits which continue on an upward path (including deposits of domestic households in particular).** At the end of

²¹ They constituted 14.0% of the total financing of Group 2 credit institutions at the end of the first quarter of 2018.

Chart 2.6
BREAKDOWN OF GROUP 1 CREDIT INSTITUTION FUNDING
(billions of euro)

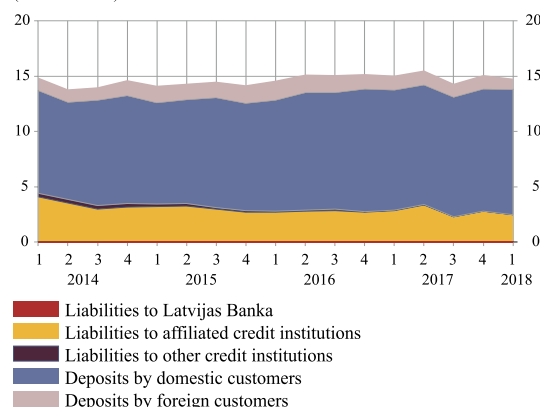
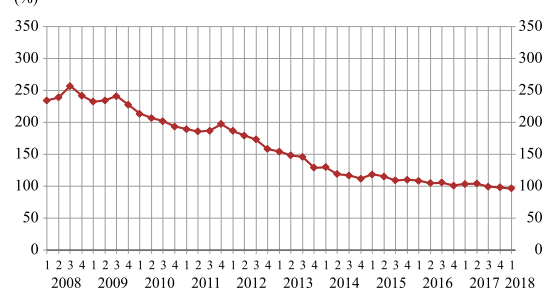


Chart 2.7
DOMESTIC LOANS-TO-DEPOSITS RATIO OF GROUP 1 CREDIT INSTITUTIONS
(%)



the first quarter of 2018, the ratio of domestic loans to deposits stood at 96.5% in Group 1 credit institutions (101.7% in the credit institution sector as a whole), suggesting that Group 1 credit institutions are able to finance the domestic loan portfolio from domestic non-bank deposits (see Chart 2.7). Thus, net financing from related credit institutions continues on a downward trend. Temporary changes in funding of related credit institutions in the third quarter of 2017 were related to the merger of Nordea Bank AB and DNB ASA Baltic operations. For the time being, the cover of domestic loans with deposits at the newly-established Luminor Bank AS is lower, and funding provided by related institutions correspondingly plays a greater role. However, it is intended to gradually replace it by domestic non-bank deposits and market financing in the future (see Box 4).

BOX 4. CHANGES IN THE CREDIT INSTITUTION SECTOR IN RELATION TO THE ESTABLISHMENT OF LUMINOR BANK AS

In 2017, Nordea Bank AB and DNB ASA commenced the merger of the Baltic structural units of the above credit institutions, thus creating Luminor Bank AS, one of the largest credit institutions in the

Baltics, which will be headquartered in Estonia with branches in Latvia and Lithuania. The establishment of the new credit institution Luminor Bank AS will take place in several stages. On 1 October 2017 (stage one), Luminor Bank AS launched its operations in all Baltic States simultaneously as individual credit institutions. It is envisaged to convert the Latvian and Lithuanian credit institutions into branches in 2018 and 2019. The shareholder structure of Luminor Bank AS is as follows: Nordea Bank AB (Sweden) – 56% of share capital and DNB ASA (Norway) – 44% of share capital. Meanwhile, both major shareholders have equal voting rights (49.9% respectively but the bank's management – 0.2%).

Luminor Bank AS is among the largest credit institutions of Latvia. At the end of March 2018, it ranked second in terms of assets and deposits received from domestic customers, and first – in terms of loans granted to domestic customers.

It is expected that non-bank deposits and market financing (equity issuance) will constitute the key source of Luminor Bank AS financing. Thus, it is envisaged to significantly reduce funding provided by parent banks in the medium term. The above funding received by Luminor Bank AS (Latvia) exceeds that received by other subsidiary credit institutions of Nordic credit institutions. In March 2018, net funding of related credit institutions of Luminor Bank AS (Latvia) was slightly under 20% of its total assets, but the domestic loan-to-deposits ratio stood at 125%.

The FCMC has identified Luminor Bank AS as one of Latvia's other systemically important institutions, and it is obliged to maintain the O-SII capital buffer requirement of 1% as of late 2017 and 2% as of 30 June 2018 which is already met. The ECB has also taken a decision to classify Luminor Bank AS as a significant financial institution from 10 February 2018 and exercises its direct supervision.

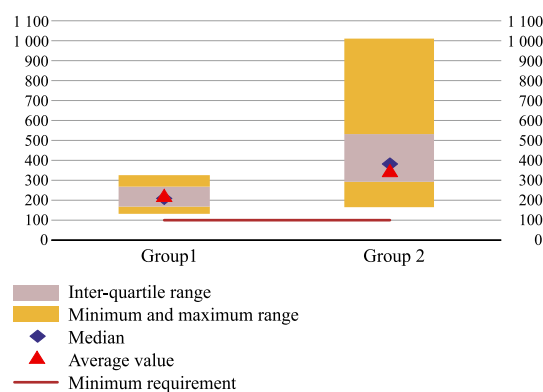
Following the transformation of Luminor Bank AS (Latvia) into a branch of Luminor Bank AS (Estonia) it will become a significant branch in Latvia and will not qualify as other systemically important institution anymore. Thus, it will not be subject to the O-SII capital buffer requirement applied by the FCMC. To date, branches of foreign banks have accounted for no more than 14% of the Latvian credit institution sector's total assets, including certain branches with 11% of assets. However, following the transformation of Luminor Bank AS into a branch of an Estonian credit institution, its share in the total assets of the credit institution sector will constitute approximately 20%. On the one hand, the transformation into a branch at the level of a credit institution group helps optimise the necessary capital, reduces administrative costs as well as enhances financial integration in the Baltics. On the other hand, however, supervision of Luminor Bank AS (Latvia), after it becomes a branch of an Estonian parent credit institution, will be more complicated in Latvia since the amount of information available to the supervisory authority and the above authority's impact on the branch will decrease. The establishment of branches affects efficiency of macroprudential policy measures, i.e. the role of cross-border reciprocity of macroprudential measures and the significance of assessment of cross-border effects (including the potential arbitrages) resulting from macroprudential measures are edging up. Unlike the size of home countries of Nordea Bank AB and DNB ASA relative to the size of their host countries and accordingly the ability of parent credit institutions to absorb the potential losses in relatively small host countries, Estonia as home country of the Luminor Bank AS group is smaller than Latvia and Lithuania, the host countries of Luminor Bank AS branches. The ratio of the Estonian credit institution sector's consolidated assets to GDP could rise more than 30% as a result of the establishment of the Luminor Bank AS group. Therefore, the ability of a home country to provide financial support and ensure cross-border cooperation in the event of a crisis will prove to be crucial.

Despite the significant drop in foreign non-bank deposits, the liquidity risk of credit institutions remains moderate since both Group 2 and Group 1 credit institutions continue to maintain considerable reserves of liquid assets. The LCR of both credit institution groups still remains well above both the minimum 100% requirement and EU average indicators²². In late March 2018, the average LCR of Group 1 credit institutions stood at 221.2%, but that of Group 2 credit institutions was 349.4% (see Chart 2.8).

It should be noted that depending on the ratio of deposits by foreign non-bank customers to assets tighter individual liquidity requirements are being set for credit institutions providing services to

²² The average LCR of euro area significant banks was as high as 144% at the end of 2017 (ECB. *Financial Stability Review*, May 2018).

Chart 2.8
LCR BY CREDIT INSTITUTION GROUP
(31 March 2018; %)



foreign customers. It is also noteworthy that changes to the regulatory framework of minimum liquidity requirements have also been made in Latvia since 1 January 2018 along with the harmonisation of liquidity requirements in the EU (see Box 5).

BOX 5. CHANGES IN LIQUIDITY REQUIREMENTS

As of 2018, minimum liquidity requirements for credit institutions have been harmonised across the EU, i.e. they have to comply with the minimum LCR requirement of 100%. The LCR requirement stipulates the minimum amount of unencumbered high-quality liquid assets credit institutions have to maintain to cover unexpected outflows of short-term financing under a certain stress scenario. The LCR is calculated as a ratio of a credit institution's high-quality assets to the simulated net cash outflows for the next 30 days.

As of this year, EU countries no longer have the option of laying down independent, specifically national minimum liquidity requirements concerning the credit institution sector as a whole. Thus, the previous minimum liquidity ratio requirement set by the FCMC at 30% is no longer in force in Latvia, and credit institutions are no longer required to submit a report on the fulfilment of the liquidity ratio requirements. To date, in addition to the minimum liquidity ratio requirement set by the FCMC at 30%,²³ individual increased FCMC liquidity ratio requirements were established within the SREP for credit institutions whose business model is oriented towards servicing foreign customers. The volume of the above requirements was subject to the ratio of deposits by foreign customers to assets, and the individual requirements could exceed the minimum requirement almost twice in certain cases.

Within the SREP, additional liquidity buffer requirements are still being laid down for credit institutions whose business model is oriented towards servicing foreign customers. The above requirements are equivalent to the increased individual liquidity requirements set by the FCMC by 2018 and are based on the principles for the calculation of the previous FCMC liquidity ratio, yet the principles are defined by using

²³ The ratio of liquid assets (vault cash; claims on Latvijas Banka and solvent credit institutions whose residual maturity does not exceed 30 days, and deposits with other maturity, if a withdrawal of deposits prior to the maturity has been stipulated in the agreement; investment in financial instruments, if their market is permanent and unrestricted) to credit institution's current liabilities whose residual maturity does not exceed 30 days. In compliance with the FCMC requirements, this ratio could not be less than 30%.

another FCMC report containing a similar dataset²⁴. However, the new, slightly modified calculation of additional liquidity requirements is a temporary solution since the EBA intends to incorporate an equivalent report concerning the term structure of assets and liabilities into supervisory financial information reports (COREP). This means that the report developed by the FCMC will cease to exist over the next couple of years. The EBA guidelines regarding an increased liquidity risk assessment will also be released.

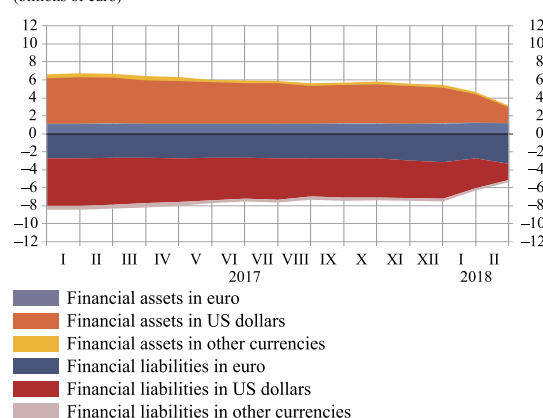
²⁴ Report on Term Structure of Assets and Liabilities.

The case of ABLV Bank, AS suggests that high liquidity ratios²⁵ may not protect a credit institution against a destructive liquidity crisis, provided it is exposed to a heavy reputational blow and faces isolation as well as if, in the case of US sanctions, a significant part of its liquid assets is in US dollars which in these certain circumstances cannot be sold in due time. ABLV Bank, AS had reserves of highly liquid assets, a large proportion of which consisted of US government securities which would have been liquid in other circumstances. However, following the US FinCEN announcement in relation to the planned sanctions against ABLV Bank, AS, the credit institution faced isolation on the market. The selling of US dollar liquid assets and business arrangements with partners having links with the US market posed the greatest problems. Thus, it was the reputational blow rather than the insufficient volume of liquid assets that caused the liquidity crisis of ABLV Bank, AS, with the potential risk aspects of the credit institution's business model materialising.

The case of ABLV Bank, AS made Group 2 credit institutions decrease sharply the share of US dollars both in their foreign financial assets and liabilities (from 74.5% and 56.8% in late 2017 to 54.7% and 34.1% at the end of the first quarter of 2018 respectively;

²⁵ The LCR of ABLV Bank, AS stood at 300.5% in late January 2018.

Chart 2.9
BREAKDOWN OF GROUP 2 CREDIT INSTITUTION FOREIGN ASSETS AND LIABILITIES BY CURRENCY
(billions of euro)



see Chart 2.9). The share of US dollars in foreign financial assets and liabilities is 36.9% and 25.4% respectively across the credit institution sector as a whole. Group 2 credit institutions also substantially reduced the holdings of their liquid securities (mainly US government securities) by replacing them with deposits with the national central bank.

Liquidity stress test results obtained using the LCR and the individual liquidity ratio requirements for Group 2 credit institutions set by the FCMC suggest that the amount of liquid assets required to fulfil all legislative requirements is sufficient even in cases of quite significant financing outflows (see Box 6).

BOX 6. LIQUIDITY STRESS TEST RESULTS

Liquidity stress test results are based on the end of March 2018 data. Since the minimum liquidity requirement set by the FCMC is no longer in force as of 2018, the LCR was employed in the stress test to assess the ability of the credit institution sector to withstand the risks of financing outflows. A shock was applied to all credit institutions by reducing deposits received from non-MFI customers²⁶ until the LCR reached 100%.

²⁶ Non-MFI deposits prevail in credit institutions' funding.

All Group 1 credit institutions could withstand at least 10% of additional deposit outflows. Meanwhile, Group 2 credit institutions (despite the fact that deposits by non-MFI customers have already decreased by 35.8% since March 2017) could withstand more than 30% of additional deposit outflows (except one small credit institution which can withstand more than 10% of deposit outflows).

Additional stress tests involving a baseline²⁷ scenario and two particularly adverse scenarios were performed among Group 2 credit institutions.

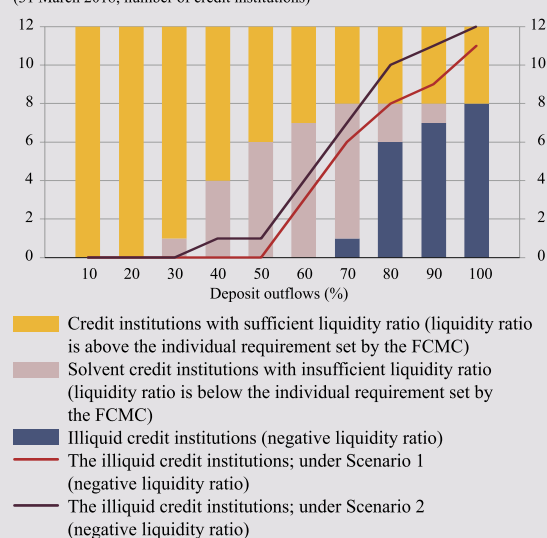
The liquidity ratio²⁸ used by the FCMC for laying down individual liquidity requirements for credit institutions providing services to foreign customers within the SREP and which is equivalent to the previous liquidity ratio set by the FCMC was employed in the above tests. The results of the stress tests indicate the tolerance of credit institutions to the outflows of foreign non-MFI deposits before the amount of their liquid assets reaches 0, assuming that credit institutions have no access to additional resources to offset the funding outflows.

Under the baseline scenario, Group 2 credit institutions would still be able to fulfil the additional individual liquidity requirements set by the FCMC in cases where 20% of deposits by foreign non-MFI outflow; only in the event of an outflow of more than 60% of deposits, liquid assets would reach 0.

The assumptions of Scenario 1 (adverse) foresee that it is impossible to pledge or sell the securities portfolio, except securities issued by the Latvian government and those issued by other governments where at least one of the three long-term ratings by international credit rating agencies is AAA. In relation to Latvian government securities it was assumed that they would lose 30% of their value within Scenario 1, and they could be used by applying a 3.0% discount in the Eurosystem's monetary policy operations. In Scenario 2, in addition to the above assumptions of Scenario 1, it is provided that no credit institution has access to claims on MFIs from a country on whose MFIs the specific credit institution has the highest volume of claims.

The application of Scenario 1 does not notably deteriorate the results of the baseline stress tests. Group 2 credit institutions would be able to withstand the outflows of no less than 50% {50%} of deposits by foreign non-MFI customers (see Chart 2.10). The application of Scenario 2 reduces the ability to withstand the outflows of up to 30% {30%} of deposits by foreign non-MFI customers.

Chart 2.10
LIQUIDITY STRESS TEST RESULTS FOR GROUP 2 CREDIT INSTITUTIONS IN THE EVENT THAT DEPOSITS BY FOREIGN NON-MFI CUSTOMERS OUTFLOW
(31 March 2018; number of credit institutions)



²⁷ Deposits by foreign non-MFI customers outflow, and credit institutions have no access to additional resources to offset the funding outflows.

²⁸ Unencumbered liquid assets (vault cash; claims on Latvijas Banka and solvent credit institutions whose residual maturity does not exceed 30 days, and deposits with other maturity, if a withdrawal of deposits prior to the maturity has been stipulated in the agreement; investment in financial instruments whose maturity (repayment, sale term) is up to 30 days as well as other securities whose market is permanent and unrestricted) must not be less than a certain percentage of credit institutions' total current liabilities with residual maturity under 30 days.

The credit risk trends in both groups of credit institutions with regard to the loan portfolio granted to domestic and foreign customers are also different.

The credit risk of domestic customers continues on a downward track. 87.8% of the loan portfolio granted to domestic customers consists of loans by Group 1 credit institutions, and the quality of the above group's loan portfolio is improving. Meanwhile, the quality of Group 2 credit institutions' loan portfolio continues to deteriorate primarily on account of the materialisation of foreign customers' credit risk. At the same time, it should be noted that loans to foreign customers and their share in the total loan portfolio of credit institutions have shrunk due to the downsizing of Group 2 credit institutions' overall activity.

The robust economic growth and improvement in domestic borrowers' creditworthiness contribute to reduced credit risk in the domestic loan portfolio.

The domestic loan portfolio quality continues to rise, i.e. the share of loans past due over 90 days in the domestic loan portfolio declined to 3.0% in March 2018 ({3.4} – see Chart 2.11). The estimated PD of the domestic loan portfolio is also gradually decreasing further, pointing to a decline in credit risk. Loans written off the balance sheets of credit institutions also contribute to the fall in long past due loans; however, the impact caused by this factor is declining year by year. Given the GDP growth forecast, further improvement of borrowers' creditworthiness as well as the continuously prudent lending policy pursued by credit institutions, it is projected that the domestic loan portfolio quality will continue on a gradual upward path. The forecast marginal increase in the domestic loan portfolio will also somewhat stimulate it.

