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EUROSYSTEM

FINANCIAL STABILITY REPORT 30

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Stability and Security.

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The OeNB's semiannual Financial Stability Report provides regular analyses of Austrian and international developments with an impact on financial stability. In addition, it includes studies offering in-depth insights into specific topics related to financial stability.

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Call for applications: Visiting Research Program

The Oesterreichische Nationalbank (OeNB) invites applications from external researchers for participation in a Visiting Research Program established by the OeNB's Economic Analysis and Research Department. The purpose of this program is to enhance cooperation with members of academic and research institutions (preferably postdoc) who work in the fields of macroeconomics, international economics or financial economics and/or pursue a regional focus on Central, Eastern and Southeastern Europe.

The OeNB offers a stimulating and professional research environment in close proximity to the policymaking process. Visiting researchers are expected to collaborate with the OeNB's research staff on a prespecified topic and to participate actively in the department's internal seminars and other research activities. They will be provided with accommodation on demand and will, as a rule, have access to the department's computer resources. Their research output may be published in one of the department's publication outlets or as an OeNB Working Paper. Research visits should ideally last between three and six months, but timing is flexible.

Applications (in English) should include

- a curriculum vitae,
- a research proposal that motivates and clearly describes the envisaged research project,
- an indication of the period envisaged for the research visit, and
- information on previous scientific work.

Applications for 2016 should be e-mailed to *eva.gehringer-wasserbauer@oenb.at* by May 1, 2016.

Applicants will be notified of the jury's decision by mid-June. The following round of applications will close on November 1, 2016.

Financial stability means that the financial system – financial intermediaries, financial markets and financial infrastructures – is capable of ensuring the efficient allocation of financial resources and fulfilling its key macroeconomic functions even if financial imbalances and shocks occur. Under conditions of financial stability, economic agents have confidence in the banking system and have ready access to financial services, such as payments, lending, deposits and hedging.

Reports

The reports were prepared jointly by the Foreign Research Division, the Economic Analysis Division as well as the Financial Stability and Macroprudential Supervision Division together with the Supervision Policy, Regulation and Strategy Division and the Off- ite Supervision Division – Less Significant Institutions, with contributions by Andreas Breitenfellner, Gernot Ebner, Friedrich Fritzer, Andreas Greiner, Manuel Gruber, Stefan Kerbl, David Liebeg, Martin Ohms, Fabio Rumler, Stefan Schmitz, Josef Schreiner, Michael Sigmund, Katharina Steiner, Caroline Stern, Eva Ubl, Walter Waschiczek, Daniela Widhalm and Tina Wittenberger.

Management summary

Global growth declines, reflecting a further slowdown in emerging markets and a weaker recovery in advanced economies

Macroeconomic conditions have gradually strengthened further in Europe in the course of 2015, amid a more pronounced shift in growth dynamics from emerging to advanced economies. Still, euro area growth prospects remain muted, with the risks surrounding the economic outlook tilted to the downside given heightened macrofinancial vulnerabilities in major emerging economies.

At the global level, the prospect of diverging monetary policy trends in major advanced economies, ongoing geopolitical tensions and continued volatility in emerging economies and global commodity markets could lead to a renewed increase in vulnerabilities.

Macrofinancial conditions and financial market developments in many countries of Central, Eastern and Southeastern Europe (CESEE) continued to be broadly favorable in the first half of 2015, despite a broad-based reassessment of risks in international markets, especially vis-à-vis emerging economies. However, more volatility was observed in Turkey, and geopolitical tensions continued to weigh on dynamics in Russia and Ukraine.

With a few exceptions, the asset quality of the CESEE banking sectors has slightly improved due to the gradual start of nonperforming loan (NPL) resolution processes in several countries. Positive effects on the profitability of the banks concerned were already visible in the first half of 2015. Throughout most of the region, banks continued to be well capitalized. However, announced macroprudential measures in some countries will raise regulatory requirements and could therefore reduce capital mobility within banking groups.

Growth of credit to the Austrian nonfinancial sector stagnates at a low level

The growth of lending by Austrian banks to domestic nonfinancial corporations remained weak in the course of 2015. Loan dynamics continued to be affected by both supply- and demand-side factors. On the one hand, banks continued their cautious lending policies in 2015. On the other hand, loan demand by enterprises remained weak, reflecting the current cyclical environment. Moreover, firms had built up substantial liquidity buffers in recent years in the form of undrawn credit lines and overnight deposits. Thus, at least in the current environment of weak loan demand, Austrian banks' more restrictive lending policies probably did not constitute a binding constraint for the financing of Austrian enterprises. The subdued external financing of nonfinancial corporations was also reflected in a decreasing issuance of corporate bonds, which had been a major source of external finance for the corporate sector in the past years.

The low interest environment continued to support firms' and households' ability to service their debt. At the same time, the high share of variable rate loans in total lending – which has recently started to recede somewhat for new lending to households – implies considerable interest rate risks in the balance sheet of the corporate and household sectors.

As a result of the low saving rate, financial investments by Austrian households remained subdued in 2015. Given the low opportunity costs resulting from the low nominal interest rate environment, households continued to

display a strong preference for investments in highly liquid assets. At the same time, there are hardly any indications – at least within their financial investments – that households made up for low interest rates by investing in riskier assets.

Austrian banks still face headwinds despite improved profitability

The global low interest rate environment affects Austrian banks in the critical phase of transition from a high- to a low-growth environment. In this regard, Austrian banks are vulnerable to shocks, as their risk profile and risk-bearing capacity still need to be enhanced.

The Austrian banking system's consolidated profits rose significantly in the first half of 2015 compared with the previous year. This improvement can mainly be traced to reduced credit risk costs and an increase in operating profits, both in domestic and foreign business. Nevertheless, operating income was below the corresponding 2014 results mainly due to a decrease in trading and other operating income, while total assets remained stable. The improvement in operating profit was additionally supported by a reduction of operating costs. The improvement in operating efficiency resulting from lower operating costs may, however, not be sustainable as it is attributable to lower depreciation and amortization costs.

Measures taken to reduce operating costs in Austria seem to begin to bear fruit as operating profits in banks' domestic business improved markedly. Some weaknesses still exist, however. The number of local bank branches in Austria, for example, barely changed between 2008 and 2014, while other countries have reported material reductions.

Austrian banks are particularly vulnerable because of their significant exposure to CESEE. Given the higher uncertainty of future economic developments and fragile conditions in important markets like Russia and Turkey, risks deriving from banks' exposure to CESEE could again take center stage. Legal interventions concerning foreign currency loans in Croatia and Poland add to uncertainty. Profits of Austrian banks' subsidiaries in CESEE recovered after the particularly challenging year 2014, but profitability varies considerably between markets. Apart from the flat yield curve environment, Austrian banks are also still confronted with legacy issues, mainly in the form of a large stock of NPLs in several CESEE countries.

Recommendations by the OeNB

To strengthen financial stability in Austria, the OeNB recommends that the following measures be taken:

- Banks should continue to strive for capital levels that are commensurate with their risk exposures. The OeNB notes that the trend of improving capitalization has slowed down. The OeNB thus welcomes the recommendation by the Financial Market Stability Board (FMSB) to activate the systemic risk buffer (SRB) and calls on banks to start preparations proactively.
- Banks and insurance undertakings should thoroughly review their business models, internal structures, branch networks and processes in order to increase their profitability and to be prepared for the possibility of a prolonged low growth and low interest rate environment. The OeNB positively notes ongoing efforts in this direction.
- Banks should refrain from trying to gain short-term growth at the cost of

risk-inadequate pricing, as profit margins in Austria are narrow and margins in CESEE have come under pressure.

- Banks should further de-risk their loan portfolios by continuing to clean up their balance sheets and to pursue risk-adequate provisioning.
- Banks should adhere to the FMA minimum standards on foreign currency lending in their business in Austria and to the FMA's "Guiding Principles" in their CESEE business. This also includes working proactively with borrowers on tailor-made solutions to reduce the risks for both sides. Such an approach also encompasses reducing the risk related to the underperformance of repayment vehicles.
- The OeNB recognizes that major improvements in local funding have taken place since 2011. Nevertheless, banks should further continue to strive for sustainable loan-to-local stable funding ratios at the subsidiary level and for the risk-adequate pricing of intragroup liquidity transfers.

International macroeconomic environment: declining global growth reflects further slowdown in emerging markets and weaker recovery in advanced economies

Subdued global growth amid slowdown in emerging markets and weaker recovery in advanced economies

Macroeconomic conditions have gradually strengthened further in Europe in 2015, as the momentum of growth has shifted from emerging to advanced economies. Still, euro area growth prospects have remained muted, with the risks surrounding the economic outlook tilted to the downside given heightened macrofinancial vulnerabilities risks in major emerging economies.

At the global level, the prospect of diverging monetary policy trends in major advanced economies, ongoing geopolitical tensions and continued volatility in emerging economies and global commodity markets could lead to a renewed increase in vulnerabilities.

Growth in emerging and developing Europe is projected to remain broadly stable in 2015. The region has benefited from lower oil prices and the beginning recovery in the euro area, but at the same time has been affected by the contraction in Russia and other emerging markets and the impact on investment of still-elevated corporate debt.

Asset quality in Eastern European banking sectors has slightly improved due to the gradual starting of nonperforming loan (NPL) resolution in several countries. This also had positive effects on the profitability of banks in the first half of 2015. Across most of the region banks continued to be well capitalized. However, the implementation of macroprudential measures that have been announced in some countries will raise regulatory requirements.

Global growth affected by emerging market slowdown

The pace of global economic growth slowed down further in the review period from June to October 2015, and the world economy is expected to expand less in 2015 and 2016 than anticipated. While the outlook and economic performance improved in the U.S.A., the recovery lost steam in Europe and growth continued its slowdown in emerging economies, which suffer from financial volatility, low commodity prices and capital outflows. New data on U.S. economic activity signaled some improvement and reduced uncertainty about the forthcoming monetary policy normalization in the U.S.A.

In the euro area, the recovery has continued, mainly driven by domestic demand and net exports and supported by the Eurosystem's asset purchase program and low energy prices. In spring, yields on euro area government bonds rose temporarily, triggered by the resurgence of the Greek sovereign debt crisis, but returned to a declining path driven by the accommodative stance of monetary policy and continued subdued inflation expectations.

Global stock markets rebounded after their sharp but short slump related to China's bursting equity bubble in August. In Europe, stocks were also weakened by developments in Greece and, more recently, in automotive markets. In emerging markets, stock prices came under additional pressure by falling commodity export revenues, the

expected impact of rising policy rates in the U.S.A. on foreign debt as well as domestic vulnerabilities.

Economic activity back on growth track in the U.S.A., shrinking in Japan and subdued in emerging markets

In the U.S.A., real GDP grew by 0.4% (quarter on quarter) in the third quarter of 2015, following a very strong second quarter and a weak start to the year. Apart from a sizable inventory correction, the growth drivers remained intact, notably personal consumption, together with residential investment and public consumption. Going forward, household spending is expected to be buoyed by a further firming of the labor market, with unemployment down to 5.0% – close to its pre-crisis level – albeit lower participation rates and slow labor income expansion. Credit conditions have also been favorable while net exports could act as a drag on activity given a strong U.S. dollar and weak foreign demand. The threat of a more restrictive fiscal policy has been averted by bipartisan legislation that suspends the debt ceiling until after the 2016 presidential election. Monetary policy has remained accommodative, but the Federal Reserve is preparing the public for a raise in the federal funds rate in December conditional on further progress toward its objectives of maximum employment and inflation at 2%. Consumer price inflation has turned negative, declining 0.2% in September after –0.1% in August. Excluding the volatile components food and energy leaves the CPI index at a mere 0.2% in September.

Japan fell into its second technical recession within only two years. Japanese real GDP shrank in the second and third quarters (–0.2% each, quarter on quarter), mainly because of weak investment and inventory building in reaction to slowing demand from China. Despite unemployment falling below its assumed structural level (3.4% in August) wage growth was anemic. In September, headline CPI inflation was 0% and core inflation even negative. Long-term inflation expectations – an indicator targeted by the Bank of Japan (BoJ) – weakened broadly over the third quarter. Since fall 2014, the BoJ has applied its policy of "quantitative and qualitative monetary easing" (QQE), with the aim of "converting people's deflationary mindset." The Japanese government reacted to the renewed recession by postponing its planned increase of the value added tax to spring 2017. Structural reforms – the "third arrow" of the Japanese prime minister's "Abenomics" are seen to be key for achieving long-term growth.

In China, growth came in slightly higher than expected in the third quarter, still consistent with a gradual slowdown in the Chinese economy, which is currently undergoing a transition from export- and investment-led toward consumption-led growth. This process toward sustainability negatively affects China's trading partners in the short term through a sharp fall in the country's imports to a seven-month low and declining commodity prices. The Chinese CPI dropped to 1.6% in August, and producer price deflation deepened in its fourth year. Although concerns about the Chinese economy's risks of a "hard landing" remain, the latest measures adopted by the Chinese authorities to contain the stock market downturn in reaction to the foreign exchange rate regime change in August appear effective. The People's Bank of China (PBoC) has repeatedly intervened in currency markets, which it opened to foreign central banks in September. The Chinese renminbi overtook the Japanese yen to become the fourth most-used currency for global payments. Uncertainty remains about how the PBoC will and can manage the

transition to a more freely-floating exchange rate. More recently, the PBoC announced the third round of "two-track" monetary easing in 2015, cutting benchmark interest rates (for the sixth time in a year) and reserve requirements, particularly for bank lending to the agricultural sector and SMEs. As a further step toward interest rate liberalization, the rate ceiling for deposits has now been fully removed.

In Switzerland, the central bank warned in September that the value of the Swiss franc remained "significantly overvalued" and announced that it would remain active in the foreign exchange market to soften the impact on the Swiss economy.

Euro area recovery continues, with inflation remaining subdued

The economic recovery in the euro area continued in 2015. Real GDP grew by 0.4% (quarter on quarter) in the second quarter, slightly less than in the previous quarter, reflecting positive contributions from private consumption and – to a lesser extent – net exports. Euro area real output remained 0.8% below its pre-crisis peak. The latest data are consistent with a continued moderate economic expansion in the third quarter. Among the larger euro area economies, Spain performed best, growing by 1%, while Germany and Italy continued to grow moderately, and France stagnated.

Euro area inflation dipped back into negative territory in September but touched the zero line in October. The recent weakness has mainly been driven by energy and food prices, while core inflation has gradually increased to 1%. Headline inflation was below 1% in almost every country of the euro area; Spain and Greece continued to experience outright deflation. Market-based euro area-wide inflation expectations declined during the summer but have stabilized since then. The unemployment rate continued to decline slowly but steadily, reaching 10.8% in the first quarter. Employment creation gathered pace in the second quarter.

ECB continues asset purchase program supporting euro area bonds

Against the background of a rather neutral fiscal stance, monetary policy has become even more accommodative. This is true for the Eurosystems' conventional policies, with key interest rates at record low levels (negative deposit facility rate) as well as its asset purchase program, particularly concerning public sector securities in response to the risks of too prolonged a period of low inflation. The ECB continued its monthly purchases of public and private sector securities worth EUR 60 billion. They are to be carried out at least until the end of March 2017 and in any case until the ECB Governing Council sees a sustained adjustment in the path of inflation consistent with its aim of achieving inflation rates below, but close to, 2% over the medium term. Additionally, the Eurosystem kept liquidity injected into the banking system via its targeted longer-term refinancing operations (TLTROs), which are conditional on new lending to the real economy, in particular SMEs. As a result of these measures, central bank liquidity has risen to above EUR 1,200 billion and is expected to rise further by half that amount in 2016.

After the exchange rate of the euro had reached a trough in spring 2015 following a steep decline due to the effects of the asset purchase program, it gradually appreciated against the U.S. dollar and in nominal effective terms against a basket of 21 currencies until mid-October, when a renewed drop set in. Falling to below USD/EUR 1.1, the euro exchange rate has recently been determined by market expectations about the Federal Reserve's timing of

monetary normalization, the extension of the Eurosystem's asset purchase program and developments in China.

The representative stock index DJ Euro Stoxx rose by around 3.5% in the review period, almost three times the increase of the comparable U.S. Dow Jones Industrials. In the wake of an equity slump in China, global stock markets became more volatile, but recovered most of the losses until recently. Over the whole year, the DJ Euro Stoxx rose by around 12%. Euro area sovereign bonds have been volatile over the review period, weakened by fears surrounding a possible "Grexit" until early summer; more recently they have restored part of their earlier strength against the background of the Eurosystem's quantitative easing and a subdued inflation outlook, only dented slightly by the sharp decline in U.S. Treasury prices. Yields of German ten-year government bonds recently stood at ½%, after peaking at almost 1% in early June and recovering from a record low of almost zero in April due to flight-to-safety effects triggered by the resurgence of the Greek crisis. More recently, also non-core sovereign bond yields remain on a downward trend, as do U.S. Treasury and Japanese government bond yields. In the review period oil prices traded in a range of USD 40 to USD 50 per barrel, dampened by market oversupply and signals indicating a global slowdown.

Sound macrofinancial developments in CESEE EU Member States despite a more challenging international environment

CESEE: Sound macrofinancial developments in the CESEE EU Member States but situation in Russia and Ukraine remains challenging

The international environment for the CESEE region has become more challenging over the review period. Market volatility increased against the background of stock market turbulences followed by doubts about the sustainability of high growth in China and heightened uncertainty concerning the timing and pace of anticipated rate hikes by the Federal Reserve. This caused a broad-based reassessment of risk especially in emerging markets, which went hand in hand with capital outflows, currency depreciations and asset price deflation in a considerable number of countries. The IMF adjusted downward its growth forecasts for the world economy (especially those for emerging market and developing economies in Asia and Latin America) and for world trade. In this global setting, the strengths and weaknesses of individual CESEE countries became clearly visible.