Meanwhile, the credit risk of loans to foreign customers continues to materialise in the loan portfolio. At the same time, the loan portfolio of credit institutions' foreign customers is substantially contracting. Although total problematic loans (restructured loans and loans past due over 90 days) to foreign customers as well as their share in the loan portfolio of foreign customers have been slowly shrinking since early 2017, it remains significant (the share of problematic loans in the loan portfolio of foreign customers was 21.8% in March 2018). Moreover,

Chart 2.11
LOANS PAST DUE OVER 90 DAYS GRANTED TO DOMESTIC AND FOREIGN CUSTOMERS AND THEIR SHARE IN THE TOTAL LOAN PORTFOLIO OF THE RESPECTIVE GROUP OF LOANS

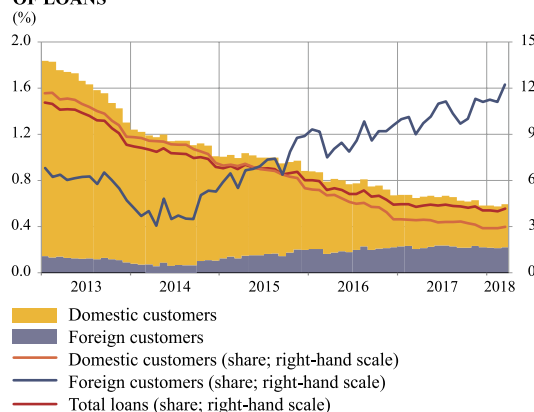
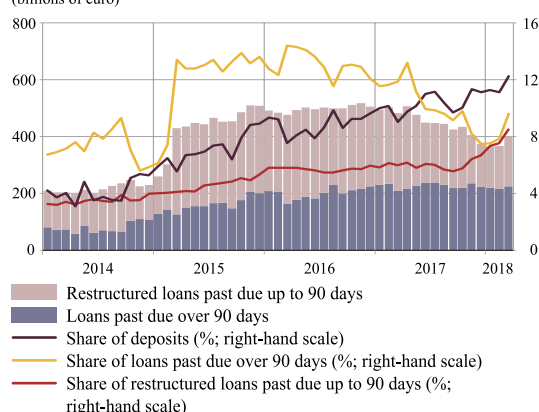


Chart 2.12
PROBLEMATIC LOANS AND THEIR SHARE, THE SHARE OF PROVISIONS IN THE LOAN PORTFOLIO OF FOREIGN CUSTOMERS
(billions of euro)



migration of problematic loans from the restructured loans to long past due loans is taking place. This means that part of borrowers face difficulties in meeting their obligations also after restructuring of loans. The share of loans past due over 90 days reached 12.2% {9.0%} of the foreign customers' loan portfolio in March 2018 (see Chart 2.12). The increase in the share is largely on account of the significant contraction of the foreign customers' loan portfolio. It shrank by 20.7% in March 2018 year-on-year (primarily short-term loans). This can be mainly associated with a reduction in activity of Group 2 credit institutions as a whole. A smaller loan portfolio of foreign customers mitigates the significance of its quality deterioration risk. Loans to foreign customers constituted 12.8% {15.2%} of the credit institutions' total loan portfolio in late March 2018. Meanwhile, the share of loans past due over 90 days granted to foreign customers

has increased to 37.6% in the total amount of loans past due over 90 days.

With long past due loans to domestic customers continuing on a downward path, the total share of long past due loans tends to go down despite an increase in foreign customers' long past due loans. Given the contraction of the total loan portfolio, the share of loans past due over 90 days has remained almost unchanged, i.e. it constituted 4.2% {4.3%} of the total loan portfolio in March 2018. Total loans past due over 90 days have decreased more than seven times in comparison with the peak reached during the crisis in 2010. The share of total NPLs and advances (including claims on MFIs) in the total outstanding amount of loans and advances has also followed a downward path and stood at 5.6% {6.3%} at the end of 2017.

Quality trends of the loan portfolio increasingly differ by credit institution group. The share of loans past due over 90 days continues to contract significantly within Group 1 credit institutions (see Chart 2.13). The share of the above loans in the loan portfolio of Group 1 credit institutions had decreased to 2.5% {3.0%} in March 2018. Overall, loan loss provisions of Group 1 credit institutions are shrinking accordingly, thus improving their profit indicators. Meanwhile, the share of loans past due over 90 days of Group 2 credit institutions in the total loan portfolio continue on an upward path (11.0% {8.6%} in March 2018). Consequently, provisions and their share in the loan portfolio of Group 2 credit institutions expanded (see Chart 2.14).

Chart 2.13
LOANS PAST DUE OVER 90 DAYS AND THEIR SHARE BY CREDIT INSTITUTION GROUP
(billions of euro)

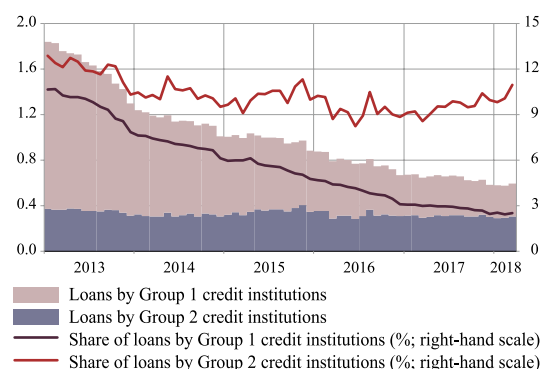
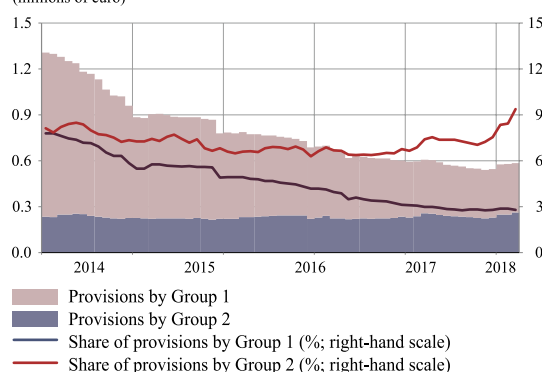


Chart 2.14
LOAN LOSS PROVISIONS AND THE SHARE IN THE TOTAL LOAN PORTFOLIO BY CREDIT INSTITUTION GROUP
(millions of euro)



Provisioning for loans granted by credit institutions are projected to increase somewhat. The new "Regulation on Evaluation of Asset Quality and Supervisory Provisioning", which will take effect in July 2018, will affect the amount of provisions. The introduction of the above Regulation means that credit institutions will be required to build additional provisions. However, the impact of the new Regulation on capitalisation and profitability of credit institutions will be limited (see Box 7).

BOX 7. CHANGES IN THE REGULATORY FRAMEWORK RELATED TO EVALUATION OF ASSET QUALITY AND SUPERVISORY PROVISIONING

In 2017, the ECB and EBA developed²⁹ guidance on NPL reduction. Moreover, International Financial Reporting Standard 9 took effect on 1 January 2018. That brings substantial changes in the recognition of a decrease in the value of financial assets. In March 2018, the ECB published an Addendum to the ECB Guidance to banks on non-performing loans, laying down requirements pertaining to provisioning

²⁹ The EBA has published Guidelines on credit institutions' credit risk management practices and accounting for expected credit losses (EBA/GL/2017/06) and the ECB – the Guidance to banks on non-performing loans (March 2017).

for aged past due loans. The Addendum is addressed to the credit institutions directly supervised by the ECB. The ECB requirements will apply to new NPLs classified as such from 1 April 2018 onwards; the requirements will take effect in 2021.

The FCMC has also published a binding regulation to the credit institutions under its supervision. It covers all requirements in relation to asset quality evaluation and supervisory provisioning. The above regulation took effect on 1 July and it applies both to the existing and newly classified NPLs without a transitional period. The lack of transitional period and the extended scope of requirements to both existing and newly classified NPLs makes the FCMC requirements more stringent than those developed by the ECB for the credit institutions under its direct supervision.

The new FCMC regulation introduces substantial changes in provisioning for NPLs. It:

- establishes more detailed requirements for making an estimate of future cash flows to be used for determining the loan recovery rate;
- establishes requirements for a credit institution to backtest on a regular basis the correspondence of provisions to the actual losses and adjust estimates to reduce differences;
- imposes more stringent requirements related to the evaluation process of real estate used as collateral for NPLs;
- establishes requirements regarding the minimum level of provisions depending on the duration of the NPL status and collateral;
- in the future, credit institutions will be obliged to build provisions for the expected losses rather than for the incurred ones, and the supervisory authority shall have the power to request credit institutions to create additional provisions;
- establishes requirements for writing non-recoverable assets or their non-recoverable parts off the credit institution's balance sheet in a timely manner. Both the FCMC and ECB approaches imply provisioning for the secured part of NPLs beyond 2018 which will continue until 100% provisioning rate is reached;
- changes the capital adjustment method that is applied in cases where shortage of provisions exceeds the accounting provisioning level, i.e. all deductions will be made from CET1 capital;
- the regulation will not apply to the credit institutions under direct ECB supervision.

The FCMC and ECB approaches to supervisory provisioning differ. The FCMC approach provides that provisions for the non-secured NPLs shall already be built following the first year in the NPL status. For the loans with non-performing status for at least two years only real estate, deposits or high-grade securities are considered an effective collateral. The ECB approach provides provisioning for the non-secured part of NPLs following two years in the NPL status. The two supervisory approaches differ also with regard to the application of the provisioning ratio to the secured part of NPLs. FCMC regulation requires lower provisioning ratios for the initial years, but they are raised at a more rapid pace after the fifth year in the NPL status. Meanwhile, the ECB Addendum to the guidance on NPL provides an equal annual increase in the provisioning ratio (see Table 2.1).

The breakdown of the NPL portfolio (as at the end of 2017) according to the NPL status (in years; see Table 2.2) shows that the majority of NPLs are concentrated in the first three past due groups (up to three years) and in the last group (more than seven years), which in turn is linked to the legacy from the crisis. The provisioning requirements will not apply to loans having the NPL status for a period of less than one year (42% of the total loans past due; see Chart 2.15). The above group has been added for illustrative purposes to reflect the entire NPL portfolio.

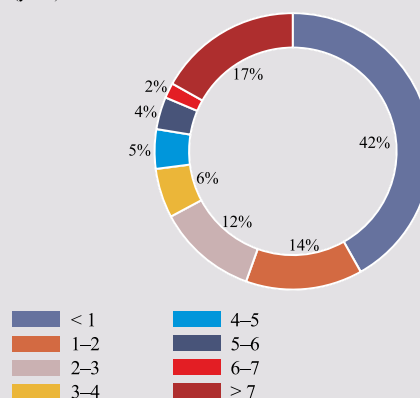
Table 2.1
PROVISIONING RATIO DEPENDING ON THE COLLATERAL AND DURATION OF NPL STATUS
(%)

NPL status (years)	Unsecured part		Secured part	
	FMC approach	ECB approach	FMC approach	ECB approach
1–2	100	–	–	–
2		100	–	–
3			3	40
4			12	55
5			30	70
6			60	85
7			100	100

Table 2.2
NPL PORTFOLIO³⁰ IN ACCORDANCE WITH THE
NPL STATUS
(years)

Group (NPL status in years)	NPLs (millions of euro)	Number of NPLs
<1	237	9 701
[1–2)	77	2 620
[2–3)	66	474
[3–4)	33	431
[4–5)	26	367
[5–6)	21	402
[6–7)	10	349
≥7	95	8 227
Total	566	22 571

Chart 2.15
THE SHARE OF NPLs IN THE TOTAL NPL PORTFOLIO
IN ACCORDANCE WITH THE NPL STATUS
(years)



Keeping NPLs on credit institutions' balance sheets for a lengthy period of time has an adverse effect on their profitability and thus also on lending to the economy. It is expected that **the introduction of the FMC higher standards will facilitate more prudent assessment of asset quality and adequate provisioning, thus contributing to further contraction of the NPL share in the total loan portfolio.** Under the current circumstances, when the quality of the credit institutions' loan portfolio has significantly improved and their credit risk is decreasing overall, the impact of the application of the new FMC regulation will be limited.

³⁰ For comparison purposes, the assessment covers all credit institutions, including also the ones directly supervised by the ECB and branches of foreign credit institutions.

Profitability trends in both credit institution groups continue to diverge: profitability of Group 1 gradually improves, while that of Group 2, along with the plunging business volumes, has been considerably declining since 2016 (see Chart 2.16). Due to decreasing profits of Group 2 credit institutions, total profit of the credit institution

sector fell by 28.7%³¹ in 2017, with the weighted average ROE shrinking to 7.7%, down from 10.4% in 2016. In

³¹ Calculations hereafter in this section exclude the one-off effect of the sale of VISA Europe Limited shares in 2016 and two one-off effects in 2017: 1) in line with regulatory changes AS Citadele banka and Signet Bank AS wrote off deferred tax assets; 2) in the process of establishing Luminor Bank AS, upon the transfer of the balance sheet of the Latvian Branch of Nordea Bank AB to Luminor Bank AS, the profit accumulated by the Latvian Branch of Nordea Bank AB in the first nine months of 2017 was not transferred to the profit and loss statement.

the first quarter of 2018, pre-tax profit of the credit institution sector³² dropped 22.0% year-on-year.

The performance of Group 1 credit institutions is favourably affected by accelerated economic growth, which supports the creditworthiness of households and non-financial corporations and increases the demand for financial services. Credit institution income from commissions and fees grew by 2.4% in 2017, while the robust net interest income is supported by the persistently stable interest rate margin (see Chart 2.17). As a result, **the operating income and aggregate profit of Group 1 credit institutions in 2017 posted slight annual increases of 1.2% and 1.7% respectively³³.** ROE of these credit institutions also improved to 10.7% (from 9.4% in the previous year), considerably exceeding the average ROE of EU credit institutions³⁴.

Provisioning expenses of Group 1 credit institutions posted a relatively rapid fall of 9.1%, simultaneously with a decline in the NPL ratio in the domestic loan portfolio. Although income from reversal of provisions slightly decreased by 1.6%, the net effect of change in provisions on Group 1 credit institution profit was positive.

Cost efficiency of Group 1 credit institutions has slightly deteriorated: in 2017 cost-to-income ratio increased to 51.6% {49.8%} (see Chart 2.18). **Nevertheless, the cost-to-income ratio still remains**

Chart 2.16
DISTRIBUTION OF CREDIT INSTITUTION INCOME AND EXPENSES AND PERFORMANCE RESULTS
(solo basis; millions of euro)

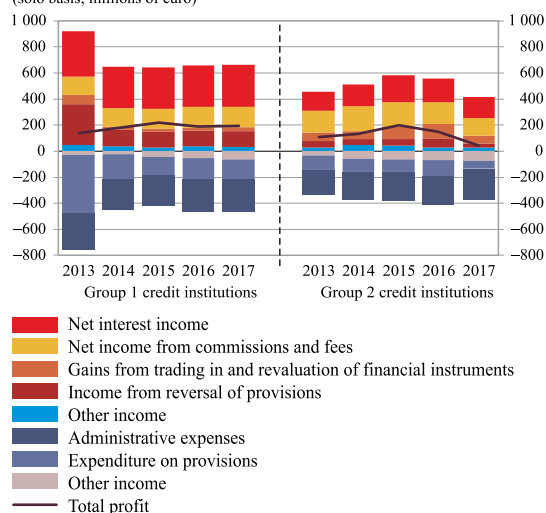


Chart 2.17
INTEREST RATE MARGIN ON LOANS GRANTED TO DOMESTIC CUSTOMERS BY CREDIT INSTITUTIONS (%)

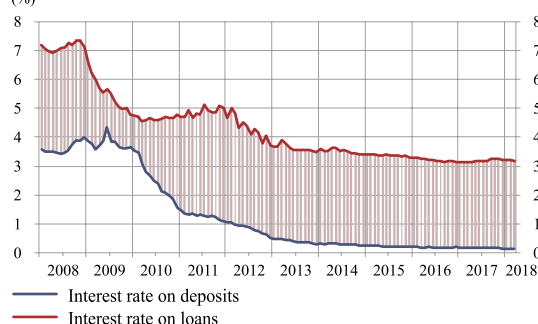
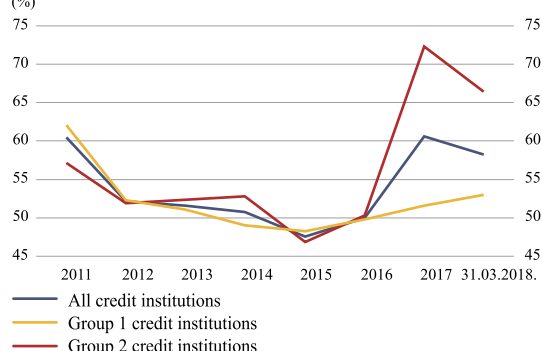


Chart 2.18
CREDIT INSTITUTION COST-TO-INCOME RATIO (%)



among the lowest in the EU³⁵. A minor pick-up in administrative expenses mostly resulted from an increase in the costs of information and computer services. The above costs grew on account of changes

³² On 1 January 2018, the revised Law on Corporate Income Tax took effect in Latvia, establishing that corporate retained earnings are not subject to CIT. Consequently, in the profit and loss statements of credit institutions for 2018 no CIT will be calculated on the profit earned in the respective reporting period. Thus, when comparing data for 2018 and 2017, the comparison of pre-tax profits and losses is more objective.

³³ In the first quarter of 2018, the operating income of Group 1 credit institutions remained broadly unchanged year-on-year, while the aggregate pre-tax profit decreased. This is largely on account of a fall in Luminor Bank AS profit, probably associated with the merger process, including the transfer of part of the assets (part of the credit portfolio of the Latvian Branch of Nordea Bank AB remained on the balance sheet of the parent bank of Nordea Bank AB).

³⁴ In 2017, the average ROE of the largest EU credit institutions was 6.1% (European Banking Authority, Risk Dashboard Data as of Q4 2017).

³⁵ In 2017, the average cost-to-income ratio of the largest EU credit institutions was 63.4% (European Banking Authority, Risk Dashboard Data as of Q4 2017).

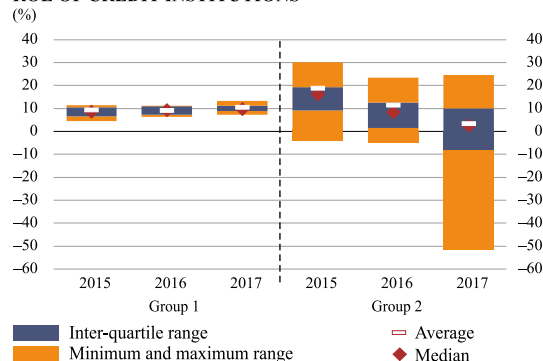
in several regulatory requirements³⁶, preparations for the implementation of *AnaCredit*, as well as credit institution investment in digital services development (e.g. introduction of instant payments, mobile payments and electronic authorisation methods of new customers, improvement of internet bank and mobile applications).