Most CESEE EU Member states in the country sample covered in this report stand out positively, showing hardly any negative impact of the above-mentioned developments. Exchange rates were broadly stable, equity prices did not post substantial losses and bond spreads as well as CDS premiums remained by and large compressed compared to historical levels. Several factors made these countries especially resilient: while emerging markets around the globe had received substantial capital inflows (a considerable part of which were short-term) in the context of monetary accommodation and quantitative easing in advanced economies and, consequently, financing conditions were rather loose, CESEE EU Member States were much less affected by this development. On the contrary, a number of countries of the region saw large-scale deleveraging in the years after the outbreak of the global financial crisis. Furthermore, the CESEE EU countries have become more resilient over the past few years, following a much more balanced growth model compared to pre-crisis times: domestic

demand has played an increasingly important role recently amid continued (and in some cases substantial) current account surpluses. The incipient recovery in the euro area and low oil prices have also contributed to supporting growth in the CESEE EU Member States lately. The effects of all of these factors were reflected in strong GDP growth in the first half of 2015.

Growth was vivid also in Turkey. While having become more fragile, growth also benefited from some fiscal impulse ahead of the parliamentary elections in June 2015. Credit growth and inflation stood above the targets of the central bank. The country also continued to run a substantial current account deficit, financed to a large extent by portfolio and short-term capital inflows. On top of that, political uncertainty and geopolitical risks increased in the review period. The elections did not result in a clear majority for any party. The failure to form a coalition government thereafter made it necessary to hold snap elections in November; ensuing political uncertainty added to an all-time low in the consumer confidence index in September 2015. As security risks increased, uncertainty over global liquidity conditions have prevailed and external refinancing needs have remained elevated. Turkish five-year CDS spreads rose to their highest level in three years in early October 2015, before declining again somewhat. The Turkish lira has been under noticeable depreciation pressure too. Between the beginning of 2015 and mid-September, the currency weakened against the U.S. dollar by 24%. Against the euro, it depreciated by 17%. In late July, the Turkish central bank attempted to counter these depreciation pressures by cutting the one-week FX lending rates (by 50 basis points to 3% for U.S. dollar deposits and 25 basis points to 1.25% for euro deposits), while keeping its policy rate (one-week repo, borrowing and lending rate) unchanged. The Turkish lira has appreciated somewhat since.

Further deterioration of the macro-financial situation in Russia and Ukraine

Russia and Ukraine were also affected by financial market stress, with Russia slipping into recession in the first half of 2015. The reasons for this are well known and mainly relate to the deep slump in oil prices and the international sanctions in the context of the conflict in Ukraine. The sanctions also implied that Russia has been de facto cut off from international financial markets. This tightened funding conditions but also shielded the country from most of the disruptions in financial markets that were observed elsewhere in the review period. Nevertheless, the ruble depreciated in line with the declining oil price and in August 2015 returned to levels comparable to the trough reached in late 2014.

Turkey becomes more vulnerable

The exchange rate pass-through but also Russia's countersanctions (involving a ban on food imports from countries sanctioning Russia) lifted inflation into the double digits. In recent months, however, inflation has abated somewhat, providing room for some monetary easing against the background of a deepening economic contraction in the first half of 2015. The Central Bank of the Russian Federation decided to cut the key interest rate from its emergency-triggered high level of 17% (December 2014) by 600 basis points to 11% in August. Private net capital outflows declined somewhat to USD 52.5 billion in the first half of 2015 (compared to a record level of USD 69.4 billion in the first half of 2014). Russia's international reserves continued to decline until March and April 2015, when they reached USD 356 billion, before they stabilized and increased somewhat again to USD 371 billion in late Sep-

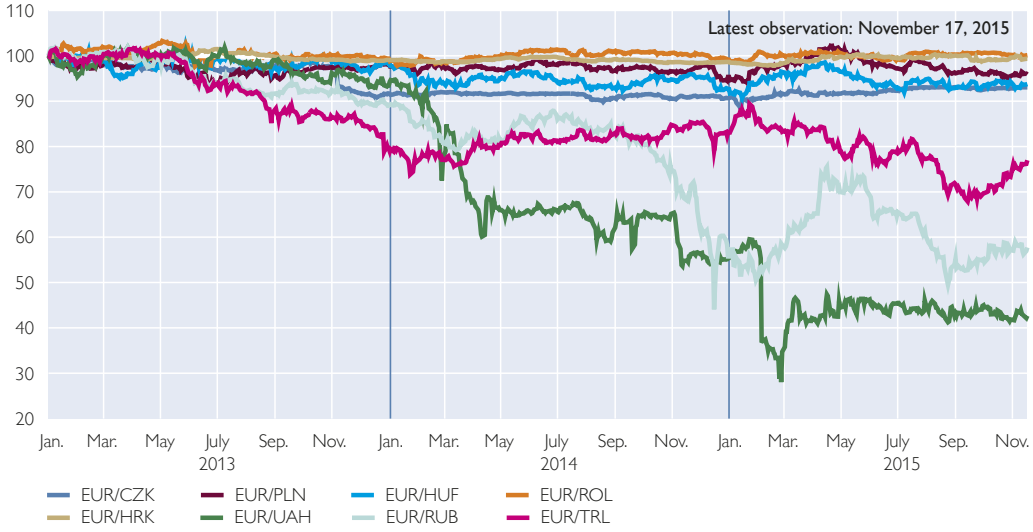
tember 2015. External deleveraging forced on Russian state-owned banks and enterprises in the context of the sanctions against the country played a key role in the further drop of the country's total external debt to USD 556 billion (around 39% of GDP) in the first half of 2015.

In Ukraine, economic activity plunged by 15.8% in the first half of 2015, but the downward trend decelerated markedly in the second quarter. Since March 2015, the Ukrainian hryvnia has remained broadly stable against the euro and the U.S. dollar. The National Bank of Ukraine (NBU) reduced its key policy rate in two steps from 30% to 22%, citing disinflationary developments. Inflation peaked at 60.9% in April before gradually declining to 51.9% in September 2015. Thanks to a current account adjustment (reflecting a weak currency, weak domestic demand as well as terms of trade effects) and official financing from the IMF, the EU, the World Bank and other creditors, the NBU's foreign exchange reserves doubled to USD 12.7 billion between end-March and end-September 2015, thus covering currently three months of import volume. The first review under the IMF Extended Fund Facility (EFF) was concluded at end-July. Talks on the second review were held in late September and early October, but some issues, in particular some policy and reform measures to be taken in 2016, remained outstanding, and therefore discussions will continue. In late August, the Ukrainian government achieved an agreement with the creditors' committee on the restructuring of privately held external sovereign debt in line with the IMF program. The deal contains a 20% nominal haircut and a four-year maturity extension as well as GDP-linked warrants to compensate bondholders for losses if the economy performs well in 2021–2040. At a bondholders' meeting in mid-October, creditors (more than 75% for each

Chart 1

Exchange rates of selected currencies against the euro

January 1, 2013 = 100; rise = appreciation



Source: Thomson Reuters.

bond) approved the debt exchange offers for 13 out of 14 series of bonds. No approval was obtained for the USD 3 billion Eurobond maturing in December 2015, as its holder, the Russian National Welfare Fund, did not take part in the voting. Russia regards the bond as official financing and has not accepted the restructuring terms. It is still unclear how the IMF would handle the issue if Ukraine defaulted on this bond. Yet, some IMF shareholders are preparing a change in the IMF's policy with regard to lending to countries that are in arrears to official creditors to continue the IMF program with Ukraine. Also, Standard & Poor's has already raised its foreign currency sovereign rating from selective default to B–.

Credit developments (nominal credit to the private nonbank sector and adjusted for exchange rate changes) were rather heterogeneous across CESEE in the review period. Credit growth rates remained at a comparatively high level in Poland and Slovakia and increased noticeably in the Czech Republic. In the latter, especially corporate credit expanded swiftly, mirroring a strong increase in gross fixed capital formation. Solid credit expansion rates in those countries were attributable to both favorable demand (related to rising domestic demand) and supply conditions (related to generally healthy banking sectors with low NPL ratios, high profitability and – in the Czech Republic and Slovakia – deposit overhangs as well as low stocks of loans denominated in foreign currency). Apart from the Czech Republic, also Romania reported some improved momentum in credit expansion as household loan growth accelerated. Overall, however, credit to the private sector still declined by –0.8% in Romania in August 2015.

Slovenia and Croatia, in turn, reported broadly stable, though negative credit growth rates. In Bulgaria and Hungary, credit growth rates slipped deeper into negative territory. While in the latter, this was related to a deep recession, statistical reasons played a role in Bulgaria and Hungary. In Bulgaria, the central bank revoked Corporate Commercial Bank's license for conducting banking activities in November 2014. This move implied that the bank's loans (amounting to some BGN 5.2 billion) were no longer included in the official banking statistics. This exerted a strongly negative base effect on credit growth in the review period. Even without this effect, however, credit growth would have been muted and declined to around zero. In Hungary, mortgage loans to households denominated in Swiss francs were converted into forint loans at an exchange rate below the prevailing market exchange rate in the first quarter of 2015. As a result, the share of foreign currency loans to households in total loans to households shrank from more than 50% in December 2014 to below 5% in August 2015. Hungary has announced to continue this conversion policy, aiming at eliminating foreign currency loans in the household sector altogether.

Heterogeneous credit developments in CESEE

An unsustainably high rate of credit growth was reported for Turkey, reaching levels of close to 20% year on year throughout 2015. Despite a moderate decline in recent months, credit expansions remained notably above the central bank's target. Contrary to that, credit growth in Russia halved from 12% to 6% and declined further to –20% in Ukraine against the back-

ground of the deepening economic contraction.[1]

Efforts toward converting Swiss franc loans

The strong appreciation of the Swiss franc after its exchange rate floor vis-à-vis the euro was lifted in January in combination with the existence of a notable stock of Swiss franc-denominated credit also prompted Croatia and Poland to take steps toward a conversion of Swiss franc loans. Croatia already adopted a legal act stipulating the conversion of household loans denominated in Swiss francs into euro loans. The costs of this measure are estimated at EUR 1 billion and are envisaged to be borne by the banking sector. However, the law has been contested in court by several banks. Discussions on the issue of foreign currency loans are ongoing also in Poland, where the new government is also planning a conversion of Swiss franc mortgage loans into złoty loans. The details of this plan have not been decided yet, however.

The following CESEE countries continued to report a notable share of foreign currency-denominated loans to households by August 2015: Croatia (close to 70%), Ukraine and Romania (around 50% each) and Bulgaria and Poland (around 30% each). In all these countries, however, the share has been shrinking throughout the review period, most strongly so in Ukraine (–7 percentage points).

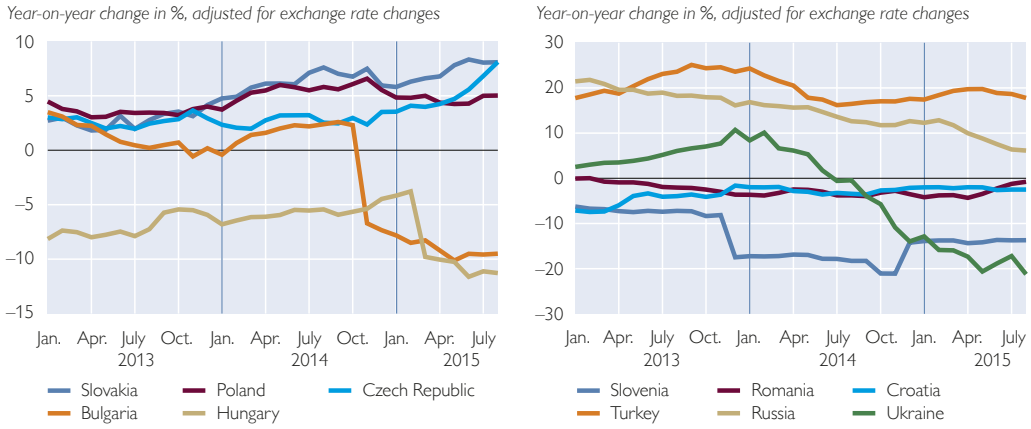
Favorable outlook for lending conditions in CESEE

Despite rather heterogeneous developments across credit aggregates, available lending survey results for the countries of the region draw a rather uniform and by and large positive picture of lending conditions.

The most recent CESEE Bank Lending Survey of the European Investment Bank (EIB), covering CESEE EU Member States and Western Balkan countries, reported that lending conditions had improved over the first half of 2015 and were expected to improve further over the next six months. Aggregate credit supply restrictions eased almost across the board and are expected to gradually ease further. NPLs and regulation, at both the national and international level, remain the most often cited factors constraining credit

Chart 2

Growth of credit to the private sector



Source: National central banks.

[1] *For further information on the Russian banking sector see Barisitz, S., "The Russian banking sector – heightened risks in a difficult environment" (p. 71) in this report.*

supply. Demand for loans improved marginally across the board, marking the fourth consecutive half-year of improvement. Demand was up not only for debt restructuring and working capital, but also for investment. Funding conditions have been fairly favorable and eased across all sources of funding. Local bank funding continues to play a dominant role, substituting for decreased intragroup funding. Aggregate NPL figures did not deteriorate further in the review period, signaling that a turning point may now have been reached. Yet, NPL levels remain high and constitute a key concern for the region's banks. Available national bank lending survey results for the Czech Republic, Romania, Hungary, Poland and Bulgaria support this general picture. However, some regional differences concerning the pace and dimension of easing in bank lending conditions remain.

The Russian bank lending survey also found some easing of lending conditions in the second quarter of 2015, after five quarters of (partly substantial) tightening. Once again, Turkey is different: Funding conditions were reported to have tightened considerably in the second and third quarters and are expected to continue to do so also over the next three months. Credit standards also tightened for corporate and mortgage loans. While demand for corporate loans decreased noticeably, it was somewhat higher for housing and consumer loans in the third quarter.

Concerning the operations of international banking groups in the region, the EIB survey found that the CESEE region remains relevant in the strategies of international banking groups. However, banks continue to be selective in their country-by-country strategies. Roughly 55% of the groups surveyed expect to expand operations, while another third may reduce operations in the region. Roughly half of the groups signal that they have been reducing their total exposure to the region already, while only little less than 30% expect to continue to do so. The profitability of CESEE operations has been gradually climbing back up again, and banks continue to reassess the potential of some of the region's markets in light of differing profitability and market-positioning stances.

Credit quality improves in many countries…

While Russia and Ukraine reported a strong increase in NPL ratios, credit quality turned out broadly favorable in the other CESEE countries. NPL ratios either remained largely unchanged on a comparatively low level (Czech Republic, Poland, Slovakia, Turkey) or decreased. The decrease was most pronounced in Romania, where banks removed uncollectible loans from their balance sheets that were fully or largely covered by adjustments for impairment and/or started to sell NPL portfolios. The quality of the loan portfolio, however, also improved substantially in Bulgaria, Hungary and Slovenia. In Bulgaria, a part of this development has to be attributed to the introduction of new reporting standards for NPLs in 2015. However, banks were also cleaning up their balance sheets against the background of a planned asset quality review and stress test that will be based on financial data as at end-2015. In Hungary, the decline in the NPL ratio was supported by the compensation of households by banks for abusive terms in loan contracts, which – in the case of NPLs – had to be used for the settlement of arrears. In Slovenia, the improvement in loan quality was fueled by the transfer of a further tranche of NPLs to a bad bank.

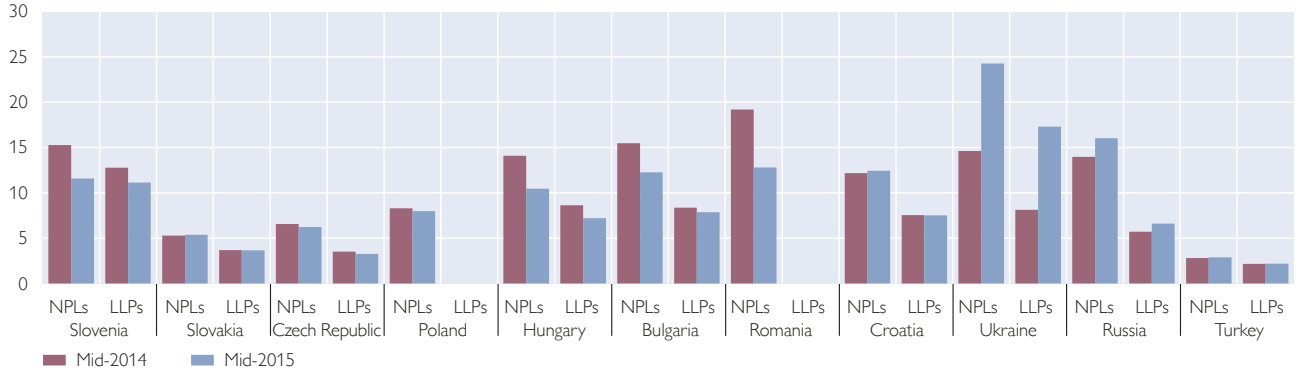
…which has a positive effect on profitability

Against the background of improving loan quality, banking sector profitability recovered somewhat in Slovenia,

Chart 3

Banking sector: credit quality

Nonperforming loans (NPLs) and loan loss provisions (LLPs) in % of total credit at end of period



Source: IMF, national central banks, OeNB.

Note: Data are not comparable between countries. NPLs include substandard, doubtful and loss loans, except for Ukraine (doubtful and loss loans) and for Romania and Slovenia (in arrears for more than 90 days).

Most banking sectors remain well capitalized

Bulgaria and Romania and substantially so in Hungary in the first half of 2015 compared to the previous year. In all these countries, this recovery was driven to a substantial extent by a lower net creation of reserves and provisions. At the same time, income (especially interest income) was often somewhat lower. In the other CESEE EU Member States and Turkey, profitability remained broadly unchanged, with the return on assets coming in at a satisfactory 1% to 1.5%.

A notable deterioration was only reported for Russia and Ukraine, against the background of a general economic recession in those countries. In Russia, the return on assets declined to close to zero as higher refinancing costs related to Western financial sanctions weighed on interest income. In Ukraine, the return on assets plunged to almost –5% as the creation of reserves and provisions as well as writedowns doubled compared to a year earlier.