With the economic growth remaining strong and demand for lending improving gradually, the profitability of Group 1 credit institutions is expected to be stable or increase somewhat. Nevertheless, Group 1 credit institutions have to increasingly take account of the growing competition posed by non-bank financial institutions (non-bank lending and payment services providers) and Group 2 credit institutions, part of whom is likely to engage in the competition for the domestic customers.

The considerable drop in Group 2 credit institution profitability resulted from the declining volume of transactions with foreign customers. With the number of customers and transactions falling, in 2017 net interest income and net commissions and fees of Group 2 credit institutions shrank by 13.3% and 17.3% respectively. Following a decline in customer deposits and transactions, profit from trade of financial instruments plunged by 58.7%. Overall, **in 2017 the operating income and aggregate profit of Group 2 credit institutions dropped 22.0% and 69.5% year-on-year respectively** (see Chart 2.16). Consequently, ROE of Group 2 credit institutions also decreased from 11.7% in 2016 to 3.6% in 2017 (see Chart 2.19).

³⁶ For example, Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation); Directive (EU) 2016/1148 of the European Parliament and of the Council of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union; Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61; Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC; introduction of International Financial Reporting Standards; stricter AML/CTF requirements.

Chart 2.19
ROE OF CREDIT INSTITUTIONS (%)



In the first quarter of 2018, pre-tax profit of Group 2 credit institutions also fell by one third in annual terms.

With Group 2 credit institutions facing a decline in the sources of profit and an increase in operating costs, the Group's cost efficiency deteriorated notably in 2017: the cost-to-income ratio of Group 2 reached 72.3% {50.3%} (see Chart 2.18). Administrative costs moved up by 8.6% year-on-year, with the rise partly on account of implementing stronger AML/CTF measures and other regulatory requirements⁶. Wages and salaries of the employed also rose somewhat, but the largest contribution to the increase in administrative costs mostly resulted from the accumulated provisions for litigation³⁷. At the same time, Group 2 credit institutions undertook cost optimisation trying to reduce expenses.

In 2017, provisions of Group 2 credit institutions posted slower growth than before (provisioning expenses shrank by 54.1%). While income from reversal of provisions also decreased, the overall impact on Group 2 credit institution profit was positive.

Group 2 credit institution profit will continue on a downward trend. Amendments to the Law on the Prevention of Money Laundering and Terrorism Financing, made in April 2018, establish a prohibition to carry out transactions with shell arrangements and service their accounts; consequently, the number of

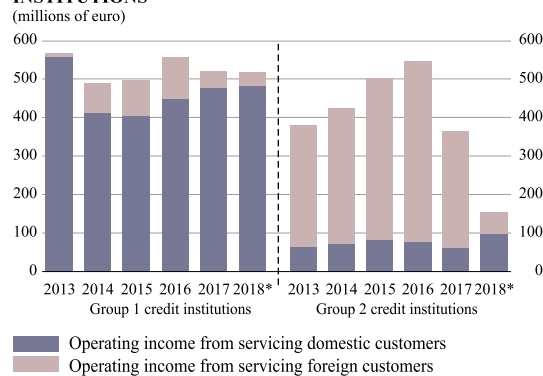
³⁷ AS Rietumu Banka accumulated provisions of 20 million euro in relation to the ruling of the court of first instance issued by Paris Court Department No 32 on 6 July 2017, obliging AS Rietumu Banka to pay a fine of 80 million euro under a criminal case and a fine of 10.1 million euro jointly with more than 20 defenders under a civil case. On 12 July 2017, AS Rietumu Banka submitted an appellate complaint.

customers, business volumes and income of Group 2 credit institutions will continue to decline. In 2018, the aggregate profit of Group 2 credit institutions will also decrease as a result of the winding up of ABLV Bank, AS; in 2017, the profit of ABLV Bank, AS made a major contribution to the aggregate profit of Group 2 credit institutions, whereas the Group's ROE, excluding ABLV Bank, AS, would have been negative (−0.6%) in 2017. The future profitability and development of Group 2 credit institutions will depend on their ability to change their business models (see Box 3). Since the decline in the business volumes of Group 2 credit institutions, no significant increase in income generated from servicing domestic customers has been observed in the consolidated profit or loss statement of the above institutions over the last two years (see Chart 2.20).

The overall capitalisation of credit institutions is high and significantly exceeds the minimum capital requirements as well as the average credit institution capitalisation in the euro area (see Charts 2.21 and 2.22). At the end of 2017, the average total capital ratio was 21.4% on a consolidated basis, including CET1 ratio which stood at 19.0%. The average leverage ratio of credit institutions is also high (9.8% at the end of 2017) and significantly above the minimum threshold of 3% set by Basel III standards. At the end of the first quarter of 2018, the above three ratios were 22.3%, 19.9% and 10.8% respectively. The results of the stress test and credit risk sensitivity analysis conducted by Latvijas Banka suggest that the capacity of credit institutions to absorb a potential rise in credit risk caused by external and internal shocks is quite high (see Box 9).

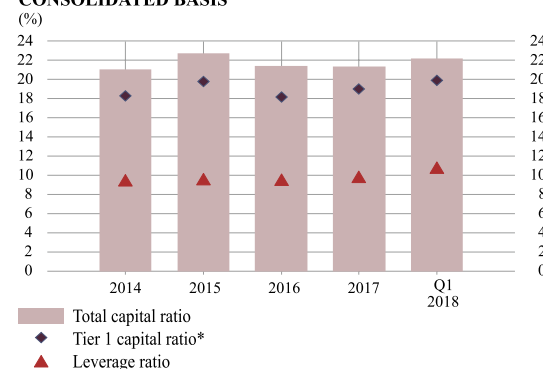
The total capital of Latvia's credit institution sector is dominated by higher quality capital, and its share is expanding. At the end of 2017, CET1 constituted 89.2% of total capital (84.9% in 2016). The quality of credit institution capital improved on account of reinvested earnings of several credit institutions. Changes in the CIT regime (starting with 2018, corporate retained earnings are not subject to CIT) will promote reinvesting of earnings and strengthening of credit institution capital in the future.

Chart 2.20
OPERATING INCOME OF CREDIT INSTITUTIONS BY CUSTOMER RESIDENCE AND GROUP OF CREDIT INSTITUTIONS



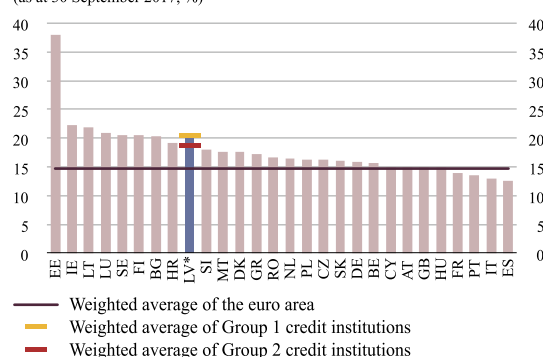
* Annualised data of the first quarter.

Chart 2.21
DEVELOPMENT OF CAPITAL RATIOS ON A CONSOLIDATED BASIS



* CET1 ratio of all credit institutions equals Tier 1 capital ratio.

Chart 2.22
CET1 RATIOS OF CREDIT INSTITUTIONS ON A CONSOLIDATED BASIS IN EU COUNTRIES
(as at 30 September 2017; %)



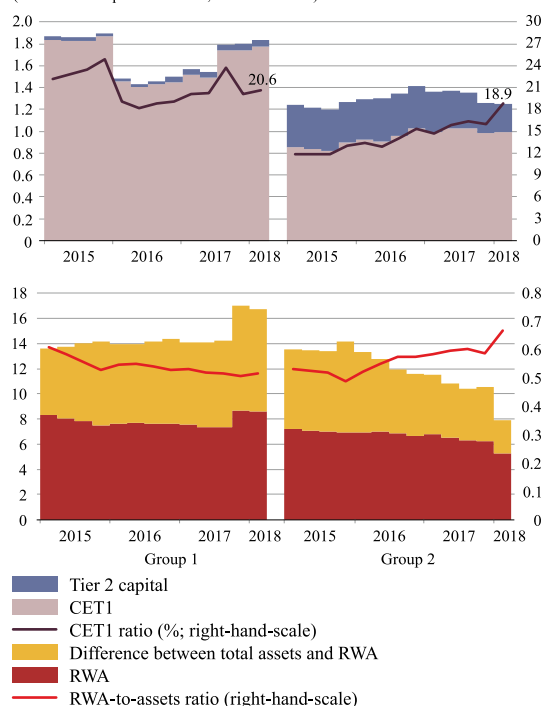
* Data of Latvian credit institutions as at 31 March 2018.

The dynamics of capital ratios and their components differs in both groups of credit institutions (see Chart 2.23). Excluding the impact of one-off effects³⁸, capitalisation ratios of Group 1 credit institutions are improving slowly, but steadily as their business volumes and profit evolve in line with lending developments and domestic economic growth. With the above trends persisting, capitalisation of Group 1 credit institutions is expected to remain high in the future. Considering the high level of capitalisation and plans of several Group 1 credit institutions to distribute the profits earned in 2017 in dividends partly or fully, the capitalisation growth most likely will not be fast. The total capital growth of Group 1 credit institutions in absolute terms was affected by the establishment of Luminor Bank AS when the Latvian Branch of Nordea Bank AB made a capital investment upon merging with AS DNB banka. In the first quarter of 2018, the total capital ratio and the Tier 1 capital ratio of Group 1 credit institutions were 21.3% and 20.6% respectively.

With several Group 2 credit institutions incurring losses, Tier 1 capital of this Group posted a minor decline at the end of 2017. The decrease in the capital was slightly offset by a drop in the assets and RWA of Group 2 credit institutions. The business volumes and balance sheets of the credit institutions of this Group are also expected to shrink further in 2018. With profitability prospects of the above credit institutions deteriorating, several credit institutions face further risk of decreasing capitalisation. In the first quarter of 2018, the fall in the assets and RWA of Group 2 credit institutions accelerated and their capital remained

Chart 2.23
CONSOLIDATED CET 1 CAPITAL, TIER 2 CAPITAL, RWA AND ASSETS OF CREDIT INSTITUTIONS, CET 1 RATIO AND RWA TO ASSETS RATIO

(at end of first quarter of 2018; billions of euro)



Changes in the capital and RWA of Group 1 credit institutions in the third and fourth quarter of 2017 are related to the establishment of Luminor Bank AS.

broadly unchanged; hence, the total capital ratio and Tier 1 capital ratio rose to 23.8% and 18.9% respectively.

In 2018, the total weighted average capital requirement for credit institutions increased to 13.8% (see Box 8). The above rise resulted from full implementation of O-SII requirement (with respect to six O-SII) and an increase in the individual requirements defined by the supervisor, associated with the change in the FCMC methodology for setting individual requirements for credit institutions supervised by the FCMC.

³⁸ At the beginning of 2016, the capital ratios of Group 1 credit institutions and the absolute amount of their CET1 decreased as a result of a pre-planned capital reduction by two Latvian subsidiaries of Nordic bank groups with a very high level of capitalisation in order to optimise the capital structure within the groups. At the end of the third quarter of 2017, the capital ratio of Group 1 credit institutions was affected by the establishment of Luminor Bank AS for a short time: prior to the consolidation, the capital of the merging credit institutions was increased (before that, the Latvian Branch of Nordea Bank AB was not required to hold capital), but the consolidation process of the credit institution balance sheets had not been completed yet. At the end of the fourth quarter, following the balance sheet consolidation, the effect of the temporary capital increase was no longer observed in the capital ratio of the consolidated credit institution.

BOX 8. CHANGES IN TOTAL CAPITAL REQUIREMENTS OF CREDIT INSTITUTIONS IN 2018

The total capital requirement of credit institutions is composed of the minimum requirement, the individual requirement set by the supervisor and capital buffer requirements (see Chart 2.24). The capital buffer requirements are comprised of the capital conservation buffer of 2.5% of RWA, the CCB whose current rate has been set at 0% for transactions with Latvian residents, taking into account the continued weak lending and low cyclical risks as well as of the O-SII capital buffer with regard to credit institutions designated as O-SIIs.

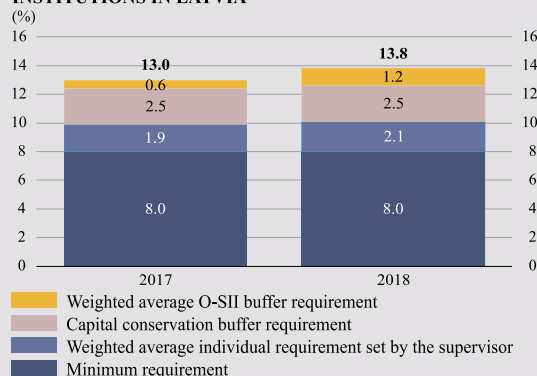
The full introduction of the O-SII requirement as of 30 June 2018 plays a part in increasing the total weighted average capital requirement in Latvia. In November 2017, the FCMC repeatedly

identified six O-SIIs in Latvia (Swedbank AS; AS SEB banka; ABLV Bank, AS; AS Rietumu Banka; AS Citadele banka and Luminor Bank AS) and decided on the size of the applicable O-SII buffers³⁹. O-SII capital buffers have been set within the range of 1.5%–2%, as was the case before. Partial and full compliance with the O-SII buffer requirements had to be ensured as of 30 June 2017 – and 30 June 2018 respectively. After a review of O-SII capital buffer requirements, the capital buffer requirement was changed or set anew for two credit institutions, i.e. the capital buffer for the newly-established Luminor Bank AS was set anew at 2%, but that of AS Rietumu Banka was reduced from 1.75% to 1.5% due to a decline in its assets driven by a slump in business activities.

It is also the rise in individual requirements established by the FCMC for the credit institutions subject to its supervision that has contributed to the increase in the total capital requirement. This is mainly due to the change in the FCMC methodology for setting individual requirements. The methodology, in turn, was adapted to the ECB common guidelines⁴⁰ on the SREP regarding less significant credit institutions. Contrary to the previous SREP approach where the risks related to the provision of services to foreign customers were considered, the new methodology takes into account all risks affecting a credit institution, including the business model related risks. Thus, the individual requirements are set for all credit institutions supervised by the FCMC rather than only for those focusing on servicing foreign customers.

In the future, the capital requirements and capital levels of credit institutions could be affected by the expected amendments to EU legislation, i.e. review of the CRD IV/CRR, BRRD and SRMR. Within the package of the so-called risk reduction measures, the EC proposal includes several changes affecting the assessment of capitalisation and capital requirements of credit institutions (e.g. reformation of the SREP, changes in setting capital buffers, the introduction of leverage ratio requirement). Discussions on enhanced provision of credit institutions' resolvability, i.e. an increase in the amount of minimum own funds and the respective liabilities to prevent bailout of credit institutions at the taxpayers' expense are also under way. An increase in capital instruments or the eligible liabilities in the balance sheet structure will potentially challenge credit institutions both in terms of attracting investors and in terms of cost management.

Chart 2.24
TOTAL CAPITAL REQUIREMENTS FOR CREDIT INSTITUTIONS IN LATVIA



No credit institution in Latvia has Tier 1 additional capital instruments, thus Common Equity Tier 1 capital has to be used to fulfil Tier 1 capital requirements. The individual requirement set by the supervisor and O-SII buffer requirement have been weighted against credit institutions' RWA. O-SII buffer requirements of the transitional period are specified for 2017, but full compliance with the requirements effective as of 30 June 2018 is reported for 2018.

³⁹ Information on the O-SII requirements is available on the FCMC website <http://www.fktk.lv/lv/mediju-telpa/citas-publikacijas/makroprudenciala-uzraudziba/sistemiski-nozimigas-iestades/5485-sistemiski-nozimigas-iestades.html>). Detailed information on the methodology used for setting the O-SII capital buffer can be found in Latvijas Banka's Financial Stability Report 2017.

⁴⁰ LSI SREP methodology SB/18/105/06a.

BOX 9. CREDIT RISK SHOCK-ABSORPTION CAPACITY

Latvijas Banka conducts sensitivity analysis⁴¹ and macroeconomic stress tests of credit institutions⁴² on a regular basis. Estimates are based on the consolidated data of credit institutions of March 2018. The thresholds for the stress tests are as follows: the total capital ratio of 8.0%, the Tier 1 capital ratio of 6.0% and the CET1 capital ratio of 4.5%⁴³. A failure to meet the minimum requirement for a single type of capital is automatically considered a failure to meet overall capital requirements. The stress test assessment period will last until the end of the first quarter of 2019. The stress test stipulates 60% provisions for loans past due over 90 days and 20% provisions for unlikely-to-pay loans.

The results of the sensitivity analysis suggest that Group 1 credit institutions' capacity to absorb the potential increase in credit risk continues to improve in general. On a consolidated basis, Group 1 credit institutions, without raising any additional capital, would have been able to absorb a potential rise in credit risk resulting in the share of loans past due over 90 days expanding by 13.3 percentage points (by 14.4 percentage points in 2016) at the end of the first quarter of 2018. **At the same time, some Group 2 credit institutions saw a weakening of the credit risk shock-absorption capacity due to a deterioration of the credit portfolio quality.**

The results of the macroeconomic stress test also show that the capacity of Group 2 credit institutions to absorb the potential increase in credit risk caused by external and internal shocks has deteriorated. This was largely on account of the changes in the credit institutions' loan portfolio quality and the low capitalisation level of some of the Group 2 credit institutions. Consequently, the capacity of Group 2 credit institutions to absorb potential losses stemming from the materialisation of Russia- and other CIS countries-related risks has declined, and some credit institutions need to continue to strengthen Tier 1 capital. **At the same time, the resilience of Group 1 credit institutions remains strong and is facilitated by the contraction of NPLs in the domestic loan portfolio.**

In the stress test scenarios Latvijas Banka uses the so-called Basic Model Elasticities which are based on impulse response functions of endogenous variables to exogenous shocks. The impulse response functions have been derived from the macroeconomic model of Latvijas Banka. The elasticity coefficients of the base models were reviewed in autumn 2017, in order to ensure that the new elasticities better reflect the changes in Latvia's economy (the stable and balanced economic development, the low fiscal deficit and the government debt ratio as well as low current account deficit strengthening the resilience against macroeconomic shocks).

⁴¹ A credit risk sensitivity analysis provides an indication of the magnitude of an increase in loans past due over 90 days a credit institution would be able to absorb before its capital adequacy ratios fall below the minimum capital requirements. It is assumed that a credit institution has to build provisions in the amount of at least 60% for the over 90 days past due loan portfolio and build additional provisions totalling 60% of the increase in the loans past due over 90 days; restructured loans which are not past due over 90 days have to be provisioned by at least 20%. Credit institution capital and RWA are reduced by the amount of the additional provisions.