Given improving profitability, banking sectors in Hungary, Romania and Bulgaria but also in Croatia were able to increase their capital base by around 1%. In contrast, especially Ukrainian banks are less capitalized today than they were a year ago. The capital adequacy ratio declined by 6.8 percentage points to 9%, and therefore no longer complies with the regulatory minimum level of 10% set by the Ukrainian central bank. The plunge was mostly due to the above-mentioned deterioration in credit quality and profitability. The central bank requires credit institutions to reach a capital adequacy level of at least 5%, 7% and 10% by February 1, 2016, late 2017, and late 2018, respectively. Despite generally similar problems, the capitalization of the Russian banking sector remained broadly unchanged in the review period as capital positions were supported by state capital injections. Capital adequacy ratios ranged from 14.8% in Turkey to 22.3% in Bulgaria and Croatia in June 2015. They were notably lower only in Russia and Ukraine at 12.9% and 9%, respectively. The refinancing structure of CESEE banking sectors has increasingly shifted toward domestic deposits during the past few years. This is especially true for those CESEE EU Member States under review in this report that had no or a

slightly negative gap between total outstanding domestic claims and total domestic deposits (relative to GDP) in 2014. The first half of 2015, however, brought a reversal of this trend in several countries. The relation between claims and deposits deteriorated somewhat in Slovakia, the Czech Republic, Romania, Croatia and Poland. Most of these countries, however, continued to report an overhang of deposits over claims. Only Poland reported a genuine funding gap of about 5% of GDP (up from 3% at the end of 2014) as the growth of claims outpaced the growth of deposits.

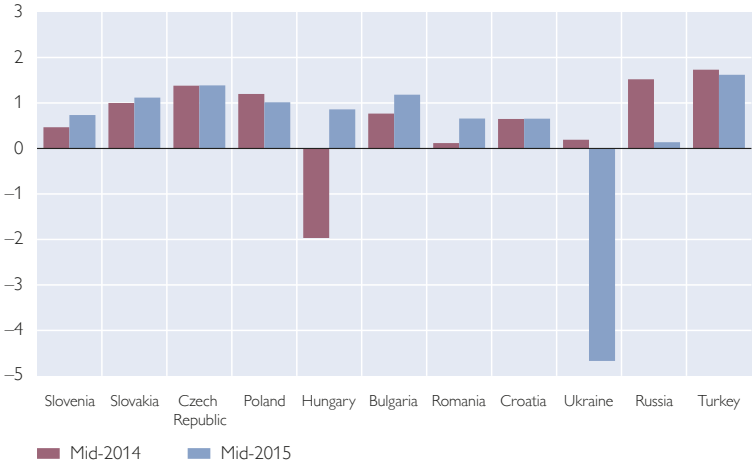
Funding gaps were much larger in Russia, Turkey and Ukraine, ranging between 11% of GDP (Russia) and 23% of GDP (Turkey). Unlike in Russia and Ukraine, the funding gap even widened further in Turkey in the review period (by 2.6% of GDP) as claims continued to grow faster than deposits.

The banking sectors of six of the ten countries under observation reported net external liabilities by June 2015, which mostly ranged between 5% of GDP and 10% of GDP. Only Turkey recorded substantially larger (and increasing) net external liabilities.

Chart 4

Banking sector: profitability

Return on assets (RoA) in %



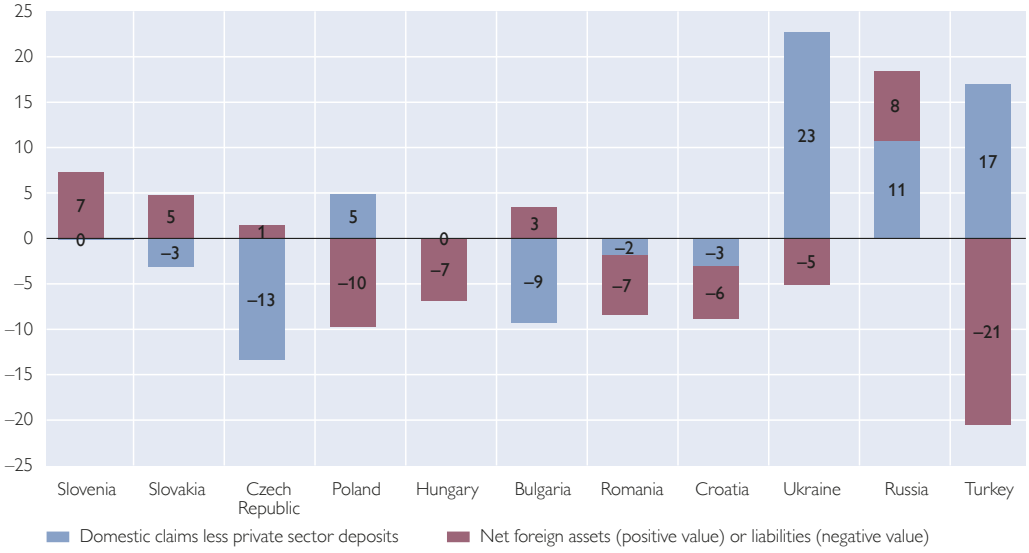
Source: IMF, national central banks, OeNB.

Note: Data are not comparable between countries. Data are based on annual after-tax profits, except for Russia's, which are based on pretax profits.

Chart 5

Banking sector: gap between claims and deposits and net external position

As a percentage of GDP at mid-2015



Source: ECB, Eurostat, national central banks, national statistical offices, OeNB.

Corporate and household sectors in Austria: financing volumes remain low

Corporate investment remains weak

Nonfinancial corporations' financial position supported by low interest rates

Sluggish economic growth in Austria

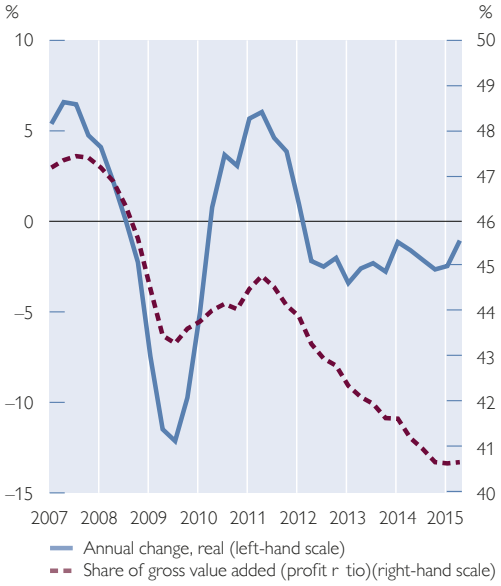
The dynamics of economic activity in Austria were moderate in the first three quarters of 2015. Whereas external factors – such as the strengthening of euro area growth, the low oil prices and the weaker euro – provided some (albeit limited) support for growth in Austria, domestic demand remained frail. Sustained uncertainties about future economic developments dampened the corporate sector's investment propensity, with equipment investment turning positive in the course of the year while residential construction investment remained weak.

Corporate profits continue to decrease

Reflecting the subdued economic environment, the gross operating surplus of Austrian nonfinancial corporations continued to recede in the first half of 2015 in real terms, thereby continuing the trend observed over the past three years (see chart 6). However, this decrease subsided in the course of the year and came to 1.1% in real terms in the second quarter (based on moving four-quarter sums). In nominal terms, the gross operating surplus was even up 0.6%. The downward trend in the gross operating surplus, expressed as a percentage of gross value added, that had been observed since 2011, came to a halt. At 40.7% by mid-2015, the gross profit ratio was unchanged against end-2014.

Chart 6

Gross operating surplus of nonfinancial corporations[1]



Source: Statistics Austria.

[1] Moving four-quarter sums.

Nonfinancial corporations' external financing went down further

Equity accounts for close to half of external financing

Nonfinancial corporations' recourse to external financing remained subdued in the first half of 2015 and, at EUR 6.3 billion, was even down by 10% against 2014. This distinctive slowdown might reflect nonfinancial corporations' ample liquidity on the asset side of the balance sheet on the one hand and, on the other hand, the merely gradual increase in financing needs for corporate investment. For the first time since the first half of 2013, the contribution of equity instruments (issuance of both quoted and unquoted shares) to total external financing was less than one-half (roughly 45%) in the first half of 2015. At EUR 2.9 billion, equity financing was about 30% lower than in the first half of 2014. This slowdown was attributable to the net issuance of listed stocks, which – after some signs of expansion in 2014 – fell by almost three-quarters to EUR 0.5 billion. In 2015 so far, there has been only one new listing, and three corporations

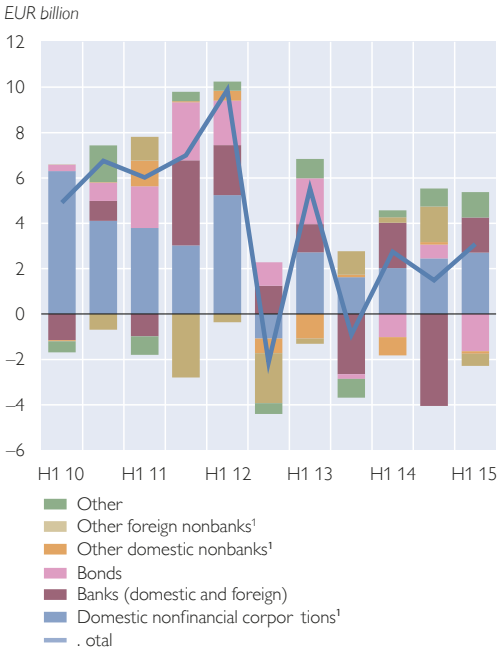
have increased their capital on the Vienna stock exchange. Unquoted shares and other equity instruments (mainly sales to foreign strategic investors) amounted to EUR 2.4 billion in the first half of 2015, virtually unchanged from the corresponding period in 2014, and thus accounted for the lion's share of equity financing (like in the period from 2011 to 2013). Net equity financing in the first half of 2015 was raised completely from abroad, while financing from domestic sources was negative.

Debt financing remains muted

The primary source of the Austrian corporate sector's debt financing were other nonfinancial corporations, which contributed almost 90% of total debt financing in the first half of 2015, thus proving to be – like in previous periods – a very stable form of funding. On the one hand, debt funding took the form of loans from other (mainly domestic) enterprises (mostly transactions within corporate groups), and on the other hand firms took recourse to trade credits despite the fact that in a low interest rate environment, this form of finance becomes comparatively more expensive. One reason for the increased use of trade finance might be that as a key element of firms' working capital, trade credits develop broadly in line with the business cycle.

Chart 7

Debt financing of nonfinancial corporations



Source: OeNB.

[1] Loans and trade credit.

Growth of bank loans slows down further

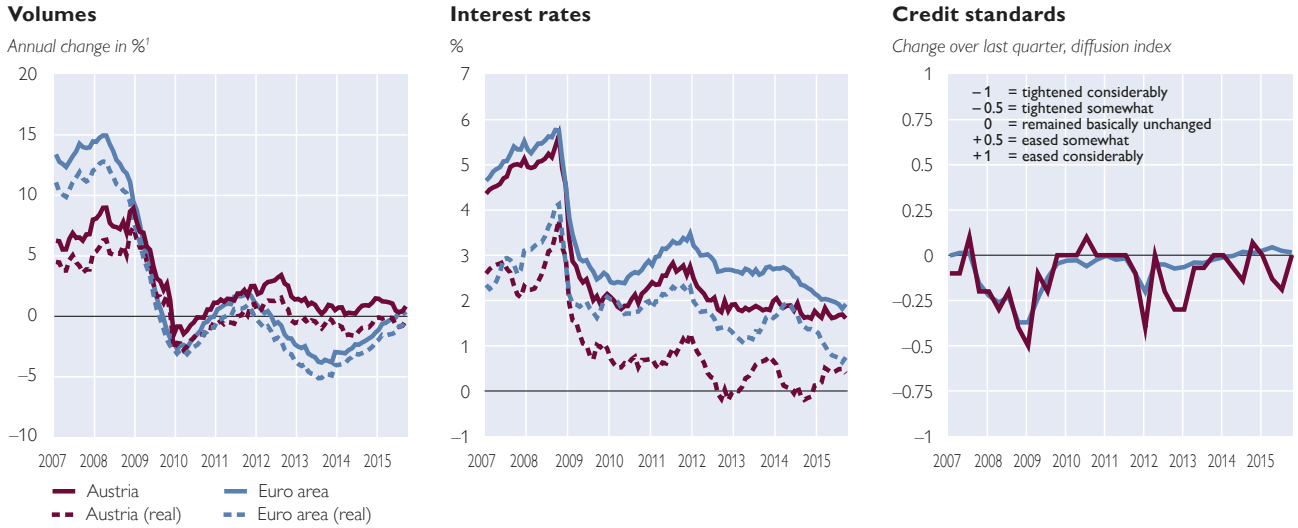
Borrowings from foreign banks – which are very volatile as they are largely driven by a few high-volume transactions – more than tripled in the first six months of 2015.[1] A significant part of this increase can be attributed to one large transaction. However, as a proportion of outstanding amounts, loans from foreign banks contributed some 8% to total bank lending to the enterprise sector. In contrast, lending by Austrian banks to domestic nonfinancial corporations slowed down. For September 2015, MFI balance sheet statistics put annual loan growth[2] at 0.8% in nominal terms (see left-hand panel of chart 8). Thus, Austria's positive growth differential vis-à-vis the euro area, which had been observed for almost four years, narrowed during the course of 2015 (and even diminished altogether for some months). In real terms, the growth of bank loans has been negative for more than two and a half years. (Nominal) loan growth mainly came from loans with medium-term and longer maturities (over one year), which had accounted for most of the loan growth in the past

[1] *Not adjusted for reclassifications, valuation changes and exchange rate effects.*

[2] *Adjusted for reclassifications, valuation changes and exchange rate effects.*

Chart 8

MFI loans to nonfinancial corporations



Source: OeNB, ECB.

[1] *Adjusted for reclassifications, changes in valuation and exchange rate effects.*

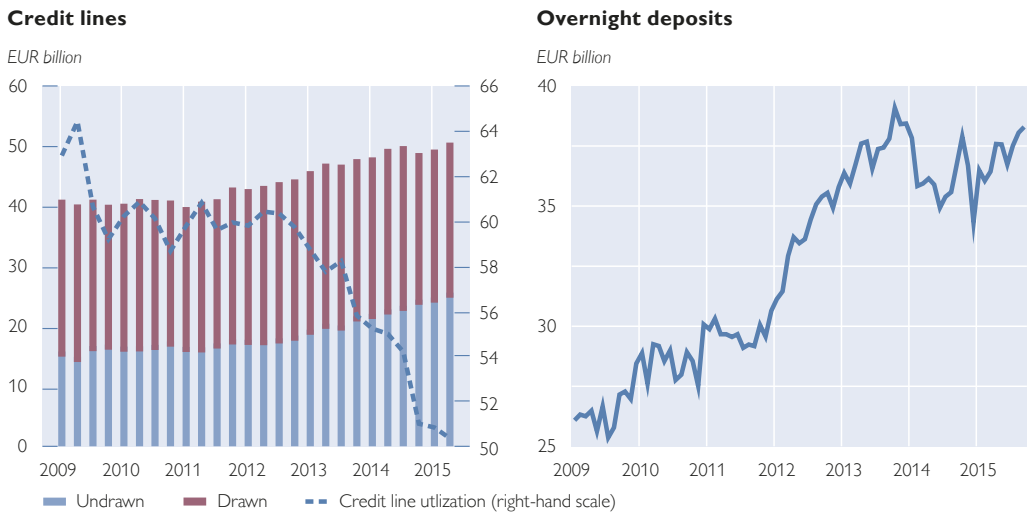
years, while the contribution of short-term loans (with maturities up to one year) decreased.

Loan dynamics continued to be affected by both supply- and demand-side factors. On the one hand, banks continued their cautious lending policies in 2015. According to the euro area bank lending survey (BLS), Austrian banks slightly tightened their credit standards for loans to enterprises in the first half of the reporting year and left them unchanged in the third quarter (see right-hand panel of chart 8). At the same time, banks said that the share of (completely) rejected applications for loans to enterprises rose slightly in 2015. Taking a longer-term view, banks tightened their standards in 19 out of 33 quarters and eased them only twice since mid-2007. Even though in most instances the extent of tightening was relatively small, it may have accumulated over the years. These lending policies affected large firms more strongly than small and medium-sized enterprises (SMEs). The tightening of lending policies has been driven both by factors related to banks' capital positions as well as by heightened risk concerns. Thus, it is possible that firms with poor credit ratings and higher insolvency probabilities, in particular, might have experienced increased difficulties in obtaining a bank loan.

On the other hand, loan demand by enterprises remained weak, reflecting the current cyclical environment. In both the second and the third quarters of 2015, banks surveyed in the BLS reported a slight decrease in corporate loan demand – as they had done in 22 out of 33 quarters since the onset of the crisis. Banks attributed this decrease mainly to lower funding requirements for fixed investment. Moreover, firms had built up substantial liquidity in recent years. Over the past three years, firms increased their undrawn credit lines (see left-hand panel of chart 9). According to the OeNB's quarterly statistics on new lending business, the total amount of undrawn credit lines available to enterprises has risen by

Chart 9

Indicators of nonfinancial corporations' liquidity



Source: OeNB, Eurostat.