⁴² Macroeconomic stress tests measure the resilience of Latvia's credit institutions to various adverse macroeconomic shocks whose materialisation is plausible, yet their probability is low. The results of the credit risk stress tests allow assessing whether credit institutions have sufficient capital for absorbing losses stemming from a rise in credit risk in particularly severe and even extreme macroeconomic stress circumstances without additional capital injections.

⁴³ A characteristic feature of the capital structure of Latvian credit institutions is the fact that the Tier 1 capital requirement is met with CET1 capital; therefore, compliance with the Tier 1 capital requirement automatically means compliance with the CET1 capital requirement as well. As a result, a relatively high stress test threshold is applied to high quality capital (CET1).

The macroeconomic stress test was carried out to evaluate the capability of credit institutions to absorb a potentially higher credit risk caused by the deterioration of the external and domestic macrofinancial environment. The main risks under the stress scenario are a significant weakening of external demand (inter alia, in relation to a notable adjustment of the real estate market prices in the Nordic countries) and growing uncertainty which could have a negative effect on domestic economic growth.

The risks associated with macrofinancial deterioration in Russia have subsided as a result of Russia's ability to adapt itself to the sanctions regime, the significant rise in oil prices, more rapid than expected economic development in Russia in 2017 and the projected moderate GDP growth in 2018. Standard & Poor's upgraded Russia's credit rating to investment grade BBB. Thus, two of the three largest international credit rating agencies have assessed Russia's credit rating in investment category⁴⁴. Therefore, under the stress scenario of 2018 the expected loss rate defined for investment in Russia and other CIS countries has been decreased as compared to the stress test of 2017 by lowering the PD from 25% down to 20%. However, even the PD of 20% is still considered quite conservative and indicates a high investment risk in Russia (inter alia, on account of geopolitical risks). The assumption on the LGD has remained unchanged at 75% (see Table 2.3).

The stress test baseline scenario is based on Latvijas Banka's macroeconomic forecast of June 2018. According to the forecast, higher external demand and more active absorption of EU funds will facilitate Latvia's economic growth, and the seasonally adjusted GDP growth rate will reach 3.9% in 2018. Economic growth will be more moderate in 2019, with the GDP growth rate amounting to 3.0%. The following assumptions have been used in the baseline scenario with regard to foreign investment: in 2017, the PD for loans granted to customers from Russia and other CIS countries is 5%, whereas LGD amounts to 75%. PD is 5% as regards securities issued by the CIS countries and claims on MFIs of the CIS countries, and LGD is 75%.

Considerable deterioration of the external macrofinancial environment **has been modelled under the stress test stress scenario**: large external demand shock (a 15% fall), similar to that observed in the previous crisis, followed by notable declines in investment (35%) and private consumption (30%). Moreover, as a result of a drop in the global appetite for risk, regional risks with respect to the real estate market in the Nordic countries are also materialising. The stress scenario for investment in Russia and other CIS countries has been made less rigid in comparison with the 2017 stress test. PD for credit institutions' investment in CIS countries is 20% and LGD – 75%.

The scenario assumes that the above shocks affect the Latvian economy in the second quarter of 2018. Changes in Latvia's real GDP in the stress scenario were evaluated employing the macroeconomic model of Latvijas Banka. The macroeconomic parameters of the stress scenario are reflected in Table 2.3.

Under the stress scenario, the impact on the quality of loans granted to domestic customers was estimated by using the credit risk model of Latvijas Banka and employing the assumptions about loan migration to and from the unlikely-to-pay loans category.

⁴⁴ Fitch Ratings has also assigned a rating in the investment category (BBB–). The investment rating of Moody's Investors Service remains low (Ba1).

Table 2.3

PARAMETERS OF MACROECONOMIC STRESS TEST
(%; percentage points)

Credit risk parameters and macroeconomic shocks	Baseline scenario	Stress scenario
Latvia		
Shock from lower external demand	0	15
Shock from deteriorating investor confidence (lower investment)	0	35
Shock from deteriorating consumer confidence (lower private consumption)	0	30
Annual changes in Latvia's GDP in 2018	3.9	-4.1
Annual changes in Latvia's GDP in 2019	3.0	1.0
Annual changes in Latvia's GDP (deviation from the baseline scenario; second quarter of 2018–first quarter of 2019)	–	-10.4
3-month EURIBOR ⁴⁵	-0.295	-0.295
The implied ⁴⁶ probability for a performing loan or a loan past due less than 90 days to become a loan past due over 90 days within a period of one year	–	5.5
Probability for an unlikely-to-pay loan to become a loan past due over 90 days within a period of one year	–	19.5
Increase in the share of loans past due over 90 days in the domestic customers' loan portfolio in the first quarter of 2019 ⁴⁷	-0.2	5.3
Russia and other CIS countries		
Claims on MFIs, securities		
PD	5	20
LGD	75	75
Expected loss rate	3.75	15
Loans		
PD	5	20
LGD	75	75
Expected loss rate	3.75	15

The stress test assumed that in the case of loans to Lithuanian and Estonian borrowers the credit risk developed in the same way as that of the domestic loan portfolio⁴⁸. The losses stemming from loans to foreign customers, securities of the CIS countries and claims on MFIs were estimated based on the parameters assumed in the scenarios. To reflect the potential losses arising from investment in the CIS countries more accurately, the amount of investment made in these countries was adjusted according to the data provided in country risk reports.

According to the baseline scenario, the quality of the domestic loan portfolio of credit institutions is expected to continue improving gradually in 2018. At the same time, an increase in loans past due is anticipated in the foreign customers' loans portfolio. Under the baseline scenario, the estimated losses from investment in the CIS countries could reach 67 million euro or 0.3% of the total credit institution assets. Due to the necessary additional provisions, one credit institution does not meet the minimum capital requirement even under the baseline scenario. Under the stress scenario, the share of loans past due over 90 days would expand by 5.3 percentage points (to 8.3%) in the domestic loan portfolio by the first quarter of 2019. Table 2.4 features the aggregated stress test results.

⁴⁵ Annual average of 3-month EURIBOR futures rates; Bloomberg, 10.04.2018.

⁴⁶ This probability was estimated based on the increase in loans past due over 90 days (4.7%) yielded by Latvijas Banka's credit risk model using the assumptions defined in Table 2.3.

⁴⁷ Loans that have migrated from the category of "performing loans or loans past due less than 90 days" and from the category of "unlikely-to-pay loans" have been added up.

⁴⁸ Without modelling their changes in the unlikely-to-pay loans category.

Table 2.4

MACROECONOMIC STRESS TEST RESULTS FOR THE STRESS SCENARIO

Indicator	Stress test result
Estimated losses (millions of euro)	534.9
Additionally required provisions (% of total credit institution assets)	2.4
Total capital ratio	
Number of credit institutions with the total capital ratio below 8%	1
Additionally required capital (millions of euro)	0.3
Tier 1 capital ratio	
Number of credit institutions with Tier 1 capital ratio below 6%	2
Additionally required capital (millions of euro)	20.8
Credit institution assets (% of total credit institution assets)	3.4
Common Equity Tier 1 capital ratio	
Number of credit institutions with Common Equity Tier 1 capital ratio below 4.5%	1
Additionally required capital (millions of euro)	13.2

In the event of the stress scenario materialising, the estimated losses could reach 534.9 million euro or 2.4% of the total credit institution assets. Two credit institutions would face problems to comply with the minimum capital requirement with regard to Tier 1 capital owing to shocks. Three credit institutions would find it difficult to comply with the capital conservation buffer requirement as a result of shocks. None of the credit institutions would have negative capital.

The capacity of credit institutions to absorb significant shocks stemming from the deterioration of the macrofinancial environment should be evaluated for each of the two groups of credit institutions separately. Resilience of some Group 2 credit institutions against shocks can be viewed as insufficient. The amount of investment in government securities of Russia and other CIS countries has declined; meanwhile, additional provisions are necessary for loans classified as NPLs. Group 1 credit institutions maintained their strong resilience against shocks, explained by improving quality of the domestic loan portfolio and sufficient capitalisation.

3. DEVELOPMENT AND RISKS OF THE NON-BANK FINANCIAL SECTOR

The NBFS continues to develop rapidly. In 2017, NBFS assets grew by 15.3%, reaching 7.9 billion euro at the end of the year, while their ratio to GDP and to total assets of the credit institution sector went up to 29.5% and 27.8% respectively. Like in 2016, the rise was primarily on account of increased household savings in pension plans (see Chart 3.1). The assets of insurance corporations grew at a faster pace, and the non-bank loan market is also still witnessing a sustainable growth path. Meanwhile, the role of the NBFS in Latvia's financial sector and economy is still considerably smaller compared with the rest of the euro area. This is primarily due to the low level of long-term savings of the population: in Latvia they have evolved over a shorter period of time comparing to many other euro area countries.

Several types of Latvia's NBFS services (e.g. leasing and life insurance) have developed as additional operating segments of credit institutions. In the long term, such interconnectedness of the NBFS with credit institutions can become a source of credit or funding risk of credit institutions; however, overall this has not been observed so far (see Chart 3.2)⁴⁹. Continuity of accessibility of NBFS services in Latvia's financial system is high as in the event of the withdrawal of a participant, the services provided by it to ensure the functioning of Latvia's financial system may be replaced by other market participants, including from other Baltic States, due to the relatively low market concentration. Although the NBFS is developing rapidly, **the still relatively moderate level of NBFS assets, the generally low level of credit and funding risks caused by the interconnectedness of the NBFS with credit institutions and the high continuity of accessibility of NBFS services suggest that the NBFS does not represent systemic risks to the financial system.**

In 2017, NBFS loans granted to households and non-financial corporations grew rapidly, thus

⁴⁹ Some credit institutions have higher risk exposures, but mostly for a number of large long-term loans granted to subsidiary companies, including leasing companies, and the allowed level of risk exposure has been agreed with the FCMC.

Chart 3.1
NBFS ASSETS IN BREAKDOWN BY SUBSECTOR
(billions of euro)

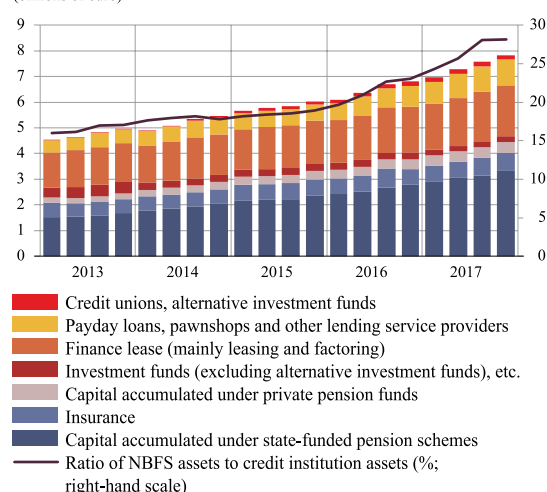
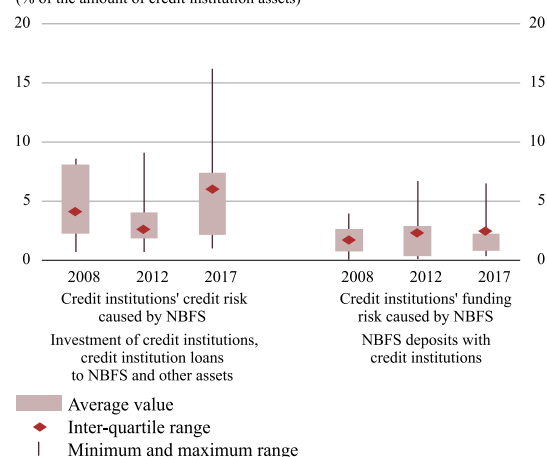


Chart 3.2
INTERCONNECTEDNESS OF THE NBFS WITH LATVIAN CREDIT INSTITUTIONS
(% of the amount of credit institution assets)



stimulating consumption of households and investment of non-financial corporations. The outstanding amount of loans granted to domestic households and non-financial corporations by the NBFS increased by 15.8%, amounting to 2.1 billion euro at the end of the year. The loan portfolio of non-bank lending services providers was approximately five times smaller compared with the loan portfolio of credit institutions. However, its ratio to the loan portfolio of credit institutions has doubled during the last five years.

The stock of loans granted by the NBFS to households continues to outpace that of loans granted by credit

institutions. In 2017, loans granted by the NBFS to domestic households increased by 19.0% (see Chart 3.3), reaching 591.7 million euro at the end of the year. Financial leasing, primarily granted by subsidiaries of credit institutions, and non-bank consumer lending (including payday loans) both equally contributed to the above increase. NBFS loans granted to households expanded across all segments, with leasing of motor vehicles and short-term consumer credits recording particular growth.

Household interest expense on non-bank loans has stabilised over the past few years. The CSB data suggest that in 2011 household interest expense on non-bank loans accounted for no more than 45 million euro (up to 0.2% of GDP), but in 2017 it was approximately 125 million euro (0.5% of GDP). During the last two years, household interest expense on non-bank loans has stabilised, and the amount of non-bank loans granted to households is growing faster than household interest payments on these loans. It is attributed both to the fact that since 2016 a ceiling on consumer credit costs has been set and to the development of other types of non-bank loans, allowing to borrow funds with a longer maturity and a more gradual repayment schedule. At the same time, the rapid development of new types of loans (incl. credit lines) urges to assess whether the level of interest rate ceilings are set sufficiently high to promote responsible lending.

Estimates by Latvijas Banka, based on the CSB data, allow for direct comparisons of household spending on credit institution loans and non-banks loans since 2015 (see Chart 3.4). At the end of 2017, the total household interest expense on loans accounted for 1.2% of GDP, with interest expense on non-bank loans and on credit institution loans contributing 40% and 60% respectively. Expense on payday loans and consumer credits accounts for the largest share of household expense on non-bank loans, while expense on leasing and loans by pawnshops forms a small percentage. **Although household spending on non-bank financial institution loans has stabilised, it is still quite high** since the stock of loans granted to households by the NBFS is approximately 10 times smaller than that of loans granted to households by credit institutions. **Disproportionately large interest payments hamper**

Chart 3.3
NBFS DOMESTIC LOANS TO HOUSEHOLDS AND NON-FINANCIAL CORPORATIONS
(annual growth rate; %)

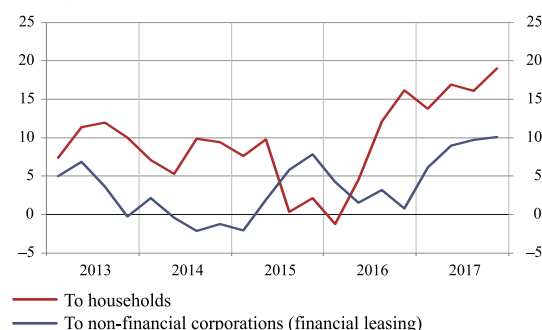
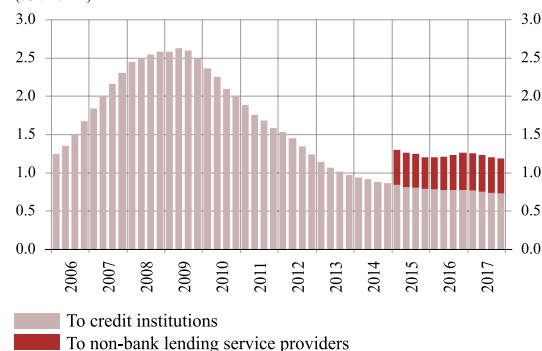


Chart 3.4
INTEREST EXPENSE ON LOANS OF DOMESTIC HOUSEHOLDS
(% of GDP)



Note. Data on non-bank loans to households covering the period up to 2015 are not available.

accumulation of household savings and damage their credit history in the event of the deterioration of the household creditworthiness, thus limiting access to the mortgage market for a number of households. Moreover, the costs of NBFS loans might rise also due to the potential increase in interest rates in the euro area in the coming years.

In 2017, financial leasing loans to non-financial corporations grew by 10.1%, amounting to 1.0 billion euro. Financial leasing accounts for more than two thirds of the total stock of loans to non-financial corporations by the NBFS⁵⁰, mostly granted for purchase of vehicles, including commercial vehicles. **A gradual improvement of external demand and increased absorption of EU funding will most likely continue to facilitate the expansion of the financial leasing portfolio in 2018.** The main profitability risk of leasing companies is the potential deterioration of

⁵⁰ Operative leasing and factoring and financing from alternative investment funds account for the remaining part of other loans granted to non-financial corporations by the NBFS.

the creditworthiness of non-financial corporations in the event of severe external shocks that would also limit new investments.

Latvian non-financial corporations, particularly start-ups, also use the risk capital as an alternative source of funding; however, for the time being, the amount of funding is rather small. The amount of securities of Latvian start-ups held by alternative investment funds increased by 55.0% during the year, reaching 50.2 million euro. The average value of investment made by alternative investment funds is almost 800 thousand euro. The increase was attributed

to two new significant investments totalling 20 million euro in wood processing and IT industries.

Crowdfunding services continue to develop as an alternative source of financing in Latvia. The business model of crowdfunding service providers so far has been mostly related to the household consumer crediting, with particular focus on foreign customers. The crowdfunding service providers in Latvia have notable potential to promote the financing of Latvia's economy; however, an appropriate regulatory framework is needed to ensure sustainable development of the sector (see Box 10).

BOX 10. GROWTH PROSPECTS OF CROWDFUNDING IN LATVIA: RISKS AND OPPORTUNITIES

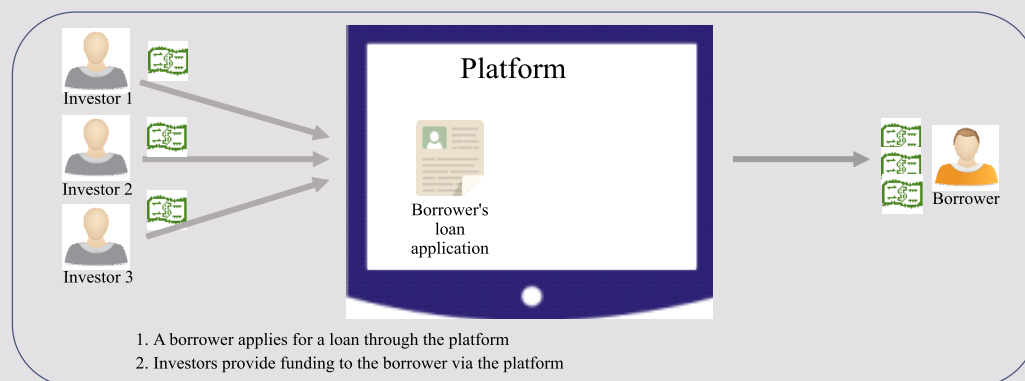
Crowdfunding services represent one of the central trends in the field of fintech start-ups in Latvia. Crowdfunding is a relatively new financial product, and only a few countries have introduced tailored regulatory regimes (the UK, Italy, France, Lithuania and Spain). Given the dynamic expansion of crowdfunding services, discussions on the introduction of a regulatory framework for these services were also started in Latvia in 2016.