EUR 7 billion, or 40%, since the end of 2012, i.e. much more strongly than the overall volume of credit lines, implying a significant drop in the rate of credit line utilization. Additionally, firms' overnight deposits, which had already increased markedly in 2012 and 2013, began to rise again in the course of 2015 (after a reduction in 2014). These liquidity buffers may reflect both precautionary motives and a lack of investment opportunities. Another factor that may have dampened corporate loan demand is that within capital expenditure, investment generally focused on the replacement of the existing capital stock, which is usually financed to a larger extent by internal finance, rather than on enhancing capacities. Thus, at least in the current environment of weak loan demand, Austrian banks' more restrictive lending policies probably did not constitute a binding constraint for the financing of Austrian enterprises.[3]

Favorable interest rates for bank loans

The tighter credit standards were reflected in the terms and conditions of bank loans. Wider margins, especially on riskier loans, as well as higher non-interest rate charges, as reported by banks in the BLS, partially dampened the effects of monetary policy easing on financing costs. Lending terms and conditions remained favorable as interest rates on loans to nonfinancial corporations declined even a little further during 2015. Between end-2014 and September 2015, corporate lending rates went down by 16 basis points (see middle panel of chart 8). The decrease was more marked for loans with an interest rate fixation period of more than five years than for loans with shorter maturities. The spread between interest rates on larger loans and those on smaller loans, which – given the lack of other data – is commonly used as an indicator of the relative cost of financing for SMEs, averaged 43 basis points in the first nine months of 2015, one of

[3] *For a detailed discussion of the factors behind Austria's recent falloff in investment activity, see Fenz, G. et al. 2015. Causes of declining investment activity in Austria. In: Monetary Policy and the Economy Q3/15. OeNB.*

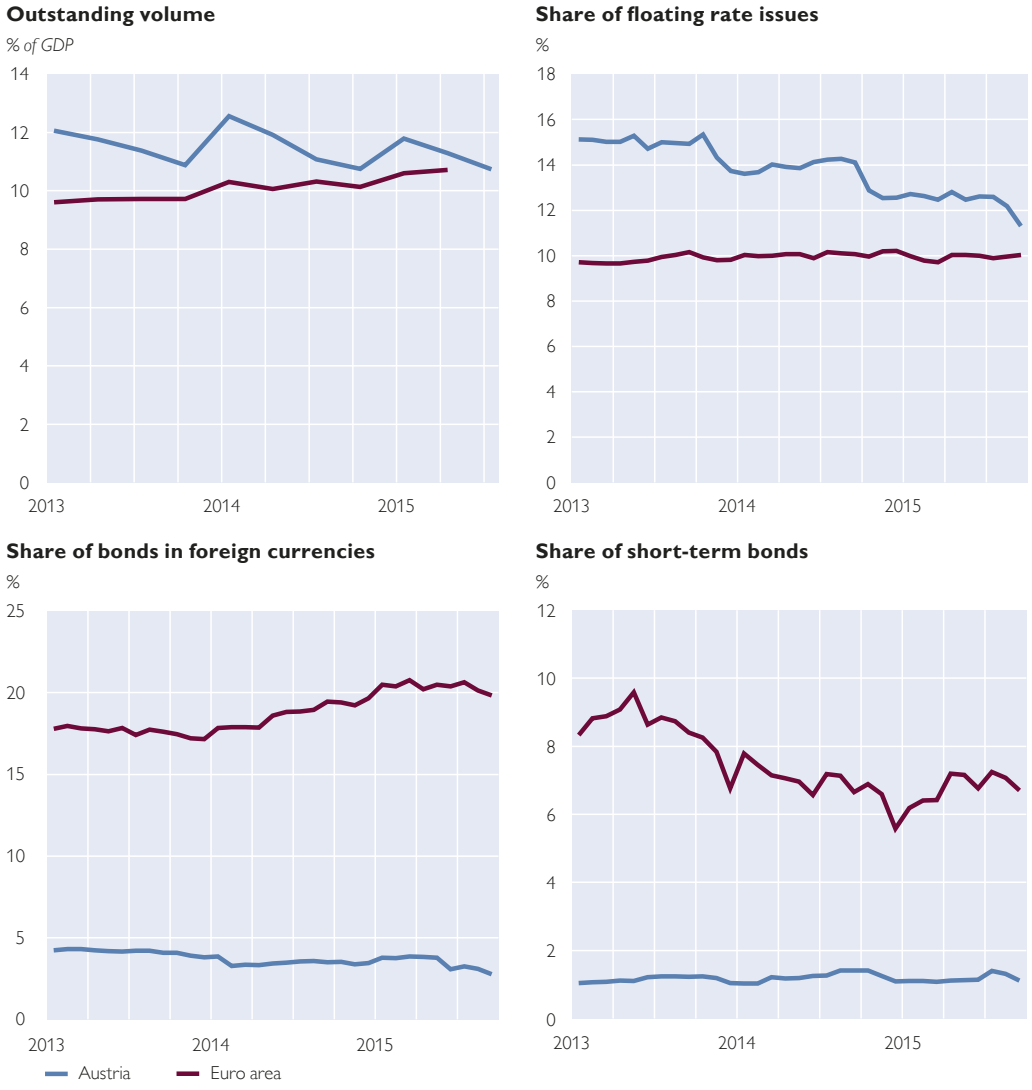
the lowest levels recorded in the euro area. Thus, the very low bank lending rates on new business are likely to have supported domestic lending to the corporate sector.

Corporate bond issuance declining

In the first half of 2015, the subdued external financing of nonfinancial corporations was also reflected in the decreasing issuance of corporate bonds, despite exceptionally low levels of corporate bond yields. Thus, according to financial accounts data, corporate bonds issuance fell by 4% in the first half of 2015 in net terms (measured against the outstanding volume at end-2014), after a 1% drop in the previous year. However, in the third quarter, issuance picked up considerably, as indicated by data from securities issues statistics.[4] In September 2015, corpo-

Chart 10

Corporate bonds



Source: ECB, OeNB.

[4] *At the cutoff date, financial accounts data were available up to the second quarter of 2015. More recent developments of financing flows are discussed on the basis of data from the MFI balance sheet statistics and the securities issues statistics.*

rate bond issuance was up 8.3% year on year in nominal terms.

Although this form of funding is available only to a limited number of mainly larger companies, bonds play a relatively important role in Austrian corporate finance. In the third quarter of 2015, the outstanding amount of long-term bonds issued by the corporate sector amounted to 10.7% of GDP, on a par with the euro area figure (for the second quarter).[5] Looking at the structure of outstanding corporate bonds, the share of floating rate issues decreased between the beginning of 2013 and September 2015 (from 15% to 11%) as did the foreign currency share (from 4% to 3%). Conspicuously, the foreign currency share in the outstanding volume of corporate bonds is considerably lower in Austria than in the whole euro area. While the volume of long-term bonds issued by Austrian enterprises exceeds the euro area average, commercial paper (short-term debt securities) only plays a minor role in corporate finance. The share of short-term securities (with a maturity of less than one year) issued by Austrian non-financial corporations amounted to 1.1% of the total outstanding volume of securities issued by the Austrian enterprise sector (against 6.7% in the euro area).

Interest rate risk of the corporate sector remains elevated

As corporate debt (viewed in terms of total loans raised and bonds issued) rose only modestly in the first half of 2015 (by 1.3% against the first half of 2014) and remained below the nominal expansion rate of the gross operating surplus, the corporate sector's debt-to-income ratio decreased slightly in the first half of 2015 to reach 433% (see chart 11). However, it still remained well above pre-crisis levels, implying that the increase in the corporate sector's vulnerability observed in the period from 2007 to 2009 has not yet been reversed.

Share of variable rate loans in new loans remains high

The low interest environment continued to support firms' debt-servicing ability. In the first half of 2015, the proportion of gross operating surplus spent on interest payments for (domestic) bank loans declined slightly further, benefiting from the very high share of variable rate loans in total new loans. While Austrian companies therefore currently face lower interest expenses than their euro area peers, their exposure to interest rate risk is higher. A rebound of interest rates could thus become a burden, especially for highly indebted companies, even if rising debt servicing costs may eventually be partially offset by the positive impact an economic recovery would have on firms' earnings.

The corporate sector's exposure to foreign exchange risk, which has never been as high as that of the household sector, remained low in the first nine months of 2015, amounting to 4.3% at the latest reading. Since the second quarter of 2014, the share of foreign currency loans in total outstanding loans in Austria has been below the comparable figure for the euro area as a whole.

Number of insolvencies goes down

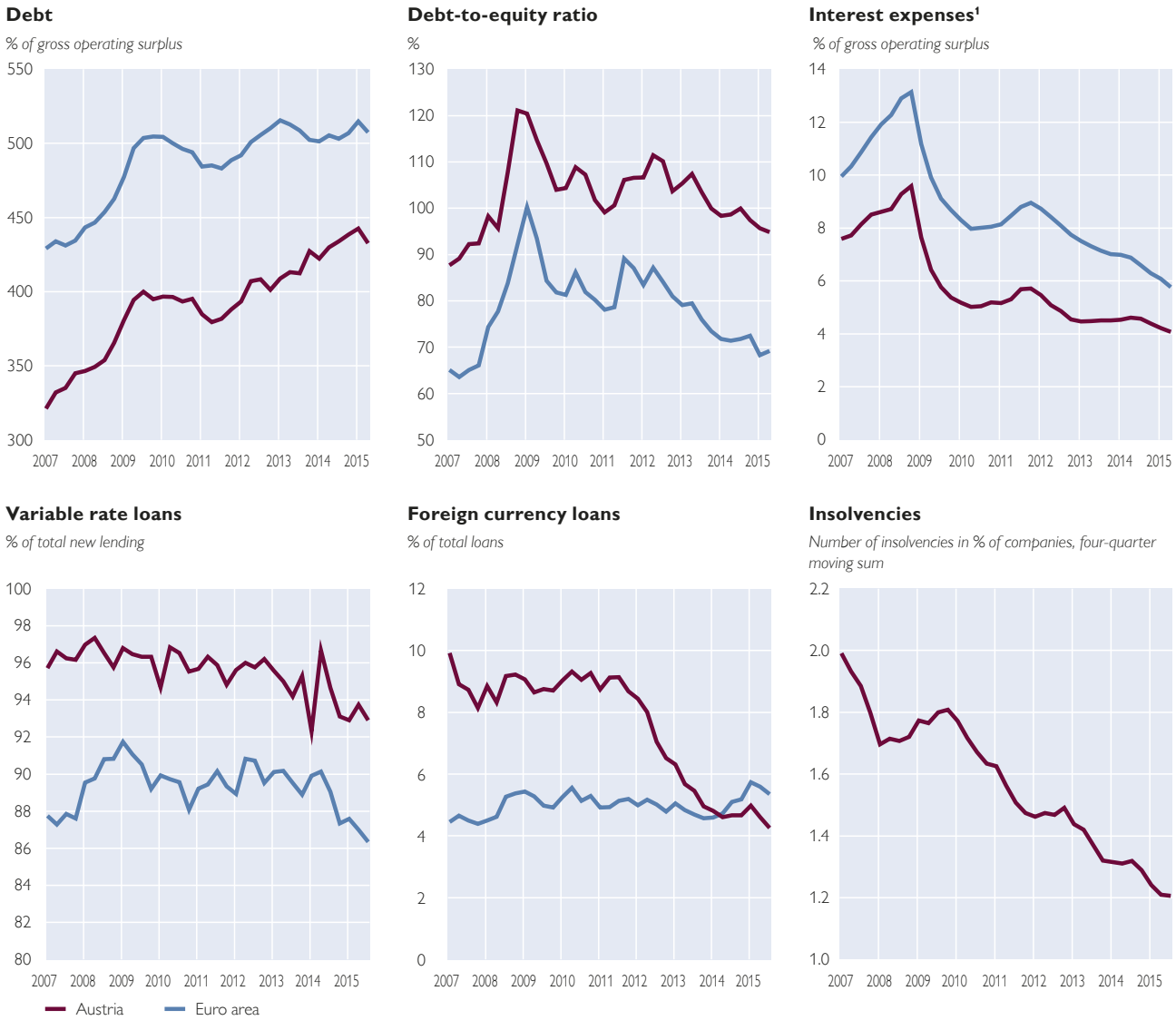
The insolvency ratio[6] continued to decline until the third quarter of 2015 (based on a moving four-quarter sum to account for seasonality). This development may be attributed to the moderate increase of debt financing and the

[5] *Due to the implementation of ESA 2010 in the securities issues statistics as of end-2012, there is a considerable break in the tine series (mainly reflecting the fact that a considerable part of bond-issuing enterprises have been reclassified to the government sector).*

[6] *Number of corporate insolvencies in relation to the number of existing companies.*

Chart 11

Risk indicators for nonfinancial corporations



Source: OeNB, ECB, Eurostat, KSV 1870.

[1] Euro area: euro loans only.

low interest rate level, which makes debt servicing easier even for highly indebted companies.

Disposable household income on the rise

Households' preference for variable rate loans begins to ebb

Austrian households' saving rate remains low

After a two-year decline, real disposable household income rose in the first half of 2015, mainly fueled by low inflation. Looking at the structure of disposable income, we note that the nominal compensation per employee climbed slightly more in 2015 than in 2014, whereas property income and mixed income accruing to self-employed households increased rather slowly. Despite the economy's persistent weakness, employment continued to expand. At the same time, however, unemployment continued to

climb as well, given rising labor participation rates. Private consumption grew slightly during the first three quarters of 2015.

The household sector's saving rate remained at the low levels of the past years. While high uncertainty may have strengthened precautionary saving, consumption smoothing put downward pressures on the saving rate. Furthermore, the composition of disposable household income may also have reduced households' propensity to save as property income usually has a higher marginal saving ratio than earned income. Moreover, the current low interest rates might have reduced the attractiveness of saving.

Strong preference for liquid assets

Reflecting the low saving rate, households' financial investments remained subdued in the first half of 2015. At EUR 2.7 billion, they were almost 40% below 2014 levels and more than two-thirds below the 2012 value (see upper left-hand panel of chart 12).

The structure of households' financial investments showed the same pattern as in previous years. Given the low opportunity costs resulting from low nominal interest rates, households continued to display a strong preference for highly liquid assets and shifted almost EUR 6 billion (more than twice the total net financial investments in that period) into cash holdings and overnight deposits with banks. Bank deposits with agreed maturity continued to decline. Since the first half of 2012, households' overnight deposits increased by more than EUR 30 billion, while deposits with agreed maturity fell by almost EUR 20 billion.

Investment in life insurance and pension entitlements (the latter including both claims on pension funds and direct pension benefits granted by private employers) continued to slow down in the first half of 2015 and at EUR 0.6 billion reached only about a quarter of the value registered in the corresponding period of 2014. This decrease was driven mainly by life insurance policies, where net investments have been negative since the second half of 2014. In the first six months of 2015, net investments in life insurance policies amounted to –EUR 0.3 billion (against +EUR 0.5 billion a year earlier). This reduction is all the more remarkable as a large part of the (gross) inflows into these instruments did not result from current investment decisions, but rather – given the long maturities and commitment periods involved – reflected past decisions; moreover, life insurance policies often serve as repayment vehicles for foreign currency-denominated bullet loans (even if these are converted into euro loans).

Households' financial investment decreased significantly

Households' net financial investments in capital market instruments, which had already been muted in previous years, were negative in the second half of 2015 (–EUR 0.8 billion). In particular, households shunned investments with longer interest rate fixation periods and reduced their direct holdings of long-term debt securities (especially bonds issued by domestic banks). Moreover, they reduced their direct holdings of quoted stocks by EUR 0.5 billion. Conversely, households invested EUR 2.3 billion in mutual funds. Thus, there are few indications – at least within their financial investments – that households made up for low interest rates by investing in riskier assets.

Capital market investments turn negative

Negative net investments in life insurance policies

Chart 12

Financial investments of households

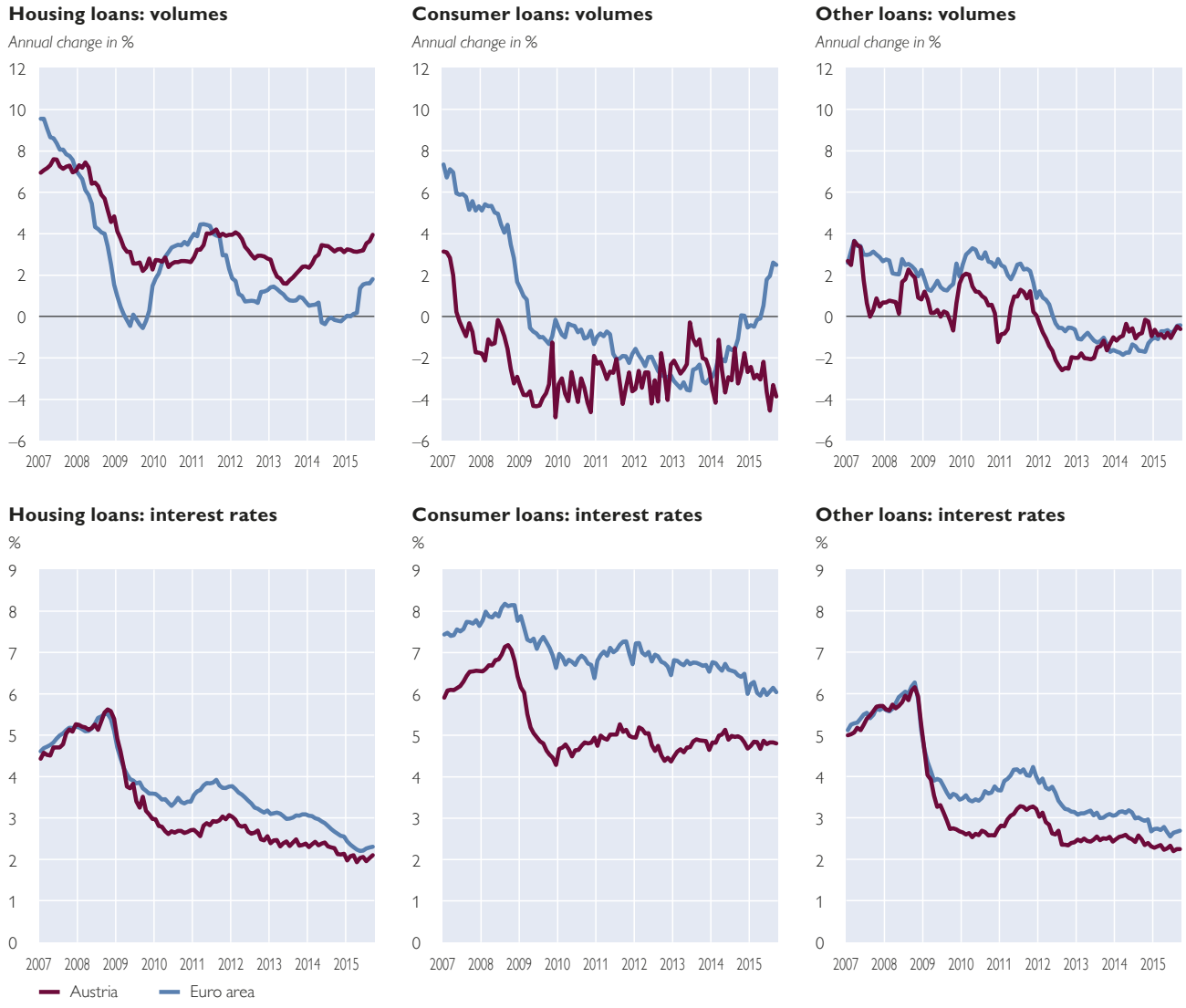
Source: OeKB.