According to information provided by the sector participants, **Latvia is one of the fastest growing crowdfunding service centres in Europe.** Of all types of crowdfunding services, peer-to-peer lending is the fastest developing one in Latvia. Peer-to-peer lending is a type of lending that enables investors to lend money to an individual or a business through an online platform, entailing long-term returns. Data published by market participants show that new loans valued at approximately 542 million euro have been financed through Latvian crowdfunding platforms in 2017 (2.5 times more than in 2016). This displays a substantially higher level than in the neighbouring countries Estonia (86 million euro) and Lithuania (22 million euro). At the beginning of 2018, seven crowdfunding service providers operated in Latvia.

Latvia's crowdfunding platforms mainly attract foreign investors and foreign borrowers; therefore, these platforms almost do not take part directly in financing Latvia's economy. The majority of investors on Latvian crowdfunding platforms come from the Western Europe, but the borrowers are primarily from the Eastern Europe. The role of the crowdfunding service providers in financing Latvia's economy is rather small: their loans granted in Latvia concentrate in the segment of loans for motor vehicles. Publicly available information on the total number of investors allows us to estimate that no more than 0.1% of the total number of households having deposits with Latvian credit institutions make investments through crowdfunding platforms in Latvia.

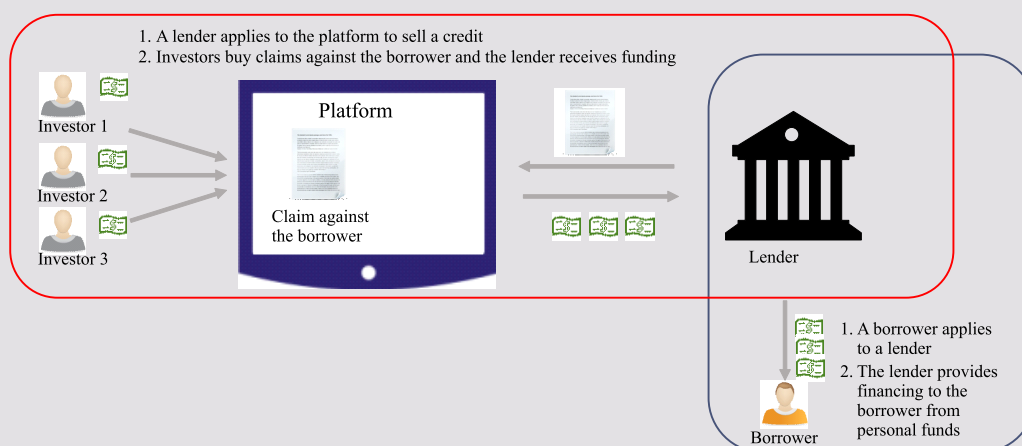
There are different business models of crowdfunding, depending on whether a loan originator is a platform, investors or another lender. Thus, each model entails different risks. In a typical crowdfunding model, peer-to-peer lending platforms grant loans and act as intermediaries between an individual borrower and potential investors (see Chart 3.5). In this model, peer-to-peer lending platforms compete with loan providers (credit institutions, non-bank loan providers, etc.) in the lending market, trying to enter new market niches or offering more attractive lending services. Platforms operating under this business model are not common in Latvia.

Chart 3.5
CLASSICAL BUSINESS MODEL OF PEER-TO-PEER LENDING PLATFORMS



The largest Latvian crowdfunding service providers are engaged in reselling credit claims rather than granting original loans. This business model (see Chart 3.6) differs considerably from the typical peer-to-peer lending as investors are offered loans already previously originated by a licensed lender (including a crowdfunding service provider if it holds a consumer lending licence). In this model, it is easier to raise business volumes as the platforms do not originate new loans and thus do not compete with lenders for a market share. A consumer lender benefits from receiving a margin of the borrower's interest payments and gets access to an additional source of funding.

Chart 3.6
CREDIT CLAIM SALE BASED BUSINESS MODEL OF CROWDFUNDING PLATFORMS



The main risk posed for a crowdfunding service provider operating under any business model is the incomplete availability of information that prevents an investor from assessing the borrower's credit risk. However, **the credit claim resale based model contains several additional risks:**

- 1) the risks of information asymmetry and conflicts of interest** (loan originators may selectively choose the worst loans to be placed on the platform);
- 2) the risk of lending procyclicality** (the loan originator may increase lending levels, without taking care of the quality of the credit claims offered as the potential losses will be borne by investors. This kind of activity may facilitate the adoption of inadequate credit risk assessment procedures prior to granting new loans and the originate-to-distribute business model, which started the global financial crisis by triggering the collapse of the subprime mortgage market in the US.

At the same time, despite the heightened risks, the credit claim resale based model has a great potential to address protracted structural problems in the financial sector, for instance, by helping to develop the secondary market of NPLs in the EU. The EC has already pointed out that the share of NPLs in the balance

sheets of EU credit institutions declines too slowly, partly on account of the weak secondary market of credit claims in the EU; it currently does not ensure an effective transfer of the credit risk from the credit institutions willing to free up funds for granting new loans to the private sector that would be ready to bear these risks⁵¹. In its November 2017 *Financial Stability Review*, the ECB stressed that crowdfunding platforms have a considerable potential to ease the transfer of such a credit risk by linking the credit institutions to potential investors, thus upgrading the secondary market of credit claims in the EU.⁵² Meanwhile, from the perspective of financial stability, it is essential that the crowdfunding industry would develop in a sustainable manner and investors would have complete information on the risks they bear.

To enhance sustainable development of the industry, **the establishment of an appropriate national regulatory framework providing for commensurate mechanisms necessary to reduce the above risks must continue. Besides, discussions about the necessity to establish a regulatory framework for crowdfunding at EU level also in relation to consumer lending should be started.** At the beginning of 2018, the EC published a recommendation to establish a common regulatory EU framework for cross-border crowdfunding service providers⁵³. However, the current initiative only covers crowdfunding services for businesses, but not for households.

A discussion on the establishment of a regulatory framework for crowdfunding was started in Latvia in 2016, and a version of the draft law that would also cover the granting of crowdfunding loans for households at the national level was presented⁵⁴. Discussions on the draft law are still underway to reach a common understanding about a sustainable regulatory framework that would provide for the mechanisms to reduce the above risks in a situation when the business model of crowdfunding service providers constantly changes. In Latvijas Banka's opinion, to ensure commensurateness between a competitive regulatory framework and the reduction of risks, the instruments that have already been incorporated into regulatory regimes of other countries or the best practice examples identified in the industry itself should be taken as the basis for the risk reduction mechanisms:

- 1) the platform or the loan originator should retain an economic interest ("skin in the game") and have sufficient capital to cover potential losses;
- 2) the management and shareholders should stick to the principles of good governance by strictly restricting investment and borrowing via his/her crowdfunding service provider;
- 3) investors whose potential losses are disproportionately large in relation to their discretionary funds should receive a refusal to make investment;
- 4) the investor should be provided with complete information if he/she acquires a credit claim against a loan that has already been once granted;
- 5) the protection of investor rights in the area of deprivation of collateral rights should be established or it should be indicated that investors do not have the secured creditors' rights;
- 6) the mechanisms restricting the accumulation of customers' discretionary funds with the crowdfunding service provider if the funds have not been invested in new projects for a long time, should be ensured;
- 7) the crowdfunding platforms should be subject to regulatory requirements regarding the prevention of AML/CTF.

⁵¹ EC. *The Commission welcomes the completion of all parts of the banking union by 2018*. Available at: http://europa.eu/rapid/press-release_IP-17-3721_lv.htm. 2017.

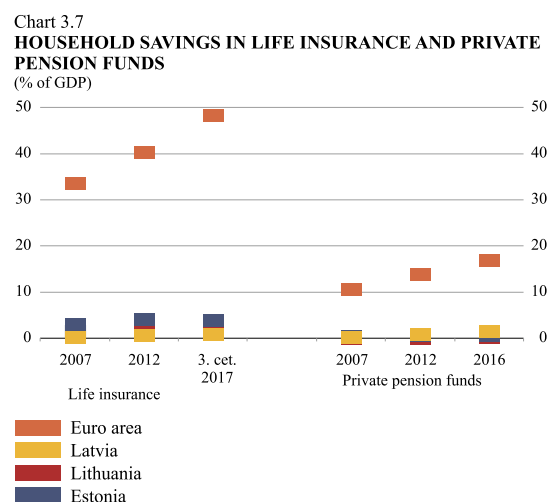
⁵² ECB. *Overcoming non-performing loan market failures with transaction platforms*. Available at: <https://www.ecb.europa.eu/pub/pdf/other/ecb.sfinancialstabilityreview201711.en.pdf?750d7cd5e9c84ede6780d7f9f12b22d2>. *Financial Stability Review*, November 2017, pp. 120–144.

⁵³ EC. Available at: https://ec.europa.eu/info/publications/180308-proposal-crowdfunding_en. 2018.

⁵⁴ The draft legal acts of the Cabinet of Ministers of the Republic of Latvia. *The Draft Law on Crowdfunding*. Available at: <http://tap.mk.gov.lv/lv/mk/tap/?pid=40435945>. 2017.

Other NBFS financial services are primarily related to the placement of household savings, risk insurance as well as the execution of payments. In 2017, the assets of other NBFS service providers increased by 16.2%, amounting to 4.7 billion euro at the end of the year. Their share in the total amount of NBFS assets was 60.1% (including the funds accumulated under the state-funded pension scheme accounted for 42.0%).

The amount of household long-term savings in pension plans and life insurance is gradually following an upward trajectory; however, it is still insufficient. With the social security contributions rate increasing, the assets of the state-funded pension scheme (the second pillar) increased by 18.9%, amounting to 3.3 billion euro. Although household savings for pensions continue to grow, the average level of savings is low and does not exceed 3 000 euro. At the same time, a relatively small number of Latvian households deposit voluntary long-term savings. In 2017, only 22% of the participants of the second pillar pension scheme made contributions to the pension capital of the third pillar of the pension scheme, with total savings amounting to 1.6% of GDP. The amount of the technical reserves of the funds accumulated under life insurance contracts was 0.4% of GDP; it is considerably below the average recorded in the euro area (48.8% of GDP; see Chart 3.7). The low level of long-term savings reduces the household resilience to financial shocks and increases the poverty risks when their members reach the retirement age. However, it should be taken into account that overall, the amount of household long-term savings in the euro area has evolved over the last few decades. In the years to come, it is important that, with the household income level rising, their voluntary contributions to life insurance and pension funds would likewise increase progressively and that the population groups having so far failed to make contributions due to low income would gradually start to do it. This will be also partly stimulated by the new EU legal initiatives regarding, for example, the implementation of an innovative Pan-European Personal Pension Product in 2017 that will make it easier for households to accumulate funds in the pension plans of other EU countries and encourage competition among pension product providers, with investors getting tax discounts similar to those applicable when investing in



a similar pension scheme in Latvia. It is important that, with the voluntary saving rate gradually increasing, the conditions for life insurance and private pension plan services (incl. the costs) provided in Latvia would not differ substantially from those established for other similar financial products available in international financial markets. This implies that the saving mechanisms established at the national level should be also periodically reviewed. If this is not the case, investors may find the above services less attractive and operational efficiency in the financial sector would not be overall improved.

At the end of 2017, the Saeima of the Republic of Latvia supported amendments to the Law on State-funded Pensions that reduces the pension funds' management fees, increases confidence in the pension system of Latvia as well as combats the informal economy through facilitating contributions to pension funds. The capital accumulated under the stated-funded pension scheme is and will continue to be one of the most significant types of long-term savings of the population in the foreseeable future. However, the household costs for pension saving management in Latvia have been so far the highest compared to OECD countries, averaging 1.6% (including the private pension plan management fees – close to 2%) of the assets of pension plans in 2016. In 2017, the management fees decreased somewhat, while remaining high and representing an average of 1.4% of the assets of pension plans. The relatively high pension plan management fees reduce the profits of pension plans and have contributed to the fact that real

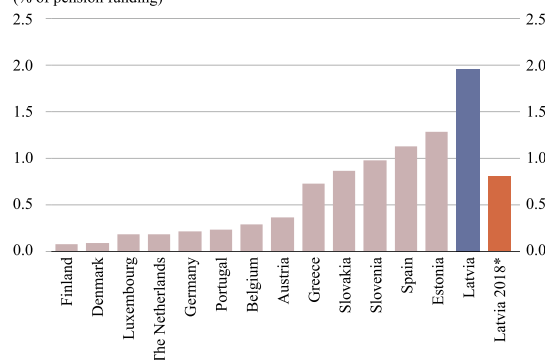
10-year yields of the state-funded pension scheme are negative, taking account of inflation. The negative real return on social security contributions undermines household confidence in the pension system as a whole. Based on the estimates of Latvijas Banka, the pension funds' management fees will be below 1.0% of the assets of pension plans in 2018 (see Chart 3.8). This will save the Latvian population at least 20 million euro and contribute to a decline of the shadow economy.

Changes in Latvia's tax regime will also improve the saving culture in Latvia; however, households will have to align their saving habits. As of 1 January 2018, the minimum validity period of life insurance contracts was extended from five to 10 years and the upper contribution limit subject to tax relief was also changed⁵⁵. The current minimum validity period of the contract was one of the lowest in the EU. Households will have to align their saving habits when starting a longer-term savings scheme in the future. A longer term of investment is more in line with the nature of long-term savings and improves the prospects for higher returns as contributions are invested for a longer period of time, guaranteeing higher expected returns. At the same time, the main risk for life insurance corporations, i.e. the interest rate volatility which has by now been low, will therefore also rise, given the short terms of investment and the great popularity of unit-linked contracts.

The overall economic growth of the euro area increases expectations concerning a rise in the key ECB interest rates in the coming years, exerting an upward pressure on yields on fixed income securities and a downward pressure on their prices. **Households with members of pre-retirement age are more sensitive to price volatility of fixed income securities.** As the state-funded pension scheme in Latvia does not guarantee a certain level of investment returns, the value of household savings depends on developments in financial markets. The short-term prices and yield volatility flatten throughout the life cycle of a fixed income security, with no effect on total investment returns.

⁵⁵ As of 2018, the population will be able to claim a refund of the tax paid on life insurance and pension fund contributions not exceeding 10% of gross income (20% in 2017), but in any case no more than 4 000 euro per annum.

Chart 3.8
PENSION MANAGEMENT COSTS IN LATVIA AND OECD COUNTRIES IN 2016
(% of pension funding)



* Latvijas Banka's forecast for the management costs of Latvia's state-funded pension scheme in 2018, assuming that a rise in assets and return on investment remain similar to average levels registered in the previous eight years (the precise level of the management fee will be determined by the yield on investment of the pension schemes and the amount of the variable part of the management fees respectively).

However, the interest rate risk may cause losses if the household members of pre-retirement age will retire at the time of a general increase in interest rates since the term of investment for such households is shorter than the life cycle of a security. Therefore, the interest rate risk level is the main source of risk for the operation of pension funds in the next few years. The risk is considerably mitigated by the fact that pension plans of Latvia's state-funded pension scheme are not particularly sensitive to interest rate changes. The average modified duration of the securities portfolio of conservative pension plans was relatively short at the end of 2017, ranging from 3.9 to 5.3 depending on the investment strategy for the pension plan. The risk is also contained by the fact that 11.2% of the total pension plan funding are held in deposits with credit institutions, thus potentially offsetting the expected impact.

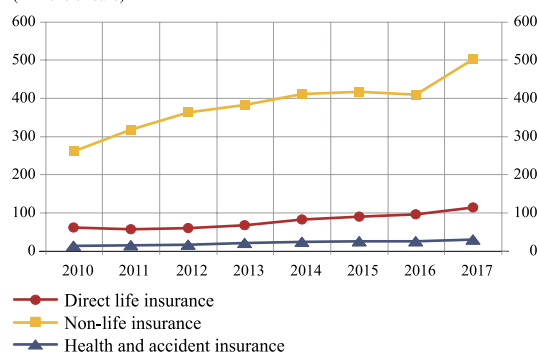
Meanwhile, in 2017 stock markets exhibited a rapid, albeit volatile, growth, promoting an increase in the value of pension plans. However, the short-term volatility in stock markets does not pose a significant risk to the performance of pension plans as the participants of these plans have a long term of investment and the financial market volatility tends to level out in the long-term.

Non-financial corporations have a great potential to use more extensively non-life insurance in order to strengthen resilience to unforeseen shocks to

operation, thus reducing the risk of default on credit payments. In 2017, the consequences caused by rainfalls and flood suggested that insurance is not sufficiently used in some sectors, particularly in the segments of small and medium-sized non-financial corporations, and that sudden shocks to operation may rapidly cause difficulties to timely repay the credit. As insurance culture is a relatively new phenomenon in Latvia which develops gradually, many non-financial corporations are still not willing to bear the burden of insurance payments. This, in turn, hinders the development and availability of appropriate insurance products in Latvia's insurance market. In the years to come, it is important to foster the businesses' understanding of the necessity to conclude insurance contracts in order to get protection against shocks to operation whose likelihood is low, but the losses caused by them – high as, for instance, in the case of natural disasters.

Despite the small size of the insurance market, **insurance corporations are financially stable and overall find themselves in a good situation to remain on a relatively rapid, while sustainable, development path.** As Latvian insurance corporations primarily specialise in life or non-life insurance, the risks associated with the financial stability of individual corporations are dispersed. The solvency ratios continue to be high in both groups of insurance corporations also after the Solvency II regime (the single EU solvency and supervision regime) has come into effect, with non-life and life insurance corporations recording on average 131.8% and 156.8% respectively at the end of 2017. In 2017, the total amount of gross premiums written by all insurance corporations (including the branches of foreign insurance corporations in Latvia) grew by 21.4%, amounting to 646.0 million euro at the end of the year (see Chart 3.9). The profitability of insurance corporations is improving, and in 2017, the profit earned by all insurance corporations was 16.0 million euro {7.0 million euro} including the profit of life insurance corporations in the amount of 1.0 million euro {1.8 million euro}. The improvement of profitability was supported by higher prices in transport insurance that has proved to be loss-making for a long time. In addition, insurance corporations have implemented successful structural changes in recent years – the consolidation of the non-life

Chart 3.9
GROSS PREMIUMS SIGNED BY INSURANCE CORPORATIONS
(millions of euro)



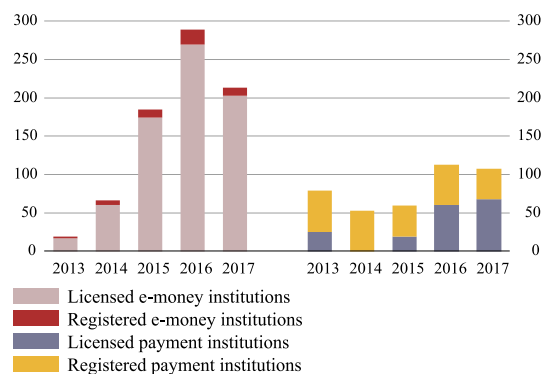
insurance sector has taken place for several years and continued in 2017 through mergers of several market participants. Meanwhile, life insurance corporations continue to develop new financial products (pension annuity) as traditional life insurance products become less attractive in the environment of persistently low interest rates.