Sizable (unrealized) valuation losses in the second quarter of 2015

As a result of rising share and bond prices, the Austrian household sector, on aggregate, recorded considerable (unrealized) valuation gains of EUR 5.7 billion on its securities portfolios in the first quarter of 2015, which was equivalent to 5.4% of households' securities holdings one year earlier. Valuation gains were registered for long-term debt securities, mutual fund shares and quoted stocks. In the second quarter of 2015, however, (equally unrealized) valuation losses of more than EUR 3 billion were registered amid falling bond and share prices, wiping out more than half of the gains of the first quarter. Again, all three asset classes were affected. On balance, households still benefited from a notional increase in financial wealth from securities holdings in the first half of 2015.

Chart 13

MFI loans to households: volumes and interest rates



Source: OeNB, ECB.

[1] *Adjusted for reclassifications, valuation changes and exchange rate effects.*

Growth of household loans remains subdued

Housing loans gain momentum

The expansion of bank lending to households remained subdued until the third quarter of 2015. In September 2015, bank loans to households (adjusted for reclassifications, valuation changes and exchange rate effects) increased by 1.8% in nominal terms. A breakdown by currency shows that euro-denominated loans continued to grow briskly (by 6.1%), while foreign currency loans continued to contract at double-digit rates – in September 2015, they had fallen by 10.7% year on year. A breakdown by loan purpose (see chart 13) shows that consumer loans and other loans shrank by 3.9% and 0.6% year on year, respectively, whereas housing loans grew by 4.0% year on year.

While the favorable financing conditions probably supported the dynamics of lending for house purchases, there are no indications that banks relaxed their credit standards for housing loans in recent years. According to the Austrian BLS results, standards have been eased slightly only twice since the beginning of 2014.

In line with MFI balance sheet items (BSI) statistics, banks have been reporting a slight increase in households' demand for housing loans in the BLS since 2014. Since the first quarter of 2015 (when this factor was included in the BLS questionnaire), banks have attributed this increase largely to the general level of interest rates. Another factor that consistently affected the increasing demand for housing loans were housing market prospects, including expected house price developments. Housing market indicators also pointed to an increase in demand. The strong house price increase registered over the past few years (although not in the course of this year – see below) may have boosted the funding needs for real estate investment. In the first half of 2015, the transaction volume in Austria's residential property market increased by roughly 30% year on year in nominal terms, according to data published by RE/MAX and compiled from the land register by IMMOunited. This rise also implies an increase in financing needs. However, to a large extent this increase in transaction volumes is likely to reflect the front-loading of transactions, especially of transfers in kind, which do not require financing, as property tax increases are due to take effect in 2016.[7]

Lending terms and conditions remained favorable although interest rates on loans to households no longer declined in 2015. Interest rates on short-term loans (for interest rate fixation periods of up to one year) stood at 2.46% in September 2015, 0.02 percentage points up on the end-2014 figure. A look at data on lending rates across the entire maturity spectrum reveals that interest rates on new housing loans stood at 2.10% in August 2015, 0.04 percentage points lower than in December 2014. Over the same period, interest rates on consumer credit increased by 0.13 percentage points to 4.81%.

[7] *For details on the tax reform and the Austrian residential property market, see the OeNB residential property market monitor of October 2015 (https://www.oenb.at/en/Monetary-Policy/real-estate-market-analysis/data-and-analyses.html).*

Box 1

Are financial services driving inflation in Austria?

Financial services inflation only slightly above average

The financial services subset of the Harmonised Index of Consumer Prices (HICP) basket comprises the fees banks charge for managing accounts, credit cards and custody accounts.

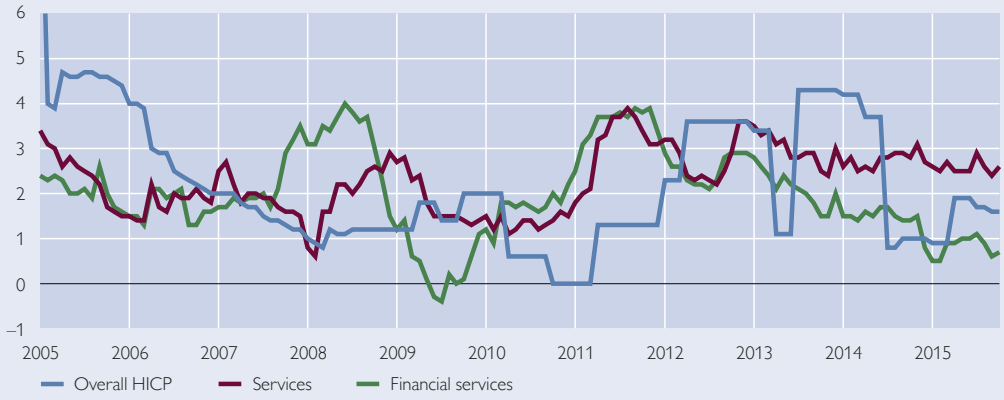
The chart below shows the development of financial services prices as well as that of headline and services inflation. It is evident – from an inflation rate that remains constant for several months – that prices of financial services tend to be adjusted only at greater intervals. Nevertheless, we do not, over a longer review period, see a persistent differential of financial services inflation vis-à-vis headline inflation. Since 2005, the inflation rate of financial services prices has averaged out at 2.2% per annum, which basically corresponds to the average services inflation rate (2.3%) recorded over the same period. Annual headline inflation has been 2.0% on average since 2005. Judged from the index change between 2005 and October 2015, the 21.6 index point increase in financial services prices is slightly lower than the rise in the overall HICP index of 21.9 index points over the analogous period. Some banks actually justify their raising of account management fees as adjustments to headline inflation. In 2005 to 2006, 2009 and 2012 to 2014, the inflation rate of financial services prices exceeded headline inflation, in the other years under observation it was below headline inflation.

At 0.37%, the weight of financial services in the HICP basket is very low, which is why the contribution of financial services to both headline inflation and service price inflation is also minimal. As a case in point, in 2014, financial services contributed 0.0087 percentage points to Austria's inflation rate of 1.5%. Their contribution to overall service price inflation in 2014 (2.8%) came to about 0.02 percentage points.

If we only consider the period after the introduction, in early 2011, of the tax on bank liabilities in Austria (which raised concerns that banks would pass on the related costs to their clients via raised bank fees), an international comparison does not show any notable development in the contribution of financial services to inflation in Austria. Since 2011, financial services have contributed an average of 0.0084 percentage points to headline inflation in Austria, i.e. only marginally more than in the period since 2005 (0.0083 percentage points).

Inflation rate of financial services

Annual change in %



Source: Statistics Austria.

Households' currency and interest rate risks remain a concern

Slight increase in household indebtedness

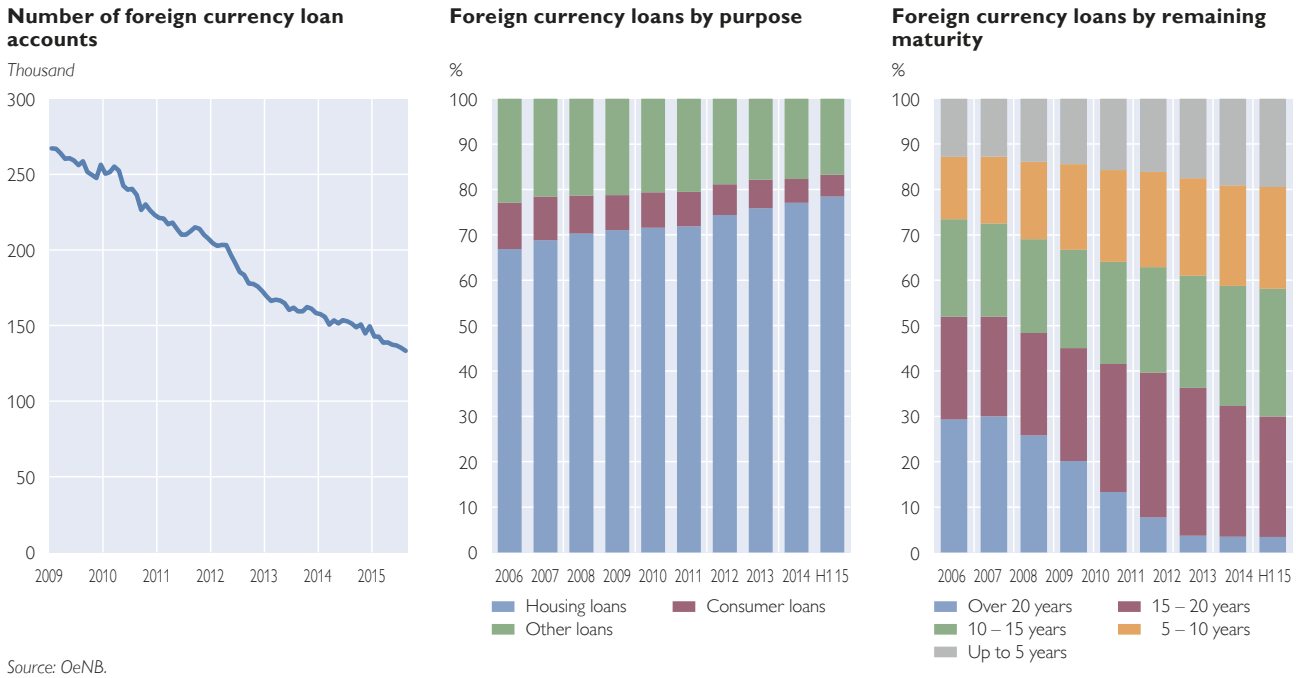
By mid-2015, the household sector's total liabilities amounted to EUR 171.7 billion according to financial accounts data, up 3.8% in nominal terms on the comparable 2014 figure. Expressed as a percentage of net disposable income, household debt rose by 2.5 percentage points to 90.3% in the first half of 2015 (see chart 15). Despite this increase, households' debt ratio thus remained lower in Austria than in the euro area as a whole. Moreover, according to data from the Household Finance and Consumption Survey (HFCS), only about one-third (36%) of Austrian households have taken out a loan – one of the lowest shares of all euro area countries. So the primary concern is not the absolute value of households' indebtedness, but rather its structure – namely the high shares of variable rate and foreign currency loans in total household borrowing.

Households start to reduce variable rate loans

In the third quarter of 2015, loans with an initial rate fixation period of up to one year accounted for 78% of new lending (in euro) to households, against almost 90% in 2014. This reduction can be seen in conjunction not only with the fact that interest rates no longer declined in 2015 but also with the continuing reduction in the spread between the interest rates for loans with long and short interest rate fixations periods. But even if the share of variable rate loans in total new loans has been falling recently, it is still very high by international standards. On the one hand, therefore the pass-through of the ECB's lower key interest rates to banks' lending rates was faster in Austria than in the euro area, thus reducing households' current interest expenses. Loan quality may also have played a role, given the comparatively low level of indebtedness of Austrian households. Households' interest expenses equaled 1.8% of their aggregate disposable in-

Chart 14

Foreign currency loans to households



Source: OeNB.

come in the second quarter of 2015, about 2 percentage points less than in 2008, the year before interest rates had begun to fall. On the other hand, the high share of variable rate loans in total lending to households implies considerable interest rate risks in the household sector.

Despite a noticeable decrease in the past few years, the still very high share of foreign currency loans in total lending remains a major risk for Austrian households. There are still about 138,000 borrowers in Austria who have a foreign currency loan, about half as many as in 2009 (see left-hand panel of chart 14).[8]

In those cases where households did not hedge their foreign currency exposure, shifts in exchange rates affect both the euro-denominated value of foreign currency liabilities and the interest to be paid on outstanding loans. As exchange rate movements not only feed through to interest expenses but also affect the euro equivalent of the principal at maturity– even if they may be considered unrealized valuation changes in bullet loans –, they may well affect current payments through the necessity to cover this increase in order to ensure repayment when the exchange rate risk will eventually materialize at maturity date. This risk had been highlighted in January 2015 when, as a result of the strong appreciation of the Swiss franc following the decision of the Swiss National Bank to discontinue its minimum exchange rate of CHF 1.20 per euro, the foreign currency share in outstanding household loans rose from 18.0% to 19.5% within one month. However, during the following months, the share of foreign currency housing loans continued to edge down, coming to 17.1% in September 2015. Almost all outstanding foreign currency-denominated housing loans are denominated in Swiss franc (close to 97%).

Foreign currency loans remain a major concern

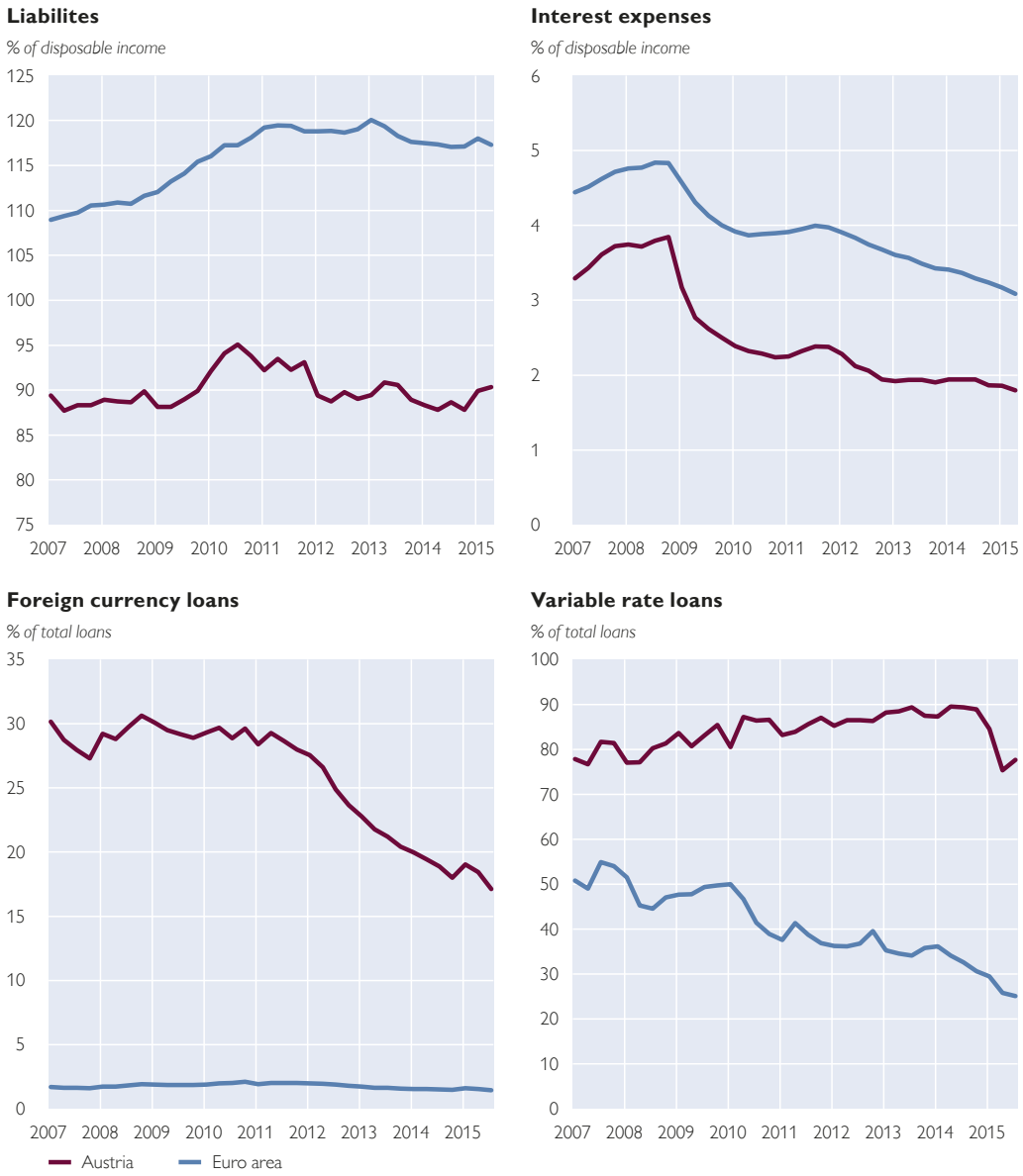
Households use foreign currency loans predominantly for housing purposes. By September 2015, about 78% of all foreign currency loans had been taken out for this purpose, while consumer loans accounted for 5% and other loans for 17% of total foreign currency lending to households (see middle panel of chart 14).[9] That the primary purpose of foreign currency-denominated loans is housing is reflected in their long maturities. By mid-2015, more than 80% of foreign currency loans had a remaining maturity of more than five years. However, as a result of the very low volume of new foreign currency loans, the remaining maturities have become increasingly shorter. The time when the bulk of foreign currency loans will mature is still a way off, but drawing nearer. While in 2007 more than half (52%) of foreign currency loans to Austrian households had a remaining maturity of more than 15 years, this percentage had come down to less than one-third (30%) by mid-2015. In any case, foreign currency loans will be around for some time as the last foreign currency loans will mature after 2035.

[8] *Strictly speaking, this is the number of foreign currency loan accounts. But survey evidence such as information gained from the HFCS shows that very few foreign currency borrowers have more than one loan outstanding.*

[9] *Other loans comprise loans to persons in the liberal professions and to the self-employed as well as loans for business purposes, debt consolidation, education and investments in pension provision models, and current account overdrafts whose purpose is unknown.*

Chart 15

Indicators of household indebtedness



Source: OeNB, Statistics Austria, ECB, Eurostat.

Note: Figures for the euro area reperesent only interest rate expenses on euro-denominated loans.