In 2017, the development of non-bank payment services was affected by higher standards of due diligence and transaction monitoring. Non-bank payment services in Latvia have developed rapidly in recent years; the total volume of outgoing payments made by payment institutions and e-money institutions has increased more than 10 times within five years, although it remains small, amounting to 0.1% of the volume of outgoing payments of credit institution customers at the end of 2017. The development of non-bank payment services was supported by the close cooperation between some of the non-bank payment service providers and Latvian credit institutions, creating synergies in the areas of IT and information systems. However, in 2017 the structural changes in Latvia's financial sector exerted pressures not only on Latvian credit institutions, but also on non-bank payment service providers to adjust their business models. In 2017, the volume of outgoing payments made by e-money institutions and payment institutions decreased by 20.1% in comparison with 2016 (see Chart 3.10). This was mainly affected by more stringent customer due diligence and transaction monitoring requirements. In 2017, the FCMC decided to suspend the operation of several Latvia's payment institutions which were not able to ensure a comprehensive assessment of AML/

CTF risks in internal control systems. In the years to come, the development of non-bank payment services will depend on the payment service providers' ability to adapt to structural changes. Payment institutions and e-money institutions that are able to ensure appropriate due diligence and transaction monitoring will find themselves in a good situation to pursue their rapid development, taking into account the growing demand for the provision of the e-commerce infrastructure not only in domestic markets but also in foreign ones. At the same time, thorough supervision of the potential risks of payment institutions and e-money institutions must continue to prevent a situation whereby the entire financial technology sector suffers from the lack of good faith of one or several market participants.

The market of investment funds (excluding alternative investment funds) is small and remained broadly unchanged in 2017, with the value of total assets representing 0.8% of GDP. Investment funds mostly develop as additional operating segments of two Latvian credit institutions diversifying the sources of profit and offering asset management services to foreign customers.

Chart 3.10
VOLUME OF OUTGOING PAYMENTS OF CUSTOMERS DURING THE YEAR
(millions of euro)

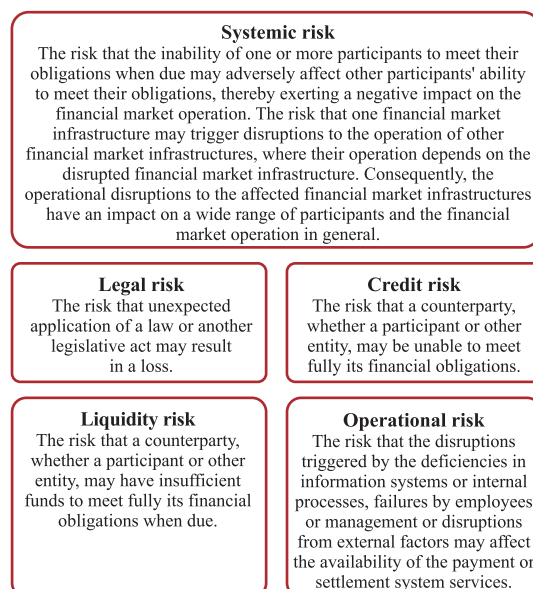


4. SYSTEMICALLY IMPORTANT PAYMENT AND SETTLEMENT SYSTEMS

The oversight of financial market infrastructures focuses mainly on the systemically important financial market infrastructures, since the operational disruptions to such infrastructures might affect the financial stability in the country. In order to make sure that the risks related to the operation of the financial market infrastructures are identified and appropriately managed and, where necessary, provide recommendations for enhanced risk containment measures, an assessment of financial market infrastructures is carried out within the oversight framework in compliance with the international "Principles for financial market infrastructures"⁵⁶. The operation of the financial market infrastructures is subject to various risks which may affect the ability of the infrastructures to deliver services as expected or may cause significant losses to the financial market infrastructure itself or its participants. The key risks (see Chart 4.1) faced by the financial market infrastructure operator and participants are the following: legal risk, credit risk, liquidity risk and operational risk. Each risk, either alone or in combination with other risks, may trigger a systemic risk, i.e. the risk that the inability of a participant in a payment or settlement system (hereinafter referred to as the "participant") to meet its obligations or the disruptions to one financial market infrastructure can affect the financial market operation.

Latvijas Banka has assessed both systemically important financial market infrastructures – TARGET2-Latvija and Latvia's securities settlement system operated by Nasdaq CSD SE (which replaced DENOS on 18 September 2017) – and has established that all risks in those systems are adequately mitigated and managed. The credit risk in TARGET2-Latvija has been practically eliminated taking into account the real-time gross settlement model used by the system. Since the cash leg settlement of Latvia's securities settlement system operated by Nasdaq CSD SE takes place in the accounts of TARGET2-Latvija, the credit risk shall also be

Chart 4.1
THE KEY RISKS FACED BY FINANCIAL MARKET INFRASTRUCTURES



deemed eliminated in Latvia's securities settlement system operated by Nasdaq CSD SE. Overall, the risk assessment may only change in case of significant operational changes to the respective system; however, the liquidity and operational risk assessment may also change depending on the operational indicators of the system, i.e. the value of payments processed in the system, the liquidity available for settlement and the system's business continuity. Therefore, the liquidity risk faced by the system participants and the operational risk faced by the system operators are the only risks to be revised additionally, taking into account the operational indicators of the respective system. Within the oversight framework, in 2017 Latvijas Banka performed the liquidity and operational risk assessment for TARGET2-Latvija and Latvia's securities settlement system operated by Nasdaq CSD SE (which replaced DENOS on 18 September 2017). According to the assessment, the above risks remain low in these systems, and additional risk containment measures are not necessary. The above infrastructures provided efficient and secure payment and settlement environment to their participants and the entire financial system, and their smooth operation facilitated the financial stability.

⁵⁶ Bank for International Settlements and International Organization of Securities Commissions. *Principles for financial market infrastructures*. April 2012.

PAYMENT SYSTEMS

Latvijas Banka ensured the operation of TARGET2 in conjunction with other participants of the European System of Central Banks. **The TARGET2 oversight assessment carried out by the Eurosystem in 2017 suggested that the risks associated with the operation of TARGET2 are appropriately managed and contained ensuring that their impact on the system's operation and its participants is minimal and does not trigger systemic disruptions.**

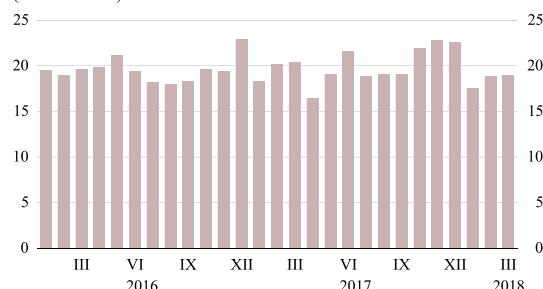
TARGET2, operated by the Eurosystem, was one of the world's largest payment systems in 2017. Latvijas Banka continued to maintain TARGET2-Latvija, one of the 25 TARGET2 component systems, enabling the settlement of the Eurosystem's monetary policy operations, interbank settlement of large-value payments, settlement of urgent customer payments in euro and final settlement in euro for the Electronic Clearing System of Latvijas Banka (EKS), Latvia's securities settlement system operated by Nasdaq CSD SE and the payment card processing system of Worldline Latvia Ltd.

The total value of payments processed in TARGET2-Latvija in 2017 amounted to 240.4 billion euro, representing an increase of 2.3% in comparison with 2016 (see Chart 4.2 for the monthly value dynamics of the payments made). In 2017, the daily average value of payments processed in TARGET2-Latvija amounted to 942.7 million euro (in the first quarter of 2018, the daily average was 879.0 million euro).

In order to assess the liquidity risk in TARGET2-Latvija, Latvijas Banka performed analysis of data by means of the payment and settlement system simulator (model BoF-PSS2), developed by Suomen Pankki – Finlands Bank.

To assess the liquidity risk in TARGET2-Latvija, Latvijas Banka evaluated the value of the settlement funds necessary for the execution of all payments submitted during the day as compared to the liquidity available in the system. The following indicators were assessed: a lower bound of the settlement funds, i.e. the value of the settlement funds ensuring the execution of

Chart 4.2
VALUE OF PAYMENTS EXECUTED IN TARGET2-LATVIA
(billions of euro)



all payments by the end of TARGET2-Latvija business day at the latest; an upper bound of the settlement funds, i.e. the value of the settlement funds ensuring an immediate execution of all submitted payments; the liquidity available in the system, i.e. the total value of funds in the accounts of the system participants' credit institutions and the Treasury, also including intraday credit granted to credit institutions and the value of settlement funds necessary for the execution of the payments submitted by Latvijas Banka. Where the liquidity available in the system exceeds the upper bound of the settlement funds, the system's liquidity risk is deemed to be low. Where the liquidity available in the system is lower than the upper bound of the settlement funds, while exceeding the lower bound of the settlement funds, the system's liquidity risk is deemed to be medium. Meanwhile, where the liquidity available in the system equals to or is lower than the lower bound of the settlement funds, the system is exposed to a high liquidity risk.

For its data analysis, Latvijas Banka used February 2017 data, since, compared to other months of 2017, February saw the smallest value of excess settlement funds defined as the spread between the liquidity available in TARGET2-Latvija and the total value of payments executed in TARGET2-Latvija. Therefore, the results of the February data analysis allow drawing conclusions about the liquidity risk throughout 2017.

The simulation results showed that the daily upper bound of the settlement funds amounted to 294 million euro on average or 6.89% of the liquidity available in TARGET2-Latvija. On none of the days did the upper bound of the settlement funds in February exceed 16% of the liquidity available in the system. Meanwhile, the lower bound of the settlement funds stood at 0.00%

of the liquidity available in TARGET2-Latvija on all days in February. The results suggest that the liquidity available in TARGET2-Latvija in 2017 significantly exceeded the upper bound of the settlement funds (see Chart 4.3). Thus, **the liquidity risk of TARGET2-Latvija remains low.**

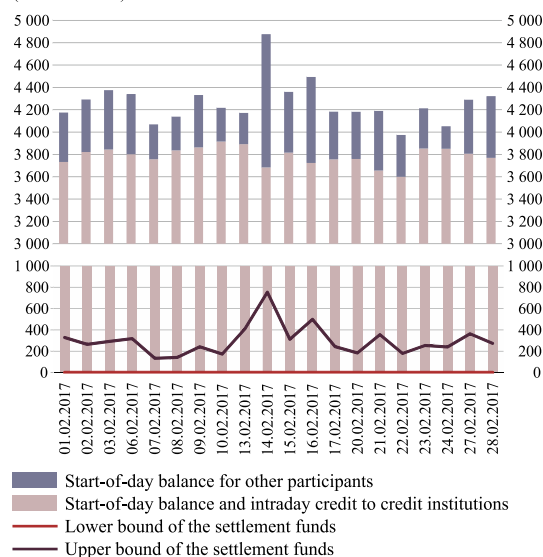
In addition to the operational risk assessments performed within the oversight framework, the overseers, when performing the day-to-day oversight, also evaluate the impact of the system disruptions on the system's operation as well as the system's availability throughout the year, since the operational disruptions to the system may affect the smooth functioning of systems and cause systemic risk.

Since TARGET2-Latvija is a component system of TARGET2 and TARGET2 technically operates as a uniform system, its business continuity is reflected by the aggregate performance indicators of TARGET2. In 2017, the availability ratio of TARGET2 stood at 100% (100% in 2016). Operational disruptions were not identified in TARGET2 in the first quarter of 2018 as well. According to the services contract, an operator of TARGET2 shall ensure the system's availability ratio of at least 99.7%. The availability ratio of TARGET2 suggests that the system is highly resilient to operational disruptions. This leads to the conclusion that **the operational risk of TARGET2 remains low.**

SECURITIES SETTLEMENT SYSTEMS

In 2017, Latvia's securities settlement system operated by Nasdaq CSD SE (which replaced DENOS on 18 September 2017 as the Baltic markets transitioned to a new settlement platform by joining the TARGET2-Securities platform) was the only systemically important securities settlement system in Latvia since it was used for the monetary policy operations of the Eurosystem and mobilisation of collateral securities of the participants in the monetary policy operations for the purpose of receiving an intraday credit in TARGET2-Latvija. The cash leg of the financial instrument-related settlement in euro of Latvia's securities settlement system was executed in TARGET2-Latvija.

Chart 4.3
LIQUIDITY RISK ASSESSMENT IN TARGET2-LATVIA
(millions of euro)



In 2017, the overseers carried out an assessment of Latvia's securities settlement system operated by Nasdaq CSD SE (including the evaluation of the system's risks such as the credit risk, liquidity risk and operational risk) in compliance with the international "Principles for financial market infrastructures" and presented several recommendations on the required upgrading. Before launching the operation of Latvia's securities settlement system on the TARGET2-Securities platform, the overseers made sure that Latvia's securities settlement system operated by Nasdaq CSD SE has implemented all significant oversight recommendations. **The oversight assessment suggested that the risks associated with the operation of Latvia's securities settlement system operated by Nasdaq CSD SE are appropriately managed and contained ensuring that their impact on the system's operation and its participants is minimal and does not trigger systemic disruptions.**

In 2017, the total value of delivery versus payment (DVP) of Latvia's securities settlement system amounted to 1.2 billion euro, with the daily average decreasing by 31.0% as compared to 2016. In 2017, the daily value of settlement executed by Latvia's securities settlement system via TARGET2-Latvija stood at 3.0 million euro on average (4.9 million euro in 2016).

Given that the cash leg settlement of Latvia's securities settlement system is executed in TARGET2-Latvija

between the participants of TARGET2-Latvija, and the liquidity risk assessment for TARGET2-Latvija suggested that the liquidity available in TARGET2-Latvija significantly exceeded the necessary liquidity (see Chart 4.3), **the liquidity risk in the cash leg settlement of Latvia's securities settlement system remains low.**

In addition to the operational risk assessments performed within the oversight framework, the overseers, when performing the day-to-day oversight, also evaluate the impact of the system disruptions on the system's operation as well as the system's availability throughout

the year, since the operational disruptions to the system may affect the smooth functioning of other payment and securities settlement systems and cause systemic risk. In 2017, the availability ratio of Latvia's securities settlement system stood at 99.7% (100.0% in 2016). No operational disruptions were identified in Latvia's securities settlement system in the first quarter of 2018.

The availability ratio of Latvia's securities settlement system suggests that the system is highly resilient to operational disruptions. Hence, it may be concluded that the operational risk of Latvia's securities settlement system remains low.

APPENDIX 1. HEATMAP: ANALYTICAL TOOL FOR THE ANALYSIS OF SYSTEMIC FINANCIAL STABILITY RISKS IN LATVIA

The range of quantitative instruments for the assessment of financial stability risks has been supplemented with a risk heatmap. The heatmap allows for a complex assessment of financial system stability within certain risk categories such as external macrofinancial and domestic macroeconomic risks, credit risk of borrowers, liquidity and funding risks of credit institutions as well as the solvency and profitability risks of credit institutions. Each risk category comprises 4–5 indicators that provide an early insight into the changes of the respective risk (see Chart A1.2). The financial stability indicators changing their value only after the materialisation of risks or reflecting the consequences of the crisis by their nature were excluded from the range of the indicators subject to analysis.

The indicators of risk categories used in the framework are assigned risk levels (indicated by colour). Thus, the heatmap enables the visualisation and analysis of the changes in external macrofinancial risks and domestic macroeconomic risks as well as the accumulation of imbalances in the credit institution sector by assessing the credit risk of non-financial corporations and households, the profitability and solvency risks of credit institutions as well as the liquidity and funding risks of credit institutions. The risk levels of indicators are based on predefined thresholds. The process is extensive and largely relies on expert judgment, since the credit institutions' data and the financial data often lack empirical justification. The assigned risk level should not be interpreted in absolute terms. Instead, it should be viewed in comparison with the historical benchmark.

The method of assigning risk levels involves the use of percentiles: the values of an indicator are assessed against the historical observations of that indicator. The data are arranged in equal-sized intervals, where the number of intervals and that of thresholds are set according to the level of risk associated with the respective indicator. Consequently, a decreased or increased value of an indicator signals the potential heightening of risks. The risk assessment framework

Chart A1.1
INTERVALS OF ONE-SIDED AND TWO-SIDED RISK INDICATORS



The first level represents the historic low, the second level – medium values, the third level – medium-high values and the fourth level – the highest values.

has two types of indicators, i.e. one-sided and two-sided risk indicators. With their values rising or declining, the former signal an increase in risk, while the latter indicate imbalances (see Chart A1.1). The assessment of different risk categories is not mutually comparable.

To increase the assessment sample and to reduce the dispersion of observations, the breakdown of percentiles was assessed for the dataset of the Baltic States, provided that the indicators have been calculated according to the same methodology. Where comparable data on other EU countries were available, the intervals, which were obtained based on the Baltic States' sample, were compared with the historic breakdown of the full sample. This approach provided additional data to take into account when defining an indicator's thresholds. The intervals which were calculated based on the percentile ranking method served as a starting point when deciding on the final threshold of an indicator. The obtained results were compared with expert judgment on the financial cycle and the previously-seen financial stress episodes, as the selected indicators should signal the heightening of risks before those episodes. The obtained threshold values have been corrected where necessary.

Quarterly data, starting with 2000 (or from the moment data have become available) have been used for the risk assessment framework. This period was chosen to reflect indicator changes throughout the financial cycle. However, it should be taken into account that the high rate of increase observed for part of indicators at the beginning of the reporting period is not related to the upswing of the financial cycle but rather to

structural changes in the financial system. Indicators were selected based on the fact that they can provide early warning signals of an increase in risk, as well as the data availability and their comparability among countries.