Residential property price growth in Austria slowed down

Price dynamics differ across regions

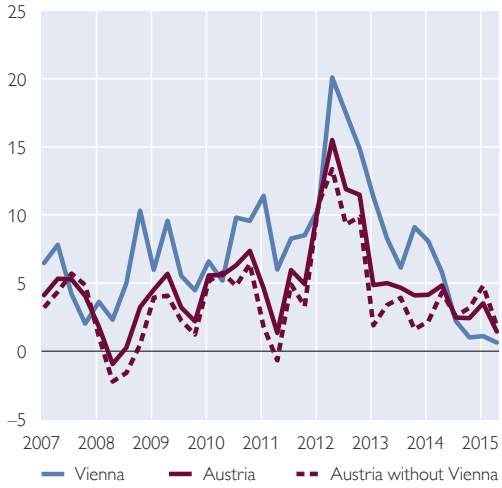
Over the past ten years, real estate prices rose at a stronger pace in Austria than in the EU. Since 2014, however, price dynamics in the Austrian residential property market have moderated considerably. In the second quarter of 2015, residential property price growth in Austria as a whole came down to 1.4% year on year. In Vienna, residential property price growth had continually subsided since the fourth quarter of 2013, coming to 0.6% year on year in the second quarter of 2015, whereas in Austria excluding Vienna, it had still accelerated until the first quarter of 2015. This trend was interrupted when

Chart 16

Austrian residential property market

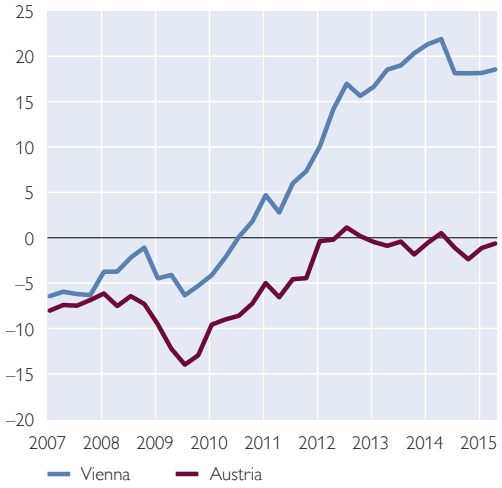
Residential property prices in Austria

Annual change in %



OeNB fundamentals indicator for residential property prices

Deviation from fundamental price



Source: TU Wien (Wolfgang Feilmayr, Department of Spatial Planning), OeNB.

residential property price growth slowed to 1.9% in the second quarter of 2015. According to the OeNB fundamentals indicator for residential property prices, residential property in Vienna was overvalued by 19% in the second quarter of 2015. For Austria as a whole, the indicator shows that prices were broadly in line with fundamentals in recent years.

Austrian financial intermediaries: adapting to a changing environment

Austrian banks face additional headwind because of low interest rate environment

Profitability of Austrian banks rose as a result of lower credit risk provisioning

Banks across the globe have posted mixed results over the past years. While the profits of U.S. banks have been relatively high and robust, European banks remain under pressure in a situation that has come to be known as "the new normal" (low economic and credit growth, loose monetary policies and low inflation rates). Net interest income, the most important source of income for banks, has decreased slightly both in Europe as well as in the U.S.

Compared to the previous year, the profitability of Austrian banks improved significantly in the first half of 2015, supported by lower credit risk provisioning (nearly one-third lower) and reduced write-offs and impairments (approximately two-thirds lower).[1] This at the first glance positive development has to be seen against the background of relatively low macroeconomic growth prospects in Austrian banks' core markets (Austria and CESEE), which cast doubt on the longer-term sustainability of this recovery. Moreover, extensive branch networks, flat yield curves and still elevated loan loss provisions in CESEE will continue to put pressure on banks' profitability. In addition, contributions to stabilization funds (e.g. for resolution and deposit insurance) and bank levies affect profitability. Also, the growing threat of cybercrime has been increasing the costs of a secure IT infrastructure.

In their domestic business, banks registered an increase in operating profit of around 15% as at June 2015 compared to the corresponding pre-year figure due to stronger operating income and lower operating expenses.

Operating income inched up by 6% year on year and exceeded EUR 10 billion. Against the background of stagnating net interest income, security and investment earnings as well as fee and commission income rose by 8% each, indicating that Austrian banks managed – at least partly – to increase their non-interest income. The trend of a higher significance of non-interest income components continued. Reduced staff costs were the main driver for lower operating costs. As a result the cost-income ratio on the domestic market improved significantly to 59% compared to end-2014 (70%). This improvement, however, has to prove its sustainability, as the cost-income ratio in Austria has historically been at elevated levels above 60%. Based on June 2015 data, Austrian banks estimate an unconsolidated return on average assets of 0.4% for the overall year. However, it has to be noted that this figure incorporates an estimate on risk provisioning for the whole year and thus should be interpreted with the necessary caution.

Figures for the third quarter confirmed the development of the first half of 2015 for Austrian banks' domestic business, although the momentum in operating income weakened.

[1] *As Hypo Alpe-Adria-Bank International AG was wound down at end-2014, the year-on-year analysis was adjusted for this effect.*

Box 2

Impact of the low interest rate environment on Austrian banks' interest margins

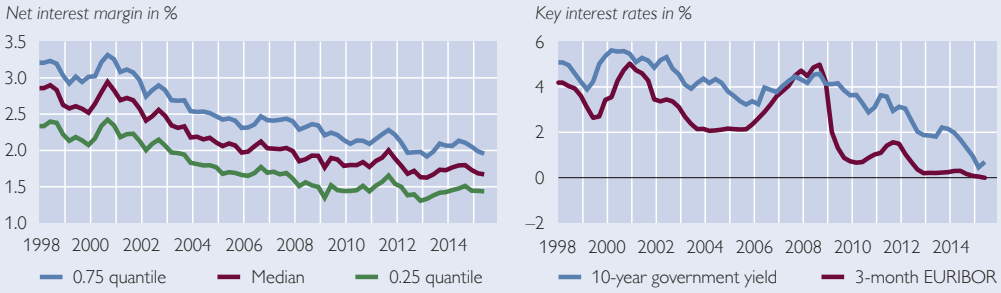
An econometric study conducted by the OeNB shows that banks' net interest margins have indeed been suffering from the low interest rate environment. Generally speaking, a decrease in key interest rates from around 1% to 0% is expected to result in a 25-basis point reduction in net interest margin. This effect is strongest if key interest rates are near zero and ebbs away at higher interest rate levels.

This is confirmed by recent international research.[1] The approach chosen by the OeNB is a panel regression that encompasses all Austrian banks and goes back to the late 1990s, which yields more than 30,000 observations. We control for various other explanatory variables like steepness of the yield curve, risk taking, liquidity, market power and main macroeconomic aggregates (for more details on the dataset and estimation details see: Gunter et al. 2013. Macroeconomic, Market and Bank-Specific Determinants of the Net Interest Margin in Austria. In: OeNB. Financial Stability Report 25.).

A further finding is that banks that rely on customer deposits and a large branch network are hit harder by the above-mentioned interest rate decrease. We estimate that the additional effect of a deposit-based funding structure on a bank's interest margin is about 4 basis points per 100-basis point reduction of the interest rate level. While the effect is statistically significant, it is small from an economic viewpoint. However, deposit-funded banks tend to have costly branch networks (and these costs are not part of the net interest income).

Also, we find strong evidence for reduced margins in an environment of a flat yield curve, which adds to the current margin squeeze. From year-end 2013 to the second quarter of 2015 the yield curve contributed to a further expected decline in net interest margins of 4 basis points according to the calculation. The chart below shows the ongoing decrease in net interest margins, which started close to 3% in 2000, dropping to 1.75% by end-2014.

Interest margins in Austria and reference rates



Source: Statistics Austria.

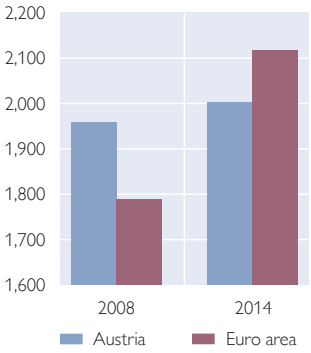
It must be emphasized that the interest rate level is one of many factors explaining the net interest margin. Market power, the asset side structure and risk taking are further important determinants in our econometric approach. Changes to these factors might compensate for the interest rate level effect.

More generally, net interest income is still clearly positive, and it depends on the level of other profit and loss positions, most importantly operating costs and risk costs, whether banks can remain profitable. Given the above results we expect banks to further curb costs and explore different profit sources like fees and commissions. Asset classes with a higher margin (and potentially higher risks and lower liquidity) might also be part of the reaction to the low interest environment and its pressure on banks' margins.

[1] *See for example: Busch, R. and C. Memmel. 2015. Banks' net interest margin and the level of interest rates. Discussion Papers 16/2015. Deutsche Bundesbank. Research Centre; or: Borio C., L. Gambacorta and B. Hofmann, 2015. The influence of monetary policy on bank profitability. BIS Working Papers 514. Bank for International Settlements.*

Chart 17

Population per bank branch



Source: OeNB, ECB, Eurostat.

Number of bank employees somewhat higher than at the start of monetary union

The relatively weak profitability of the Austrian banking system is a result of both structural and cyclical issues. Over the last few years, the profitability of the Austrian banking system has been driven by profits from foreign operations that were, however, associated with higher risks. As risks to profitability in CESEE materialized, banks stepped up their efforts to address structural issues, e.g. by reducing personnel costs via outsourcing or part-time employment models, the reduction of branch numbers or the adaption of distribution channels. But this trend is only slowly evolving. According to the recent ECB Report on financial structures,[2] for example, the reduction of bank branches (measured by population per branch) since 2008 has progressed much faster in other countries like the Netherlands, Spain, Greece or Belgium than in Austria. Moreover, the minor increase in population per branch in Austria has been driven by population growth and not by a reduction in branches.

Reduction of staff numbers in the Austrian banking sector has been moderate so far

According to OeNB data, Austrian banks employed 75,714 persons at the end of 2014. Since end-2008, this number had decreased by 5.7%, after an increase of 7.3% in the previous ten years (1998–2008). All in all, the number of bank employees was marginally higher at end-2014 (1.2%) than at the beginning of Stage Three of Economic and Monetary Union (EMU).

As in the Austrian economy at large, employment in banking has to a considerable degree reflected cyclical factors, although the momentum of this development has been markedly less pronounced in the banking sector. Only in the five years prior to the crisis (2003–2008) was the growth rate of bank employment similar to that in Austria as a whole. Then, the crisis left its mark on banking sector employment. The share of Austrian banking sector employment in total employment has been steadily declining since 1998. At the end of 2014, the banking sector accounted for 2.18% of all employed persons, 0.21 percentage points less than in 1998.

In an international perspective, the decline in bank employment in 2008–2014 was moderate; across the EU, the number of bank employees decreased by more than 10% according to data compiled by the ECB. This difference was all the more noticeable as the significant increase in bank employment that had been registered in Austria in the run-up to the crisis was not mirrored in many other countries. In contrast to the 7.3% increase in Austria, the number of employees in the euro area as a whole dropped by 0.5% between 1998 and 2008.

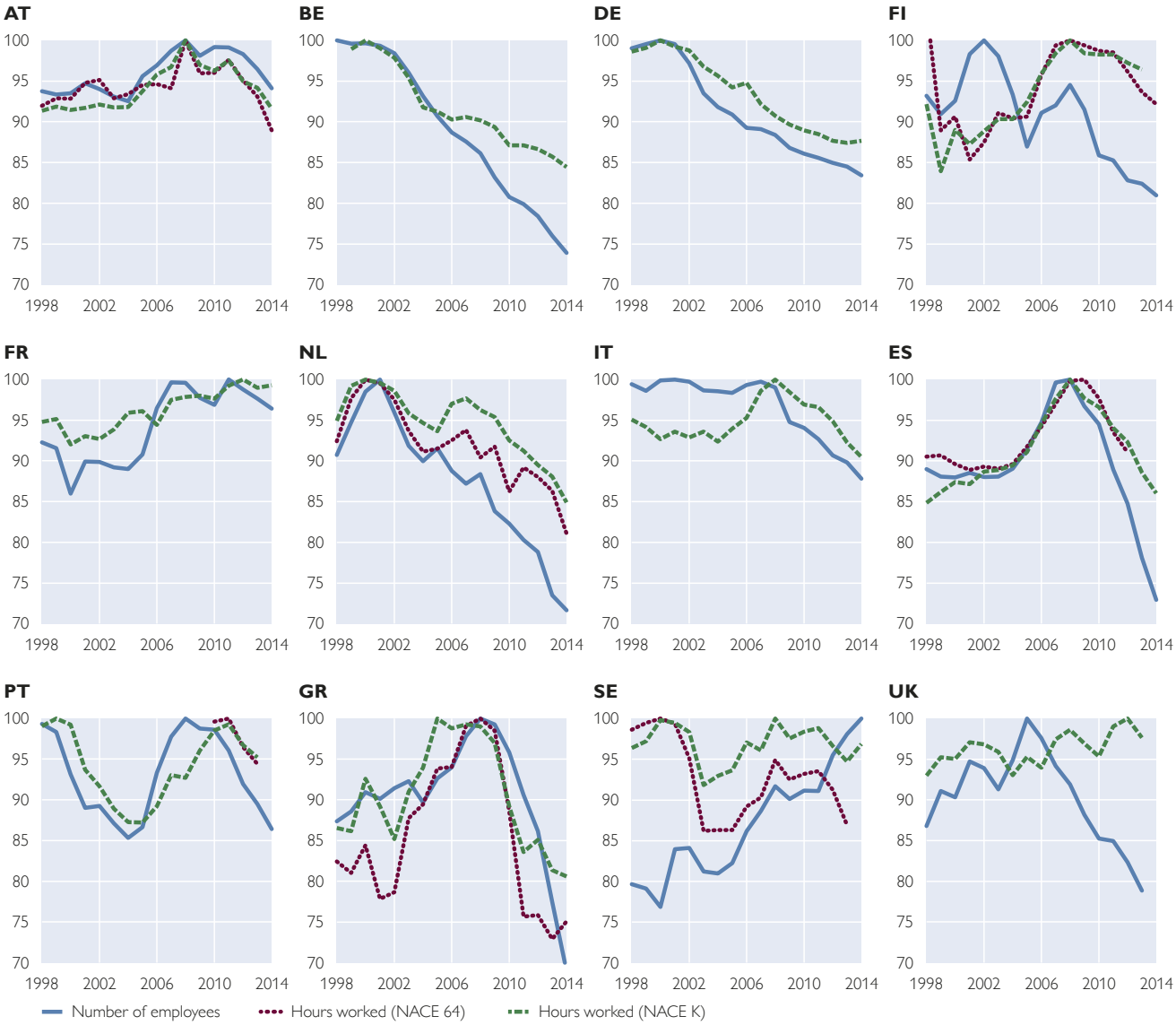
[2] *http://www.ecb.europa.eu/pub/pdf/other/reportonfinancialstructures201510.en.pdf.*

Chart 18 shows how far the reduction of bank employment has gone in European countries both in terms of headcount and the average number of hours worked.[3] In Germany, the Netherlands and Belgium the reduction in headcount already started at the turn of the millennium. In most countries in the euro area periphery, the number of employees has been reduced markedly

Chart 18

Number of employees and hours worked at credit institutions

Index (100 = max [1998, 2014])



Source: ECB, Eurostat, authors' calculations.

[3] *To make the data comparable they are presented in the form of an index. The index value is set at 100 for the year in which the relevant time series reached its maximum during the period 1998–2014. The data on the number of hours worked are obtained from national accounts data compiled by Eurostat. As for many countries there are no data available for the sector that comes closest to the banking sector, namely NACE 64 (financial service activities, except insurance and pension funding), data for NACE K (banking and insurance) are displayed in addition. In most cases where both time series are available they move very much in tandem.*

since the onset of the crisis. In contrast, the number of bank employees in Austria is still close to its historical peak. A development similar to that observed in Austria has occurred in France. The consolidation we now see in the Austrian banking sector is in line with what has happened in other countries.

Significant rise in the part-time ratio

The reduction in the number of hours worked was rather moderate by international comparison. In 2014, the Austrian banking sector recorded 121 million hours worked according to national accounts data (K64). After having risen by 8.7% in the period 1998–2008, hours worked fell by 11.1% in 2008–2014, which means that at the end of the observation period they were 3.3% lower than at the start of the third stage of EMU. To a large extent, this reflects the significant rise in part-time work. Whereas the number of full-time bank employees shrank by 14.4% between 1998 and 2014, the number of part-time employees almost doubled. Thus, the part-time ratio rose from 12.5% to 25.3%.

Austrian banks have stepped up their efforts to address structural weaknesses; several banks have announced or already started to implement consolidation plans in order to improve the efficiency of their activities. Adjustments in the structure of the Austrian banking system include a stronger focus on markets with a higher potential for generating sustainable returns and a reduction of risk-weighted assets to increase available capital.

Box 3

IT risk and the threat of cybercrime for banks

Over the last decades, the information and communication technology (ICT) used by banks has grown strongly both in size and complexity. With the growing dependence of business processes on ICT systems and the widespread use of new technologies, this area has become a major risk factor for the financial industry and a significant source of several kinds of operational risk, including IT security issues (with cybercrime, i.e. criminal activities that make use of or are directed against ICT, having become a hot topic recently), risks related to software quality and data quality, and infrastructure risks (e.g. loss of critical infrastructure such as data centers). In addition, it is common today to outsource ICT services, and technologies like cloud computing, though they offer new possibilities, also raise a whole new set of security issues.

Due to the importance of this topic, several activities have been launched at the European level to deal with IT risks. The proposed EU Network and Information Security (NIS) Directive is meant to protect critical infrastructure (such as energy and transport, but also banking). Also, the Basel Committee on Banking Supervision's (BCBS) principles for effective risk data aggregation and risk reporting (BCBS 239, January 2013) require that banks take efforts to increase data quality and data governance. Both the European Central Bank (ECB) and the European Banking Authority (EBA) have classified IT-related risks as a supervisory priority; a broad risk assessment is currently being carried out, and specific supervisory activities directed against cybercrime have been taking place throughout 2015 and will continue in 2016.

In Austria, the OeNB has performed several on-site inspections with a focus on operational risk and IT risk. Furthermore, the OeNB monitors these risks continuously as a part of its supervisory activities and takes part in the ECB's and EBA's efforts to strengthen the supervision of IT-related risks in Europe.

Recovery of CESEE profits after weak performance in 2014

The profitability of Austrian banks' subsidiaries in CESEE improved significantly to EUR 1.5 billion in the first half of 2015 after having hit a historical low in 2014 (EUR 1 billion), which was e.g. triggered by additional credit risk provisioning in Romania, the impact of foreign currency loan measures in Hungary and the tensions between Russia and Ukraine. The results for the first half of 2015 came close to the levels reported in June 2011, which marked a high in the post-crisis area. The main driver of the improvement was the significant reduction in risk provisioning.

The operating profits of Austrian subsidiaries in CESEE remained unchanged at EUR 3.2 billion in the first half of 2015 compared to the previous year.[4] Yet the most important sources of operating income – net interest income and fee and commission income – declined as lower net interest income came hand in hand with compressed interest rate margins. Operating expenses also fell on the basis of lower personnel expenses and shrinking administrative costs.

The profitability analysis at country level (for the most significant banking operations) can be built around three groups: the Czech Republic, Slovakia and Turkey, where profits grew; Russia and Croatia, where they decreased but stayed distinctly positive; and Romania and Hungary, where results turned positive as of mid-2015, after losses in the previous year. Net profits earned in the Czech Republic grew by 3% year on year and have remained the by far largest contributor to the aggregated net profit of Austrian banks in CESEE. Profits in the Czech Republic were mainly driven by a reduction in risk provisioning and to a lower extent by higher operating income. In Slovakia, net results increased by 13%, also on the back of growing operating income and shrinking provisions. As for Turkey, the pro rata net profit from a Turkish joint venture increased by 16%, with all types of income on the rise. Provisioning increased markedly but is still at a low level compared to other countries.

Profitability in Russia decreased by 30% year on year in the first half of 2015. Despite this strong decline, which was due to a slowdown in credit growth, higher funding costs, compression in interest margins and weaker credit quality as well as the depreciation of the Russian ruble, Russia remained the second largest contributor to the overall profitability of Austrian banks' subsidiaries in CESEE, although the share of profits from other CESEE countries (i.e. Romania, Slovakia and Turkey) rose markedly.[5] The operating income of Austrian subsidiaries in Russia declined by 6% year on year. The decline in income was alleviated by a decline in expenses. Both developments were attributable to the currency depreciation. Loan loss provisions doubled in the first half of 2015 year on year due to the recessionary environment in Russia. In Croatia, Austrian subsidiaries faced lower net results than the year before on the back of lower operating income (–9%), which was mitigated by reduced risk provisions, however (–8%).

Diverse profit development for CESEE subsidiaries

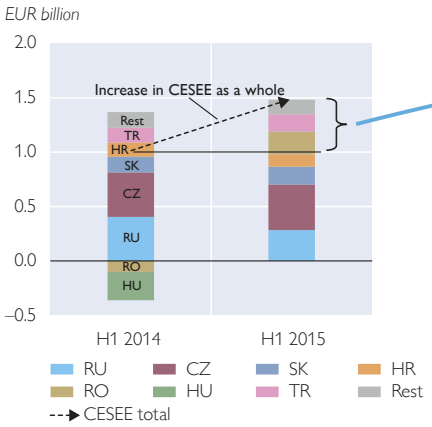
[4] *As Volksbank Romania was sold in the course of 2015, year-on-year comparisons were adjusted for this effect.*

[5] *For more details on the Russian banking sector and Austrian subsidiaries in Russia please see the special topics section in this issue.*

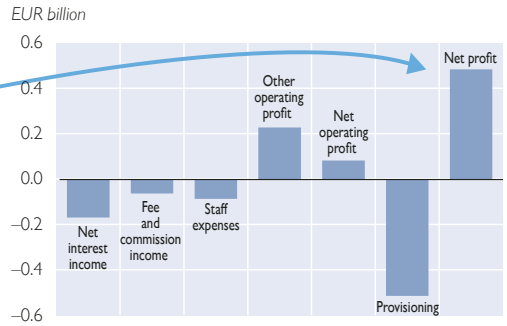
Chart 19

Profitability of Austrian banks in CESEE

Net profit of Austrian subsidiaries in CESEE



Drivers of net profit of Austrian subsidiaries in CESEE between mid-2014 and mid-2015



Source: OeNB.

Increase in consolidated profits due to improvement in domestic and foreign business

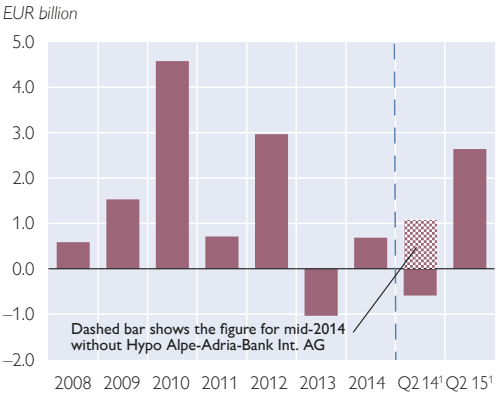
In Romania and Hungary, Austrian subsidiaries experienced a turnaround in their aggregated net results. In Romania, losses of –EUR 0.5 billion at end-2014 turned into profits of EUR 0.2 billion as at June 2015, which was almost exclusively due to a drop in credit risk provisions. In Hungary, where banks have been confronted with several legal interventions over the past five years (e.g. conversion of foreign currency mortgage loans and settlement act on overpayments), Austrian subsidiaries were able to make positive contributions to the profitability of their respective groups for the first time since 2010. Profitability developments at an individual bank level have been very diverse as some Austrian subsidiaries in Hungary are still producing losses.

The outlook for Austrian banks' profitability in CESEE remains weak. Legal interventions concerning foreign currency loans in Croatia and Poland as well as the tension between Russia and Ukraine add to the uncertainty. Risks concerning the concentration of profits in a few countries persist. In this regard, profits from Russia and Turkey are more volatile and vulnerable as they are tied to higher macrofinancial risks than in the Czech Republic and Slovakia.

The consolidated net result of Austrian banks (i.e. including foreign subsidiaries) totaled EUR 2.6 billion in the first half of 2015. On an annualized basis, this would translate into a return on average assets of 0.6% for 2015 as a whole. This improvement can mainly be traced back to reduced credit risk

Chart 20

Consolidated net profit of Austrian banks



Source: OeNB

[1] Data for the second quarter are not comparable with end-of-year data.

costs and an increase in operating profits, both in domestic and foreign business.

Austrian banks' consolidated operating profit increased from EUR 4.3 billion to EUR 5.5 billion even though the underlying operating income (before risk) was below the corresponding 2014 figure.[6] This decrease was attributable to lower trading income and a decrease in other operating income. The most important components of revenues – net interest and fee-based income – exceeded 2014 results slightly but could not offset the decline in the remaining sources of operating income. Regarding operating costs, staff costs decreased in the first half of 2015 compared to the year before. A strong decrease in depreciation and amortization costs had a positive impact on operating profit as well. Credit risk provisions declined to EUR 1.9 billion, the lowest level since 2008. Austrian banks improved their operating efficiency as the cost-to-income ratio strengthened, reaching 61% in June 2015 (June 2014: 76%).

Apart from the bank levy set up already in 2011, banks need to make regular contributions to new funds: On the one hand, the harmonized deposit guarantee schemes, the third pillar of the banking union, require banks to build up funds in advance ("ex ante") to finance resolution measures. On the other hand, the Single Resolution Fund (SRF) – the funding element of the Single Resolution Mechanism (SRM) – is also financed by contributions from the banking industry, a fact which already affected the operating profit of Austrian banks in the first half of 2015. In total, contributions to these funds will be about EUR 350 million a year for Austrian banks.

Growth rates in bank lending differ markedly across Europe

In an environment of very low interest rates, loan growth continued to recover in Europe in the first half of 2015. The ECB's targeted longer-term refinancing operations and its expanded asset purchase programme contributed to improvements in money and credit indicators. Moreover, European banks' funding costs stabilized at historical lows. More favorable lending conditions continued to support a gradual recovery in loan growth for European banks. Nevertheless, growth rates still differ markedly across countries.

Austrian banks' exposure to CESEE increased in the first half of 2015

On a group level, the total assets of the Austrian banking system remained more or less unchanged against end-2014, with EUR 1,079 billion as at June 2015. While interbank activities and securities have been further reduced, cash holdings and lending to the nonfinancial sector have been extended. However, the dynamics have been mixed.

Austrian banks' exposure to countries in the CESEE region increased by 3% compared to end-2014, coming to EUR 329 billion in June 2015, but growth rates varied markedly. While business in Poland, the Czech Republic and Turkey was expanded, banks cut back on their activities in Romania[7] and Ukraine.

New lending to Austrian nonfinancial corporations subdued

In the first nine months of 2015, Austrian banks granted new EUR-denominated loans to domestic households and nonfinancial corporations (NFCs) in the amount of EUR 63 billion. This was noticeably less than in

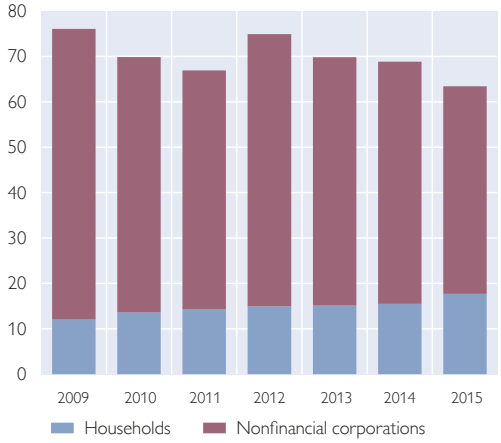
[6] *The year-on-year analysis has been adjusted for the effects of the wind-down of Hypo Alpe-Adria-Bank International AG at end-2014.*

[7] *The reduction in Romania was driven by the sale of a subsidiary.*

Chart 21

New lending[1] in Austria between January and September

EUR billion



Source: OeNB.

[1] New loans denominated in euro.

Borrowers' funding gaps widen

previous years. The reduction was driven by subdued dynamics in lending to NFCs, which are increasingly making use of internal financing. Apart from this, the investment activity of Austrian businesses has been subdued. Lending to households has increased over the previous years because of higher lending for house purchases, while lending for consumption has been stagnating.

In the first nine months of 2015, Austrian banks increased their claims on domestic nonbanks by 0.6% year on year to EUR 333 billion. The highest growth rates were recorded by savings banks and joint stock and private banks. Direct banks also increased their activities on the Austrian market further. In contrast, lending by building societies came under pressure due to the low interest rate environment, in which other banks can provide more favorable mortgage lending rates.

Domestic foreign currency exposure continues to decline

Systemic risks arising from foreign currency lending to domestic borrowers have declined over the last years but are still significant. The outstanding volumes as well as the number of foreign currency (FX) borrowers have declined strongly.

Foreign currency loans to domestic borrowers continued their year-long trend of constantly declining outstanding volumes, although there was a temporary increase in the total volume of outstanding CHF-denominated loans caused by the discontinuation of the EUR/CHF minimum exchange rate by the Swiss National Bank in January. At the end of the third quarter of 2015 total FX loans to Austrian nonfinancial customers amounted to EUR 35 billion. Although this constitutes only a minor annual change in nominal terms, the associated annual exchange rate-adjusted reduction amounts to 17%. By September 2015 FX loans to households and nonfinancial corporations made up EUR 25 billion and EUR 6 billion, respectively. About 75% of FX loans to domestic households are designed as repayment vehicle loans (i.e. bullet loans that are redeemed only at maturity by life insurance policies and/or other capital market products; until then, regular financial contributions are only made toward the repayment vehicle).

Austria's Financial Market Authority (FMA) and the OeNB launched a survey at the beginning of 2015 to gain an overview of borrowers' funding gaps affecting such repayment vehicle loans. Similar surveys were carried out already in 2009 and 2011. The survey was conducted among 35 Austrian banks covering more than 85% of outstanding repayment vehicle loans. The conclusion of the survey was that the aggregate borrowers' funding gap affecting repayment vehicle loans amounted to an estimated 23% of the total amount or EUR 6 billion in nomi-

nal terms. Compared with 2011, the gap has remained almost unchanged, especially due to the appreciation of the Swiss franc in early 2015.

As the majority of FX bullet loans do not mature before 2020 there is still some time to close borrowers' funding gaps. Nevertheless downside risks must not be underestimated as financial markets could turn for the worse and the Swiss franc might remain at current levels or even appreciate further. Consequently, the OeNB and the FMA have stepped up their efforts to encourage banks and debtors to timely engage in bilateral negotiations aimed at sustainable tailor-made solutions.

Foreign currency loans in CESEE significantly reduced

The first half of 2015 was marked by reductions in the foreign currency credit and leasing exposures of Austrian banks operating in the CESEE region. Driven by the conversion of foreign currency loans in Hungary and the sale of Volksbank Romania S.A., Austrian banks' foreign currency loan exposure fell by EUR 5.5 billion to EUR 110.1 billion during the first six months of 2015. Consequently the associated foreign currency loan share continued to decline to 46% in total nonbank loan exposure (including cross-border lending) and to 39% for Austrian subsidiaries alone.

As there were no material changes in the amount of cross-border lending or leasing activities, the reduction is entirely attributable to Austrian CESEE subsidiaries, which reported a decrease of their foreign currency credit portfolio by 7.3% since the beginning of 2015. If it were not for the significant appreciation of the Swiss franc, the decline would have been even more pronounced, as the exchange rate-adjusted change of –11% indicates.

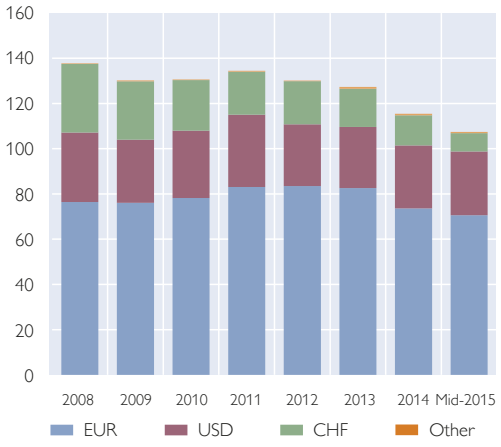
OeNB and FMA are encouraging banks and debtors to timely engage in bilateral negotiations

The strong appreciation of the Swiss franc in recent years also triggered a wave of legislative action in several CESEE countries. Hungary has already legally prescribed the conversion of foreign-currency mortgage loans in the first half of 2015. Consequently, the foreign currency exposure of Austrian banks' Hungarian subsidiaries dropped by 50% or EUR 3.7 billion. While Croatia enacted legislation imposing related measures in September 2015, discussions in Poland are ongoing. The OeNB sees the need for a cooperative and coordinated approach in the interest of sustainable financial stability in home and host countries.

CESEE subsidiaries reduced overall FX credit exposure

Chart 22

Foreign currency loans of Austrian banks in CESEE



Source: OeNB.

Note: Figures include lending via subsidiaries and cross-border lending to customers and are adjusted for foreign exchange developments.

Box 4

Austrian banks hit by Eastern European legislators' intervention in foreign currency loans

To reduce the burden for foreign currency borrowers, some Eastern European countries have already introduced (or are discussing) measures to force the conversion of foreign currency consumer loans to into local currency, mainly at banks' cost. Due to their material foreign currency loan portfolio, subsidiaries of Austrian banks operating in these countries are particularly affected by these interventions.

***Hungary:** In November 2014 the Hungarian Parliament passed a law on the mandatory conversion of foreign currency mortgage loans previously granted to households into HUF. Although the law stipulated the applicable exchange rates for EUR, CHF, and JYP, these rates were close enough to the then prevailing market rates that banks only suffered minor losses from the conversion. In order to minimize effects on the HUF, Magyar Nemzeti Bank (MNB) provided the necessary liquidity out of its reserves. In October 2015, the Hungarian Parliament passed an additional law on the conversion of foreign currency consumer loans whereby the decision to convert was to be taken by borrowers within 30 days. Again, the exchange rates were stipulated in the law, only this time they were out of market, since the same rates as in November 2014 were applied to ensure an equal treatment of borrowers. The resulting losses are to be equally divided between the banks and the state; the state's half will first be borne by the affected banks; in turn, the state will reduce banks' tax bill in 2016 and 2017. Initial losses in EUR million for subsidiaries of Austrian banks are estimated in the low two-digit range. As already in 2014, the MNB has provided the necessary liquidity out of its reserves.*

***Croatia:** In September 2015 amendments to the Croatian consumer credit legislation were made in order to enable the conversion of CHF loans into EUR loans. The aim of these amendments is to reduce the debt-servicing burden for natural persons with loans denominated in CHF as well as loans denominated in Croatian kuna with a currency clause linking payments to CHF. Based on the new legal provisions, these borrowers are given the possibility to use a conversion mechanism that places them in the same position they would have been in if their loans had been denominated in euro at drawdown. The conversion is expected to cost Austrian banks approximately EUR 0.7 billion in total. The effect may vary depending on the individual bank's composition of its loan portfolio. However, banks are still in the process of appealing against the law to avert possible losses.*

***Poland:** At the end of October 2015 the Polish president signed a bill designed to help consumers struggling with the repayment of their loans due to external factors. This group includes i.a. foreign currency debtors who are affected by unfavorable foreign currency developments. The law stipulates that banks have to offer non-interest bearing supporting measures in the form of contributions which have to be paid by the banks into a fund at the state-owned Gospodarstwa Krajowego bank. The total volume of the fund is expected to reach EUR 142 million.*

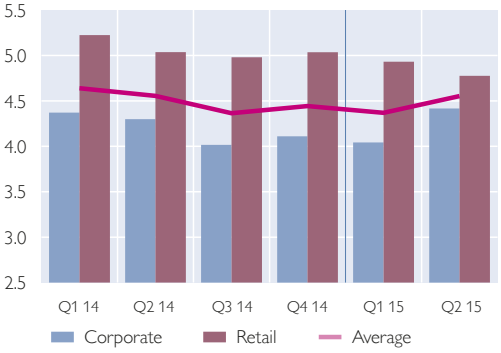
Nonperforming loan resolution has high priority for banks

European banks face significant challenges arising from their high levels of impaired assets, asset quality being quite uneven across European countries, with banks from financially stressed countries reporting the highest NPL ratios. The level of impairments depends not only on the level of financial distress endured by the country but also on the degree of progress achieved in restructuring legacy asset portfolios. Deleveraging via asset sales can contribute to improved asset quality. Over the last quarters, material volumes of loan portfolio transactions took place, assisted by the search for yield by investors.

Chart 23

Nonperforming loan ratio in Austrian banks' domestic business

% of total loans to corporates and households



Source: OeNB.

The asset quality of Austrian banks' domestic loan portfolio somewhat deteriorated in the first half of 2015, as the NPL ratio increased to 4.6%, up 0.1 percentage points compared to the end of 2014. Nevertheless, the ratio has been quite stable over the last years, moving in a range between 4.1% und 4.7% since 2009, with NPL ratios for loans to households slightly higher than the overall average. The increase was especially driven by a deterioration in asset quality at state mortgage banks. In the first six month of 2015, the coverage ratio of Austrian banks' domestic business declined slightly to 72% due to stalling provisioning; viewed against the comparable ratios of their CESEE subsidiaries and banking systems in other countries, however, this ratio is still high.