Changes in the **domestic macrofinancial environment** affect the financial stability mainly via their impact on the borrowers' solvency and, consequently, on the quality of the credit institutions' loan portfolio and their profitability. Therefore, to assess the domestic macrofinancial environment, the following indicators have been included in the risk assessment framework:

- unemployment gap: shows to what extent unemployment deviates from its natural rate estimated by Latvijas Banka and, thus, characterises the labour market situation;
- annual changes in the house price index: informs on the asset value changes (highly important in the context of credit risk);
- current account balance: points to a build-up of excessive imbalances in the economy with respect to imports and exports of goods and services;
- domestic loan-to-GDP ratio: allows comparing the current crediting cycle with the historical high.

Indicators describing changes in the national debt, Latvia's economic sentiment indicator (ESI) as well as Latvia's GDP have not been included in the heatmap since they did not deteriorate before the onset of the crisis, i.e. early warning signals were not obtained from these indicators by employing the percentile ranking method.

External macrofinancial risks are linked to external shocks (e.g. the slowdown of economic growth in the major trade partners, turmoil in foreign financial markets, the deterioration of the fiscal situation in the EU countries) and might have a negative impact on the domestic macroeconomic environment and, consequently, also on the quality of the credit institutions' assets and profitability. Indicators pointing to phases in external economic and financial cycles are used to assess the external macrofinancial environment. It is also important to capture the inter-dependence between the economic and financial cycles: an overhang in the economic cycle might facilitate the financial cycle

contraction, in particular, where a trend of excessive dynamics in relation to asset prices and private sector debt has been previously observed. The phase of the financial cycle may be implied by the indicators describing asset prices and private sector debt:

- Latvia's aggregate external demand (the weighted annual changes in exports to the major trade partners);
- the steepness of the government securities yield curve as a real-time indicator in the expansion phase of the euro area economic cycle (the spread between the yields on 10-year and 2-year government securities in the countries with AAA credit ratings);
- BofA Merrill Lynch index for the assessment of risk premia in euro on high-yield debt securities of non-financial corporations, which indicates the market sentiment and signals excessive developments in asset markets;
- three-year changes in the euro area private sector debt-to-GDP ratio.

Composite Indicator of Sovereign Systemic Stress (SovCISS) developed by the ECB, used to capture undesirable side-effects which may be caused by the government policy and an excessive debt burden. In view of the fact that even the financial distress of relatively small countries can affect other euro area countries and the euro area as a whole, an aggregate indicator is selected where the included government indicators are weighted equally.

Taking account of the role of the credit risk of households and non-financial corporations, as well as the differences in lending developments observed with respect to households and non-financial corporations in Latvia, the credit risk of households and non-financial corporations are assessed separately. For the assessment of borrowers' creditworthiness, the following indicators are included in **the non-financial corporations' credit risk category**:

- moving interest coverage ratio of non-financial corporations: allows assessing the non-financial corporations' ability to service their debt (excluding the seasonal effects);
- annual interest payments of non-financial corporations as a ratio to GDP;
- debt-to-equity ratio: enables the assessment of the debt burden;

- three-year changes in the non-financial corporations' debt-to-GDP ratio;
- measure of sectoral concentration: Herfindahl–Hirschman Index which is calculated based on the breakdown of the non-financial corporations' loan portfolio by major sector.

For the assessment of **the credit risk of households**, the following indicators are included:

- households' annual interest payments-to-GDP ratio;
- households' deposit-to-loan ratio;
- three-year changes in the households' debt-to-GDP ratio: enables the assessment of the household debt burden;
- housing affordability index: calculated as the ratio of the house price index vis-à-vis the average net wage index. Unlike the house price index, the housing affordability index provides information about the real house-purchasing power of households.

Loan portfolio quality indicators were not included in the credit risk category, since they capture the situation only after the materialisation of risks when the borrowers' creditworthiness is impaired. Meanwhile, the historical values of indicators reflecting the loan dynamics do not provide useful information, since the excessive lending observed in the past and the prolonged period of weak lending after the crisis almost throughout the reporting period indicate imbalances (considering that the risk increases when lending is excessive or – on the contrary – weak).

The category **liquidity and funding risks of credit institutions** assesses the effect of the changes in the credit institutions' funding availability and funding costs on financial stability, based on the following indicators:

- FCMC liquidity ratios of Group 1 and Group 2 credit institutions. The FCMC liquidity ratio of Group 1 credit institutions decreases when the credit institutions start to place their funds in riskier assets, mainly by granting loans. Thus, this indicator may point to an excessive credit risk;
- Group 1 credit institutions' domestic loans-to-deposits ratio: indicates the ability of these credit institutions to finance domestic loans by using domestic deposits. Where the indicator exceeds 100%, it suggests growing

dependence of credit institutions on foreign financing;

- net foreign assets-to-assets ratio: describes the dependence of credit institutions on foreign financing.

The assessment of the solvency and profitability risks of credit institutions reflects the credit institutions' ability to absorb shocks and raise adequate capital for absorbing losses when necessary. Credit institutions' profitability is assessed based on the return on assets (ROA) which is a more robust indicator compared to the return on equity (ROE) and better reflects the credit institutions' long-term profitability (instead of showing the profit of shareholders). Meanwhile, the following risk-weighted and unweighted indicators are used for the solvency risk analysis:

- Common Equity Tier 1 indicator;
- annual changes in the provisioning ratio (the ratio of loan loss provisions to loans past due over 90 days) in absolute terms;
- capital and reserves-to-assets ratio.

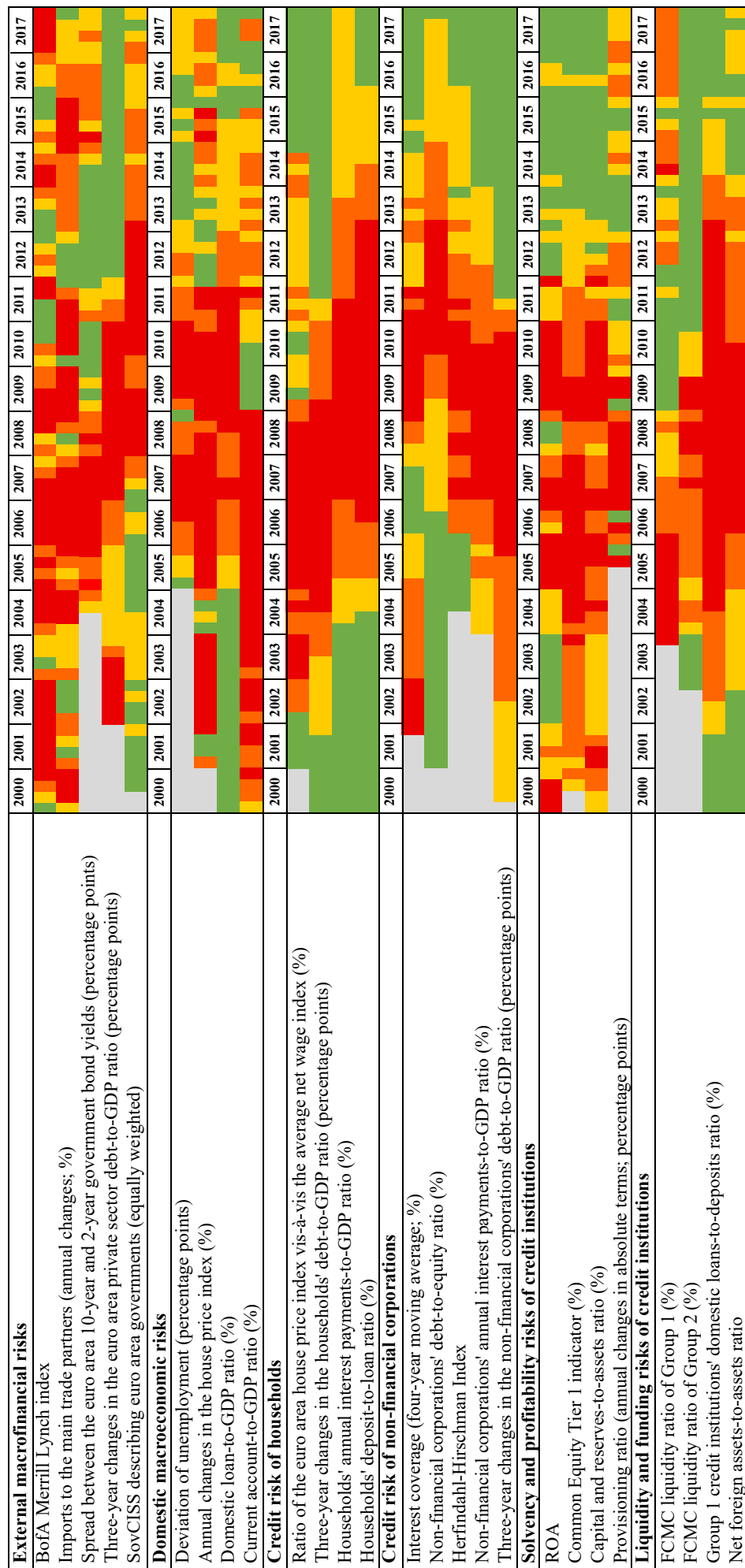
When carrying out an ex-post analysis of the heatmap risk categories' assessments, it can be concluded that early warning signals of increasing financial stability risks could be observed in individual risk categories already since 2004—the beginning of 2005. Meanwhile, the heatmap signals indicating substantial heightening of risks in 2000–2003 should be viewed in light of the structural changes in Latvia's economy. When employing the heatmap to assess the financial stability, the following limitations should be taken into account: by employing mechanical calculations alone, it is impossible to draw an exact line between the period of the financial system deepening and that of economic overheating. This is mainly due to the fact that heatmap assesses the risk level only in comparison with the historical benchmark or the risk level in the previous periods.

The heatmap also includes individual indicators signalling the build-up of the cyclical risk. According to the ESRB recommendation, the above indicators should be assessed when defining the CCB ratio. So far, when calculating the CCB ratio, quantitative assessment has only been carried out with respect to changes in the debt-to-GDP ratio, whereas for other indicators, which also have to be analysed when calculating the CCB ratio, expert assessment has been used. Thus,

the heatmap may also serve as a useful extension within the framework of the CCB methodology. The heatmap – a comprehensive tool incorporating signals of different financial stability indicators and providing

easily accessible information – supplements the range of tools used by Latvijas Banka for the financial system stability monitoring and analysis.

Chart A1.2

RISK ASSESSMENT FRAMEWORK OF EARLY WARNING INDICATORS

The risk level is indicated by colour



The periods for which no data are available are indicated in grey.

APPENDIX 2. LATVIJAS BANKA'S SURVEY-BASED ASSESSMENT OF HOUSEHOLD BORROWERS

In 2017, Latvijas Banka conducted its regular survey of household borrowers in order to assess the changes in the household borrowers' sensitivity to economic shocks and its impact on the borrowers.

The structure of the survey and the methodology of the vulnerability analysis are similar to those of the survey of household borrowers conducted in 2013⁵⁷. To assess the borrowers' solvency in the cases of macroeconomic shocks, data on household income, expenses, savings, credit liabilities and values of collaterals were compiled and analysed. Individual data on 796⁵⁸ surveyed households with 843 loans for house purchase and 345 other loans granted overall were analysed.

Based on the survey data, the financial margin of each surveyed household was calculated. The financial margin shows the remaining disposable income after deduction of debt servicing costs and basic living expenditure. If the financial margin is positive, the household is able to cover both household expenses and loan payments and is considered solvent. In turn, if the financial margin is negative, the household has solvency problems and is considered vulnerable. On the basis of the financial margin calculation it is possible to compare SHs and VHs and to model the impact of different shocks (a decrease in household income, an increase in interest rates and a rise in unemployment) on household solvency. The assessment of the rising number of VHs under different adverse scenarios allows the calculation of increases in the expected

losses⁵⁹ incurred by credit institutions and additionally required provisions.

According to the survey data for 2017, 5.4% of household borrowers are considered financially vulnerable, and the share of loans granted to them in the total outstanding amount of the surveyed household loans for house purchase accounted for 3.6% in 2017. To compare, in the survey of 2013, 10.2% of households were considered vulnerable, and the outstanding amount of housing loans granted to them accounted for 12.8% of the total outstanding amount of the surveyed household housing loans. Likewise, the share of loans past due over 90 days in the outstanding amount of housing loans to domestic households has also decreased from 12.3% in the second quarter of 2013 to 3.4% in the second quarter of 2017. The decline in the share of VHs is on account of improvements in household solvency (increasing wages and salaries and decreasing number of unemployed persons) and more effective insolvency proceedings. It should be noted that the majority of VHs are the ones having taken loans before the crisis (2005–2008).

In comparison with the survey conducted in 2013, the average debt service ratio (the ratio of loan payments to income) has decreased (see Chart P2.1) due to the rising household income (see Chart P2.2) and the prudent lending policies of credit institutions vis-à-vis the pre-crisis period. The debt service ratio for VHs has demonstrated the most significant improvements (more than two times): their average ratio is already below 40%,— a level that is deemed to be a threshold of reasonable debt burden. It should be taken into account that the decrease in the debt service ratio was also driven by a decline in the outstanding amount of current loans as households gradually repay them. Moreover, in the 2013 survey most households had

⁵⁷ See the results of the previous survey and the description of the methodology of the analysis in Āriņš, M., Siņenko, N., Laube, L. Survey based assessment of household borrowers' financial vulnerability, Latvijas Banka, Discussion paper No. 1/2014.

⁵⁸ Latvijas Banka commissioned Latvian Facts Ltd. to conduct the survey. The total number of the surveyed households amounted to 844, but the households whose loans would be repaid before 2018 and those whose replies were insufficient for the performance of the analysis were excluded from any further analysis.

⁵⁹ The average loan-to-collateral ratios calculated on the basis of the Credit Register data were used for the assessment of the expected losses also this time; however, in contrast to the previous time, the reduction coefficient (35%) was additionally applied to them to better reflect the potential sales value of collateral if sales were conducted as a matter of urgency. This corresponds to the practice of forced sale tenders where the starting price is determined 30%–40% below the market value.

taken loans for house purchase before the crisis, whereas in the 2017 survey the share of loans granted prior to the crisis in the total outstanding amount of loans for house purchase granted to the surveyed households account only for 30.2%.

When assessing the vulnerability of the household borrowers' sensitivity to different adverse macroeconomic shocks, it can be concluded that their resilience has significantly improved in comparison with 2013, leading to reduced credit risk of borrowers respectively. The improvement was achieved on account of a rise in household income, a decline in the number of VHs, an increase in the value of mortgage collateral in recent years, the amortisation of loans granted prior to the crisis, the credit institutions' balance sheet clean-up of bad loans and the tight credit standards during the post-crisis years.

Like in 2013, the household solvency is least affected by the shock of rising interest rates (see Chart P2.3). However, in view of the record low interest rates, the probability that this shock will materialise cannot be excluded. So far the largest observed increase in the base interest rate of the 3-month EURIBOR within a year has been 204 basis points. An isolated rise in interest rates of 200 basis points would raise the average value of the payments for household housing loans by 17.0%, and the share of VHs in the total number of households would grow to 10.9%, while the percentage of their liabilities in the loan portfolio would expand to 9.7%. Such a development of events would make credit institutions increase provisions for housing loans by 3.7% of the outstanding amount of the housing loan portfolio, while the estimates of their expected losses would grow by 1.5% of the outstanding amount of housing loans. In this scenario, the potential increase in the expected losses can be viewed as immaterial. It can be explained by the favourable situation in the real estate market as the value of the pledged real estate has increased gradually, but the outstanding amount of the respective loans has decreased due to the repayment of household loans. Thus, the size of the "safety cushion" of the pledged real estate created by credit institutions has increased.

Chart A2.1
THE AVERAGE RATIO OF ALL MONTHLY LOAN PAYMENTS TO HOUSEHOLD MONTHLY INCOME IN THE 2013 AND 2017 SURVEYS

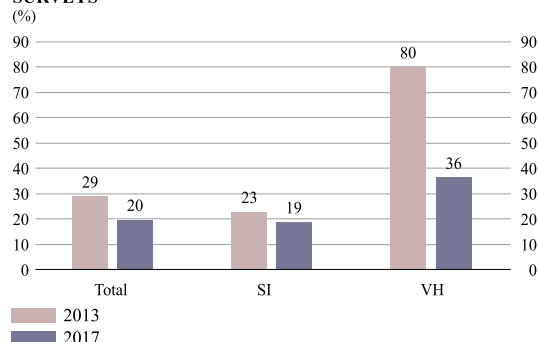


Chart A2.2
DISTRIBUTION OF EMPLOYED PERSONS AND HOUSEHOLDS – BORROWERS SURVEYED BY LATVIJAS BANKA – BY AVERAGE NET MONTHLY INCOME PER EMPLOYEE IN THE SECOND QUARTER OF THE RESPECTIVE YEAR

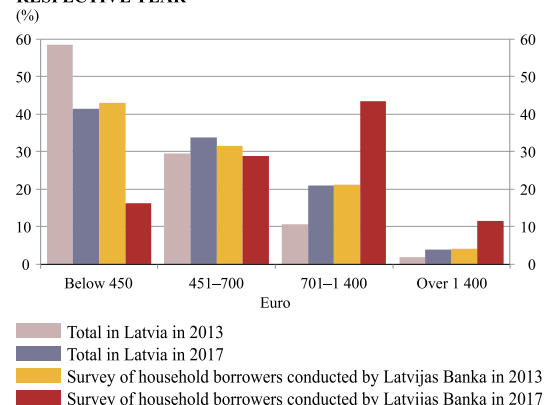
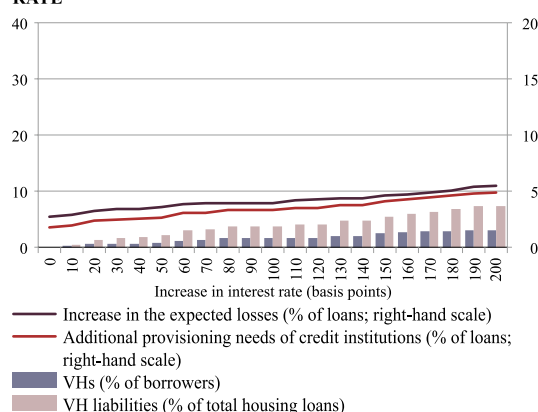


Chart A2.3
HOUSEHOLD SENSITIVITY TO AN INCREASE IN INTEREST RATE



Like in the previous survey, households are very sensitive to a decline in employment income. Over the past 15 years, the most significant reduction in wages and salaries within a year was 13.4%. An isolated 13% drop in income would increase the share of VH loans in the loan portfolio to 22.3% (see Chart P2.4).

This implies that credit institutions would have to increase provisions for household housing loans by roughly 11.2% of the housing loan portfolio. At the same time, the assessment of the lenders' expected losses reveals that the expected losses of the housing loan portfolio would grow by 3.5% in the event of such a decrease in income.

Household sensitivity to an increase in unemployment is moderate (see Chart P2.5). Over the past 15 years, the most pronounced increase in the unemployment rate within a year has been 11.7 percentage points; hence, household solvency is checked, assuming that the increase in the unemployment rate is 12 percentage points. Such an isolated shock would increase the share of VH loans in the loan portfolio to 16.6%, but the expected losses – by 2.2%. It should be taken into account that the analysed test period is only one year and the assumption is that all persons employed receive unemployment benefits for nine months. However, it is difficult to objectively include the actual fall in total household income in the impact estimates, given the informal economy factor: the calculated unemployment benefits may be lower than the income actually received due to "envelope wages"⁶⁰. The unemployment shock is not attributed to household members employed abroad and parents on parental leave.

It should be noted that only the impact of isolated shocks is analysed here; however, in case of unfavourable macroeconomic shock, unemployment might increase, household income might decrease, real estate prices might drop and interest rates might rise simultaneously. Nevertheless, overall the solvency of household borrowers can be viewed as relatively strong and their resilience to unfavourable economic growth scenarios has improved, thus reducing the vulnerability of credit institutions.

The resilience of borrowers to potential turbulences

⁶⁰ In 2016, the rate of unreported wages and salaries was 18.1% of actual wages and salaries (Putniņš, T. J., Sauka, A. The informal economy index in the Baltic countries in 2009–2016, SSE Riga, May 2017). Although credit institutions closely assess the borrowers' financial position when granting loans, they do not always have information about all household members; therefore, it cannot be ruled out that the household members receiving "envelope wages" are also included in the sample.

Chart A2.4
HOUSEHOLD SENSITIVITY TO A DECLINE IN EMPLOYMENT INCOME

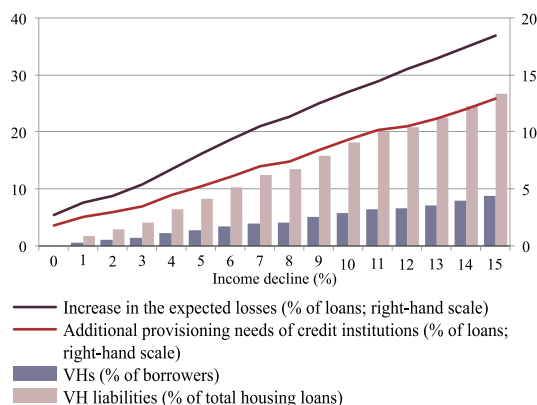
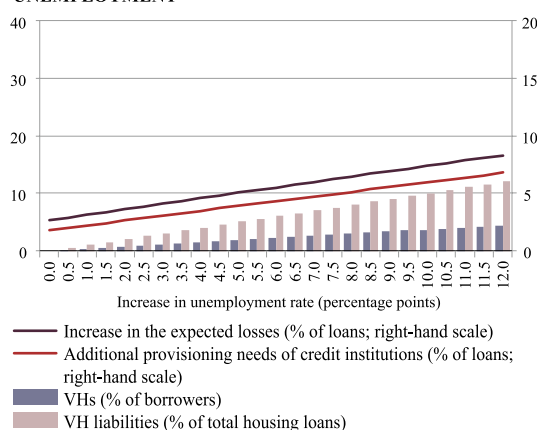


Chart A2.5
HOUSEHOLD SENSITIVITY TO AN INCREASE IN UNEMPLOYMENT



has increased and credit institutions pursue prudent lending policies. However, considering the lesson learned from the crisis that failure to comply with sound credit standards may significantly negatively affect household solvency and household income during the financial crisis, a timely and preventive broadening of the range of borrower-based macroprudential measures should be considered. LTV requirement could be complemented by, for example, a limit on the ratio of debt servicing costs to borrower's income to prevent unjustified easing of credit standards during the upswing of the lending cycle, thus strengthening the resilience of households and borrowers to potential turbulences.

APPENDIX 3. PERFORMANCE INDICATORS OF CREDIT INSTITUTIONS

Table A3.1

OVERALL PERFORMANCE INDICATORS OF CREDIT INSTITUTIONS

Indicator	2011 ⁶¹	2012 ⁶¹	2013	2014	2015	2016	2017	March 2018
Balance sheet items								
Number of credit institutions and subsidiaries of foreign credit institutions	30	29	28	26	27	23	21	21
Total assets (millions of euro)	29 775.7	28 784.4	29 192.3	30 816.1	31 937.7	29 496.1	28 397.4	25 717.1
Share of loans in total assets (%)	62.9	58.0	53.5	47.6	46.0	51.3	50.9	55.4
Share of deposits in total liabilities (%)	52.9	61.7	66.8	72.0	72.8	72.4	71.4	70.3
Share of liabilities to MFIs in total liabilities (%)	24.5	20.5	15.4	11.4	9.2	9.5	10.0	9.6
Domestic customers' loan-to-deposit ratio (%)	195.4	160.4	132.7	117.6	114.6	104.9	101.9	101.7
Profitability⁶²								
ROE (%) ⁶³	-11.2	5.6	8.6	11.1	12.8	14.3	7.6	11.0
ROA (%) ⁶⁴	-0.9	0.6	0.9	1.1	1.4	1.5	0.9	1.3
Cost-to-income ratio (%) ⁶⁵	60.3	52.6	50.7	49.7	47.5	44.7	51.9	51.9
Profit margin (%) ⁶⁶	-25.1	24.3	31.4	39.3	47.0	45.0	34.7	54.4
Capital Adequacy⁶⁷								
Own funds (millions of euro)	2 716.4	2 696.2	2 742.7	3 025.2	3 184.9	2 910.2	3 063.7	3 092.5
Common Equity Tier 1 capital/ Tier 1 capital (millions of euro) ⁶⁸	2 219.5	2 340.4	2 508.0	2 627.5	2 764.5	2 471.0	2 732.0	2 770.9
Risk-weighted assets (millions of euro)	16 439.7	16 113.8	15 201.8	15 000.5	14 583.8	14 269.0	14 844.3	13 893.9
Total capital ratio (%)	16.5	16.7	18.0	20.2	21.8	20.4	20.6	22.3
Common Equity Tier 1 capital ratio/ Tier 1 capital ratio (%)	13.5	14.5	16.5	17.5	19.0	17.3	18.4	19.9
Leverage ratio	–	–	–	9.2	9.4	9.2	9.6	10.8
Liquidity								
Liquid assets to total assets ratio (%) ⁶⁹	27.4	32.3	36.5	39.9	40.2	33.8	37.4	35.0
LCR (%)	–	–	–	–	–	342.7	313.3	264.3
NSFR (%) ⁷⁰	–	–	–	–	148.2	148.5	145.9	–
Asset quality								
Ratio of provisions for NPLs in the loan portfolio (%)	11.5	8.0	6.1	5.3	4.7	4.0	3.8	4.1
Share of loans past due over 90 days in the loan portfolio (%)	17.5	11.1	8.3	6.9	6.0	4.4	4.1	4.2

⁶¹ The Latvia Branch of the Allied Irish Banks Plc, AS Latvijas Krājbanka and AS Parex banka have been excluded from the profitability, capital adequacy and liquidity ratios for 2011 and 2012.

⁶² Profitability ratios for 2016 and 2017 have been presented without excluding the one-off effects referred to in Chapter 1 "Macroeconomic environment and lending development".

⁶³ Annualised profit/loss ratio to average capital and reserves of the reporting period (excluding data of foreign credit institution subsidiaries).

⁶⁴ Annualised profit/loss ratio to average assets of the reporting period.

⁶⁵ Cost-to-income ratio = (administrative expenses + intangible and fixed asset depreciation and disposal)/(net interest income + income from dividends + net commissions and fees + profit/loss from trades of financial instruments + financial instrument revaluation result + net ordinary income + adjustment for impairment of available-for-sale financial assets) × 100.

⁶⁶ Ratio of pre-tax profit to operating income.

⁶⁷ As of 2014, the capital adequacy of credit institutions and the related indicators have been calculated in line with the methodology of the CRR and cannot be directly compared with the indicators of the previous periods. Data are shown at the consolidated level.

⁶⁸ Common Equity Tier 1 capital is equivalent to Tier 1 capital for all credit institutions in 2014. As regards 2012 and 2013, data for Tier 1 capital are indicated.

⁶⁹ Liquid assets = vault cash + claims on central banks and other credit institutions + central government fixed income debt securities (those having a regular, unlimited market, i.e. they can be sold in a short period of time without considerable loss or used as loan collateral).

⁷⁰ Latvijas Banka's calculations.

Table A3.2

PERFORMANCE INDICATORS OF GROUP 1 AND GROUP 2 CREDIT INSTITUTIONS

	Group 1 credit institutions					
	2013	2014	2015	2016	2017	March 2018
Balance sheet items						
Number of credit institutions and subsidiaries of foreign credit institutions	13	10	11	10	8	8
Total assets (millions of euro)	18 345.0	17 623.3	17 289.9	17 845.0	17 791.3	17 483.8
Share of loans in total assets (%)	68.6	64.9	64.7	65.2	64.0	65.5
Share of deposits in total liabilities (%)	57.3	63.4	65.6	69.8	69.0	70.3
Share of liabilities to MFIs in total liabilities (%)	24.0	19.4	16.0	15.2	15.5	14.0
Domestic customers' loan-to-deposit ratio (%)	129.3	112.2	110.5	101.2	98.4	96.5
Profitability⁷¹						
ROE (%) ⁷²	6.8	9.8	9.5	11.7	8.3	12.0
ROA (%) ⁷³	0.8	1.1	1.2	1.4	1.0	1.4
Cost-to-income ratio (%) ⁷⁴	50.5	49.7	48.2	46.1	48.6	48.6
Profit margin (%) ⁷⁵	29.3	41.8	50.1	46.4	42.9	47.9
Capital Adequacy⁷⁶						
Own funds (millions of euro)	1 797.2	1 794.0	1 898.8	1 499.7	1 803.5	1 837.3
Common Equity Tier 1 capital/ Tier 1 capital (millions of euro) ⁷⁷	1 766.5	1 762.4	1 868.2	1 446.4	1 743.5	1 777.3
Risk-weighted assets (millions of euro)	9 586.0	8 383.6	7 487.7	7 589.1	8 642.0	8 625.3
Total capital ratio (%)	18.7	21.4	25.4	19.8	20.9	21.3
Common Equity Tier 1 capital ratio/Tier 1 capital ratio (%)	18.4	21.0	24.9	19.1	20.2	20.6
Leverage ratio	–	11.6	12.3	9.5	9.7	10.1
Liquidity						
Liquid assets to total assets ratio (%) ⁷⁸	25.6	27.7	28.5	27.8	31.1	29.3
LCR (%)	–	–	–	314.1	256.3	221.2
NSFR (%) ⁷⁹	–	–	133.4	136.3	136.9	
Asset quality						
Ratio of provisions for NPLs in the loan portfolio (%)	5.8	4.9	4.2	3.1	2.8	2.8
Share of loans past due over 90 days in the loan portfolio (%)	7.8	6.1	4.8	3.1	2.5	2.5

⁷¹ Profitability ratios for 2016 and 2017 have been presented without excluding the one-off effects referred to in Chapter 1 "Macroeconomic environment and lending development".

⁷² Annualised profit/loss ratio to average capital and reserves of the reporting period (excluding data of foreign credit institution subsidiaries).

⁷³ Annualised profit/loss ratio to average assets of the reporting period.

⁷⁴ Cost-to-income ratio = (administrative expenses + intangible and fixed asset depreciation and disposal)/(net interest income + income from dividends + net commissions and fees + profit/loss from trades of financial instruments + financial instrument revaluation result + net ordinary income + adjustment for impairment of available-for-sale financial assets) × 100.

⁷⁵ Ratio of pre-tax profit to operating income.

⁷⁶ As of 2014, the capital adequacy of credit institutions and the related indicators have been calculated in line with the methodology of the CRR and cannot be directly compared with the indicators of the previous periods. Data are shown at the consolidated level.

⁷⁷ CET1 is equivalent to Tier 1 capital for all credit institutions in 2014. As regards 2012 and 2013, data for Tier 1 capital are indicated.

⁷⁸ Liquid assets = vault cash + claims on central banks and other credit institutions + central government fixed income debt securities (those having a regular, unlimited market, i.e. they can be sold in a short period of time without considerable loss or used as loan collateral).

⁷⁹ Latvijas Banka's calculations.

Table A3.2

PERFORMANCE INDICATORS OF GROUP 1 AND GROUP 2 CREDIT INSTITUTIONS (CONTINUED)

	Group 2 credit institutions					
	2013	2014	2015	2016	2017	March 2018
Balance sheet items						
Number of credit institutions and subsidiaries of foreign credit institutions	15	16	16	13	13	13
Total assets (millions of euro)	10 847.3	13 192.9	14 647.8	11 651.1	10 606.1	8 233.3
Share of loans in total assets (%)	28.0	24.5	23.8	29.9	28.8	34.1
Share of deposits in total liabilities (%)	83.0	83.6	81.3	76.5	75.3	73.0
Share of liabilities to MFIs in total liabilities (%)	0.8	0.7	1.0	0.7	0.7	0.2
Domestic customers' loan-to-deposit ratio (%)	164.7	174.2	151.3	141.6	135.5	167.0
Profitability⁷¹						
ROE (%) ⁷²	13.1	13.7	19.0	18.3	7.3	10.0
ROA (%) ⁷³	1.0	1.1	1.5	1.6	0.8	1.2
Cost-to-income ratio (%) ⁷⁴	51.0	49.7	46.8	43.1	56.2	56.2
Profit margin (%) ⁷⁵	34.5	36.5	43.9	43.7	25.0	76.0
Capital Adequacy⁷⁶						
Own funds (millions of euro)	945.5	1 231.2	1 286.1	1 410.5	1 260.2	1 255.1
Common Equity Tier 1 capital/ Tier 1 capital (millions of euro) ⁷⁷	741.5	865.0	896.3	1 024.6	988.5	993.6
Risk-weighted assets (millions of euro)	5 615.8	6 616.9	7 096.0	6 680.0	6 202.2	5 268.6
Total capital ratio (%)	16.8	18.6	18.1	21.1	20.3	23.8
Common Equity Tier 1 capital ratio/ Tier 1 capital ratio (%)	13.2	13.1	12.6	15.3	15.9	18.9
Leverage ratio	–	6.50	6.33	8.77	9.29	12.3
Liquidity						
Liquid assets to total assets ratio (%) ⁷⁸	54.8	56.4	54.0	43.0	48.0	47.1
LCR (%)	–	–	–	369.0	414.7	349.5
NSFR (%) ⁷⁹	–	–	170.1	168.4	165.7	
Asset quality						
Ratio of provisions for NPLs in the loan portfolio (%)	7.4	6.8	6.3	6.7	7.5	9.4
Share of loans past due over 90 days in the loan portfolio (%)	10.3	9.6	10.0	8.9	10.0	11.0

⁷¹ Profitability ratios for 2016 and 2017 have been presented without excluding the one-off effects referred to in Chapter 1 "Macroeconomic environment and lending development".

⁷² Annualised profit/loss ratio to average capital and reserves of the reporting period (excluding data of foreign credit institution subsidiaries).

⁷³ Annualised profit/loss ratio to average assets of the reporting period.

⁷⁴ Cost-to-income ratio = (administrative expenses + intangible and fixed asset depreciation and disposal)/(net interest income + income from dividends + net commissions and fees + profit/loss from trades of financial instruments + financial instrument revaluation result + net ordinary income + adjustment for impairment of available-for-sale financial assets) × 100.

⁷⁵ Ratio of pre-tax profit to operating income.

⁷⁶ As of 2014, the capital adequacy of credit institutions and the related indicators have been calculated in line with the methodology of the CRR and cannot be directly compared with the indicators of the previous periods. Data are shown at the consolidated level.

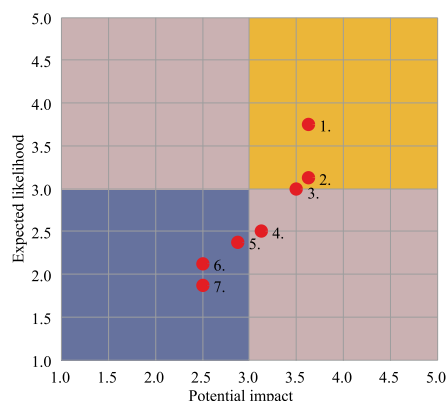
⁷⁷ CET1 is equivalent to Tier 1 capital for all credit institutions in 2014. As regards 2012 and 2013, data for Tier 1 capital are indicated.

⁷⁸ Liquid assets = vault cash + claims on central banks and other credit institutions + central government fixed income debt securities (those having a regular, unlimited market, i.e. they can be sold in a short period of time without considerable loss or used as loan collateral).

⁷⁹ Latvijas Banka's calculations.

APPENDIX 4. CREDIT INSTITUTION SURVEY ON THE POTENTIAL FINANCIAL STABILITY RISKS AND THE FINANCIAL STRESS INDEX

Chart A4.1
ASSESSMENT OF POTENTIAL FINANCIAL STABILITY RISKS PROVIDED BY CREDIT INSTITUTIONS IN THE MAY 2018 SURVEY



1. New reputation and other risks associated with the share of high-risk foreign customer deposits in the financial system
2. Adverse effects of the deterioration in the international geopolitical situation and external uncertainty on Latvia's economy
3. Weakening of external demand
4. Deterioration in creditworthiness of non-financial corporations
5. Sharp risk premium adjustment in financial markets
6. Rapid changes in real estate prices
7. Significant adjustment of real estate prices in Sweden and Norway and/or risk repricing which could have a negative effect on parent banks' borrowing terms and their financial position, as well as economic growth

Chart A4.2
ASSESSMENT OF RISK LEVELS BY CREDIT INSTITUTIONS FOR THE KEY RISK CATEGORIES (considering the expected likelihood and the potential negative effect of a risk in the next six months)

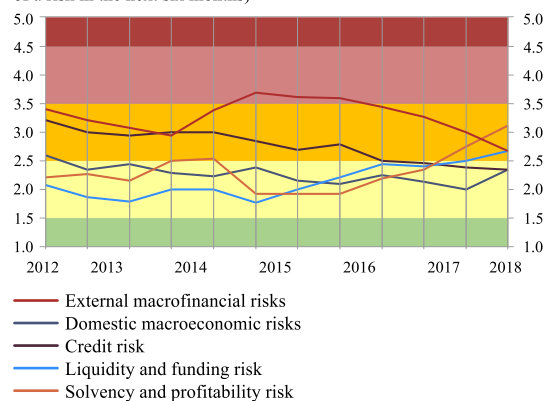


Chart A4.3
LATVIAN FINANCIAL STRESS INDEX