The average NPL ratio of Austrian subsidiaries in the CESEE region increased slightly to 12.0% for the total loan portfolio and 16.3% for foreign currency loans. This deterioration was the result of a comparatively strong increase in NPLs in Ukraine and Russia (see also the special topics section). On the other hand, Hungarian and Romanian subsidiaries reported material reductions in NPLs due to the sale of assets and other resolution measures. Nevertheless, the NPL ratios of Austrian subsidiaries in these countries are still elevated.

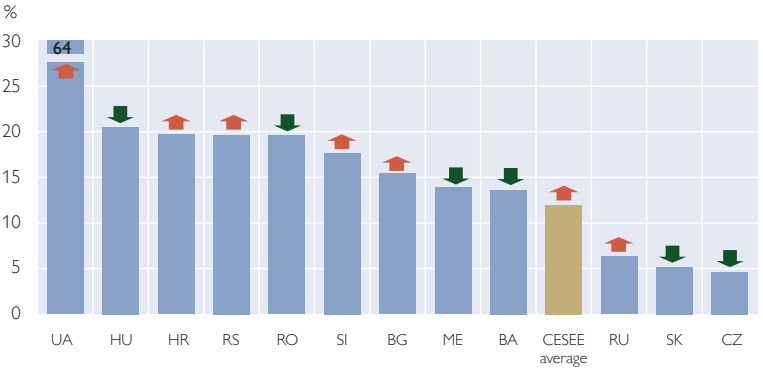
The coverage of NPLs has improved significantly over recent years, even more so since Hypo Alpe Adria shifted the majority of its NPL portfolio to its bad bank (HETA Asset Resolution AG). By the end of the first half of 2015, Austrian CESEE subsidiaries reported an NPL coverage ratio of 57% (Austrian banking system at group level: 64%).

In the first half of 2015, the leasing portfolio of major Austrian banks operating in CESEE remained constant at EUR 10 billion and the share of nonperforming leasing volumes fell to 12.1%, compared to 13% at end-2014.

A country-by-country analysis by the European Banking Authority[8] has shown that Austrian banks have an

Chart 24

Nonperforming loan ratio of Austrian subsidiaries in CESEE (June 2015)



Source: OeNB.

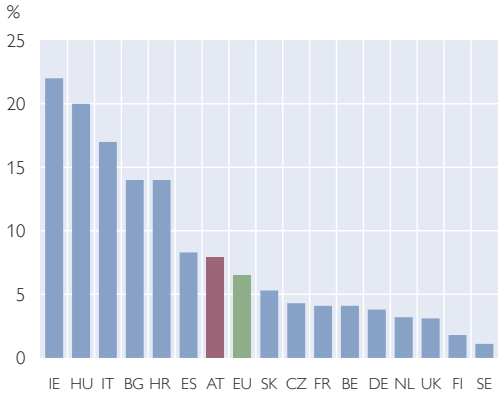
Note: Arrows indicate changes compared to end-2014. The CESEE average includes more countries than those shown in this chart.

[8] *EBA Risk Assessment of the European Banking System, June 2015.*

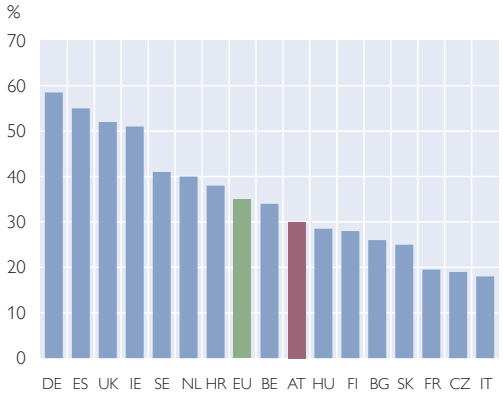
Chart 25

Loan quality in European banking sectors

Nonperforming loan ratios



Forbearance ratios for nonperforming loans



Source: EBA.

Note: Data as at end-2014.

above-average NPL ratio which is driven by the relatively weak loan quality of their CESEE exposure. At the same time, the forbearance[9] ratio of Austrian banks' NPLs is rather low. This has to be seen against the background of the relatively high coverage ratio of Austrian banks.

Persistently high NPLs are a burden for credit growth and economic activity as weak asset quality ties up bank capital and reduces profitability via write-downs and higher funding costs for the affected institutions. In Austria, banks have recorded costs for credit risk provisioning to the amount of nearly EUR 52 billion since 2008, which corresponds to approximately 60% of banks' current regulatory capital.

A recent study of the International Monetary Fund underlines that stronger momentum in NPL resolution would "unclog" the bank lending channel and enhance the transmission of monetary policy to the real economy.

Austrian banks' consolidated corporate loan portfolio is characterized by a below-average credit quality (NPL ratio: 7.2%) compared to the quality of loans to households (NPL ratio: 6.2%) and material differences across industries. Loans to the sectors "accommodation, food service" and "construction" recorded the lowest credit quality in mid-2015. These sectors account for approximately 30% of the corporate loan portfolio.[10] The overall NPL ratio of the Austrian banking sector was 6.9% in June 2015, down 10 basis points compared to end-2014.

Capitalization of banks improved

The repair process of the European banking system initiated in 2011 has led to a major strengthening of banks' capital position. Overall, EU banks increased their weighted average core equity tier 1 (CET1) ratio from 9.2% to 12.1% between 2011 and 2014.

In that period, the amount of CET1 capital grew by approximately 37%,

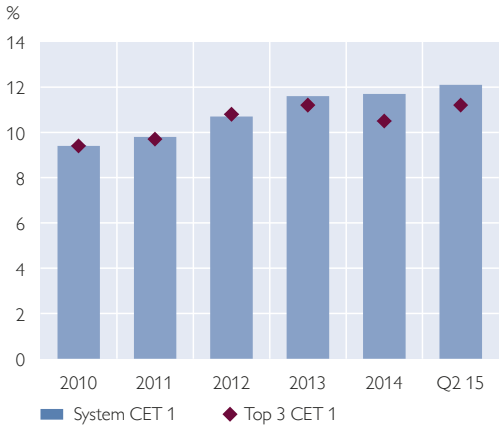
[9] *Forbearance measures are understood as modifications of the terms and conditions of loan contracts.*

[10] *Figures for the analysis of credit quality across branches only include Austrian banks that report under the FINREP framework and are therefore only a proxy for the Austrian banking system.*

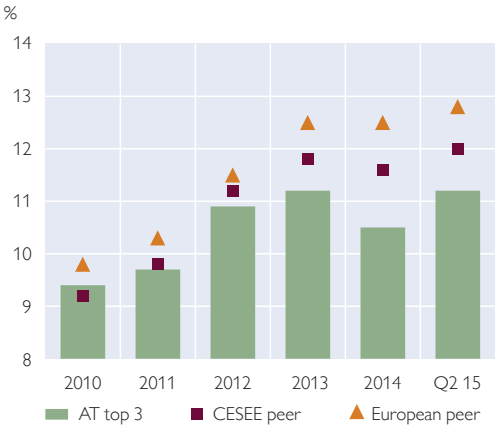
Chart 26

CET1 ratios of banks

Austrian banks



International comparison

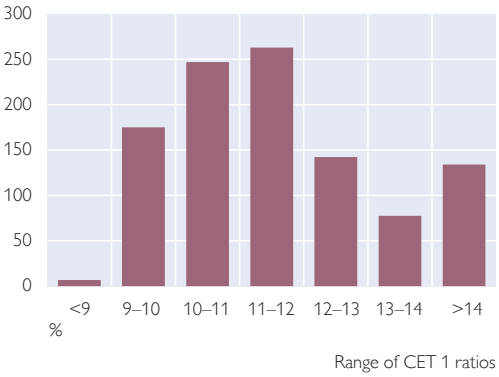


Source: OeNB, SNL Financial.

Chart 27

Distribution of Austrian banks' total assets by CET1 levels

Total assets in EUR billion (June 2015)



Source: OeNB.

while risk-weighted assets slightly increased by approximately 1 %. This means that in the EU the strengthening of banks' capital position has been driven more strongly by real capital issuances than by reductions in the denominator. The currently weak profitability of European banks might limit their ability to strengthen their equity through internal funds.[11]

Austrian banks improved capitalization but still lag behind their peers

The capitalization of the Austrian banking sector improved in the first half of 2015 through a combination of higher capital and reduced risk-weighted assets. Banks achieved this increase in capital by enlarging reserves and reducing excess of deduction from additional tier 1 items over additional tier 1 capital. This resulted in an increase of capital in the first half of 2015 of EUR 2 billion to EUR 89.5 billion. In mid-2015, Austrian banks registered an average CET1 ratio of 12.1% and a total capital ratio of 15.9%.

The capitalization ratios of Austrian banks differ markedly between different institutions. A categorization of banks (based on total assets) on the basis of their CET1 shows that the relative majority of assets of the Austrian banking systems is in the range of 10% to 12%, whereas the weighted average CET1 ratio came to 12.1% in June 2015. This is confirmed by chart 26, where the CET1 ratio of the top 3 Austrian banks is below the system average.

[11] *European Banking Authority, Risk Assessment of the European Banking System, June 2015.*

Micro- and macroprudential measures will also contribute to improving Austrian banks' capitalization. However, compared to their peers, bigger Austrian banks have a relatively low capitalization and therefore need to build up capital further.

Box 5

Making bail-in a feasible option: the minimum requirement for own funds and eligible liabilities (MREL)

The EU Bank Recovery and Resolution Directive (transposed into Austrian law by the Federal Act on the Recovery and Resolution of Banks – Bundesgesetz über die Sanierung und Abwicklung von Banken, BaSAG) established a framework for the recovery and resolution of credit institutions and investment firms in the European Union to deal with failing institutions. The directive ("BRRD" in short) introduced a number of new resolution tools to internalize the burden of bank failures and minimize moral hazard. Next to (1) the sale of business tool, (2) the bridge institution tool and (3) the asset separation tool, the BRRD also provides for a bail-in tool. Bail-in means that once an institution fulfills the conditions for resolution (e.g. an institution no longer meets the minimum own funds requirements) the resolution authority has the power to write down equity and subsequently convert liabilities into equity or to reduce an institution's principal amount of liabilities up to the extent necessary for restoring the own funds of this institution.

However, the bail-in tool can only be a feasible option for resolution authorities if enough own funds and liabilities are available to adequately recapitalize the institution under resolution. Therefore, the BRRD requires that all institutions at all times meet, on an individual and consolidated basis, a minimum requirement for own funds and eligible liabilities (MREL). The MREL is calculated as own funds and eligible liabilities expressed as a percentage of total liabilities and own funds of the institution.

All liabilities that should be counted toward MREL (i.e. eligible liabilities) have to fulfill a number of conditions (e.g. the liability must not be a derivate, nor a deposit benefiting from preference in the national insolvency hierarchy, and the liability must have a remaining maturity of at least one year).

Neither the BRRD nor the Austrian BaSAG provide for a common minimum requirement applicable to all institutions. In fact, after consulting the supervisory authority, the resolution authority (in Austria: the Financial Market Authority) determines the minimum requirement for each institution individually. However, the EU has established a Single Resolution Board within the banking union recently. In consultation with the national authorities and the ECB, this board will set the MREL for all significant institutions (i.e. institutions directly supervised by the ECB within the Single Supervisory Mechanism) and banking groups with cross-border business.

However, when setting the MREL the competent authority has to take six criteria into account: (1) resolvability, (2) recapitalization needs after resolution, (3) extent of possible exclusions of eligible liabilities listed in the resolution plan, (4) size, business model, funding model and risk profile, (5) extent to which the deposit guarantee scheme could contribute to the financing of resolution, and (6) systemic importance.

On the basis of these criteria, the European Banking Authority has further specified how to set a MREL to ensure that all Member States apply the requirements in a similar way. The competent authorities are required to assess the level of MREL needed to absorb losses. If necessary, institutions have to hold additional amounts required for recapitalization after resolution. These assessments should be linked to institutions' going concern capital requirements as determined by the Capital Requirements Regulation and the Capital Requirements Directive.

Given the current state of play, the Austrian banking sector has liabilities that are eligible under the MREL. However, the minimum still has to be set for each bank individually.

Recent activities of macroprudential supervision in Austria

One building block in strengthening Austrian banks' capitalization will come from macroprudential oversight. In its fifth meeting of September 7, 2015, the Financial Market Stability Board (FMSB) decided to adjust its recommendations to the FMA regarding the activation of the systemic risk buffer (SRB) and the buffer for other systemically important institutions (O-SII buffer) in the light of developments at European level.[12]

The SRB needs to be activated to address the specific combination of systemic risks in the Austrian banking system. These risks arise from the relatively large size of the Austrian banking sector as compared to the domestic economy, its high exposure to emerging markets, its below-average capitalization in relation to its European peers and its high share of non-listed banks and leveraged owners. A detailed analysis of systemic risks for the Austrian banking system was published in the OeNB's Financial Stability Report of June 2015.[13]

In its fourth meeting on June 1, 2015 the FMSB had decided upon the recommendation to activate macroprudential capital buffers of up to a total of 3% to strengthen the Austrian banking sector. These buffers are to be applied in addition to the applicable supervisory SREP[14] ratio.

Since the FMSB's fourth meeting, the Supervisory Board of the ECB has preliminarily determined the SREP ratios to be applied in 2016. These are markedly higher than the CET1 ratios on which the recommendation had been originally based. In light of this development, the FMSB has adjusted its recommendation of June 2015 and proposed that the FMA limit the systemic risk buffer to 2% of risk-weighted assets. To ensure a smooth implementation of the cumulated capital require-

Table 1

List of Austrian banks subject to a systemic risk buffer

	Jan. 1, 2016	Jan. 1, 2017	Jan. 1, 2018	Jan. 1, 2019
	% of risk-weighted assets			
Erste Group Bank	0.25	0.50	1.00	2.00
Raiffeisen Zentralbank	0.25	0.50	1.00	2.00
Raiffeisen Bank International	0.25	0.50	1.00	2.00
UniCredit Bank Austria	0.25	0.50	1.00	2.00
Raiffeisenlandesbank Oberösterreich	0.25	0.50	1.00	1.00
Raiffeisen-Holding Niederösterreich-Wien	0.25	0.50	1.00	1.00
BAWAG P.S.K.	0.25	0.50	1.00	1.00
HYPO NOE Gruppe Bank	1.00	1.00	1.00	1.00
Vorarlberger Landes- und Hypothekenbank	1.00	1.00	1.00	1.00
Hypo Tirol Bank	1.00	1.00	1.00	1.00
Oberösterreichische Landesbank	1.00	1.00	1.00	1.00
Sberbank	0.25	0.50	1.00	1.00

Source: Financial Market Stability Board.

Note: If both the systemic risk buffer and the buffer for other systemically important institutions are applicable, the higher of the two shall apply.

[12] *See also the FMSB's website at http://fmsg.at/en/.*

[13] *See https://www.oenb.at/dms/oenb/Publikationen/Finanzmarkt/Financial-Stability-Report/2015/financial-stability-report-29/fullversion/fsr_29_gesamt.pdf.*

[14] *Supervisory Review and Evaluation Process.*

FMSB discusses need for legal basis for additional instruments

ments, the FMSB has additionally recommended a gradual implementation horizon for banks that are directly supervised by the ECB. The scheduled initial application of the SRB has been brought forward to January 1, 2016, to facilitate operational implementation and to avoid further delays.

The O-SII buffer will enter into force on January 1, 2017. The list of O-SIIs and the levels of the applicable O-SII buffers will be published by the FMA in the course of 2016. As the higher of the two types of buffer (SRB, O-SII buffer) will apply and as the SRB is expected to be higher or equal to the O-SII buffer, the O-SII buffer is not expected to induce additional buffer requirements for Austrian banks.

Based on the currently available data, the FMSB recommended that the FMA set the countercyclical capital buffer at 0% of risk-weighted assets with effect from January 1, 2016. The countercyclical capital buffer is supposed to shield the banking system from the effects of cyclical systemic risks, which may in particular arise from unsustainable lending on an aggregated level. The growth of outstanding credit volume as compared to GDP growth currently does not indicate the need to recommend such a buffer. Further indicators support this assessment: Austrian banks continue to record sound balance sheets in terms of their unconsolidated aggregate debt ratios (tier 1 capital relative to total assets). Furthermore, the current account does not point to any major macroeconomic imbalances in terms of economic growth.

In its fifth meeting, the FMSB also discussed the need for establishing a legal basis which will enable the supervisory authority to closely monitor the real estate market and mortgage lending to prevent the buildup of risks, especially given the low interest rate environment. Rising real estate prices accompanied by expanding debt levels may increase borrowers' and lenders' vulnerability to crises. Past experience has shown that overvaluation in the real estate market is often a trigger for systemic financial crises if it is coupled with a strong rise in real estate lending. Caps on loan-to-value (LTV) ratios, debt-to-income (DTI) ratios and debt service-to-income (DSTI) ratios are deemed effective and adequate instruments[15] for addressing systemic risks associated with real estate financing. By mid-2015, 19 EU countries (and Norway) had implemented a combination of LTV, DTI and DSTI ratios and other measures in order to limit unsustainable mortgage lending booms. These measures are also aimed at reducing the expected costs for the overall economy in associated busts.

So far, the price increases on the Austrian housing market have not been accompanied by excessive mortgage lending growth. Over the medium or long term, however, macroprudential risks could arise in the wake of a real estate price boom. As a first precautionary step, the FMSB has started discussing how additional instruments might be applied, should the need arise. The FMSB concluded that it sees no need for their application at this point. In any case, the OeNB sees the need to

[15] *See e.g.: Jácome, L. I. and S. Mitra. 2015. LTV and DTI Limits – Going Granular. IMF Working Paper 15/154; Cerutti, E., S. Claessens and L. Laeven. 2015. The Use and Effectiveness of Macroprudential Policies: New Evidence. IMF Working Paper 15/61; McDonald, C. 2015. When is macroprudential policy effective? BIS Working Papers No. 496.*

prepare the legal framework for such instruments in order to be in a position to take adequate steps should they become necessary.

Based on current data, the FMSB also recommended that the FMA set the countercyclical capital buffer at 0% of risk-weighted assets with effect from January 1, 2016, as the growth of outstanding credit volume as compared to GDP growth currently does not indicate the need to recommend such a buffer.

Market observers see subdued outlook for Austrian banks

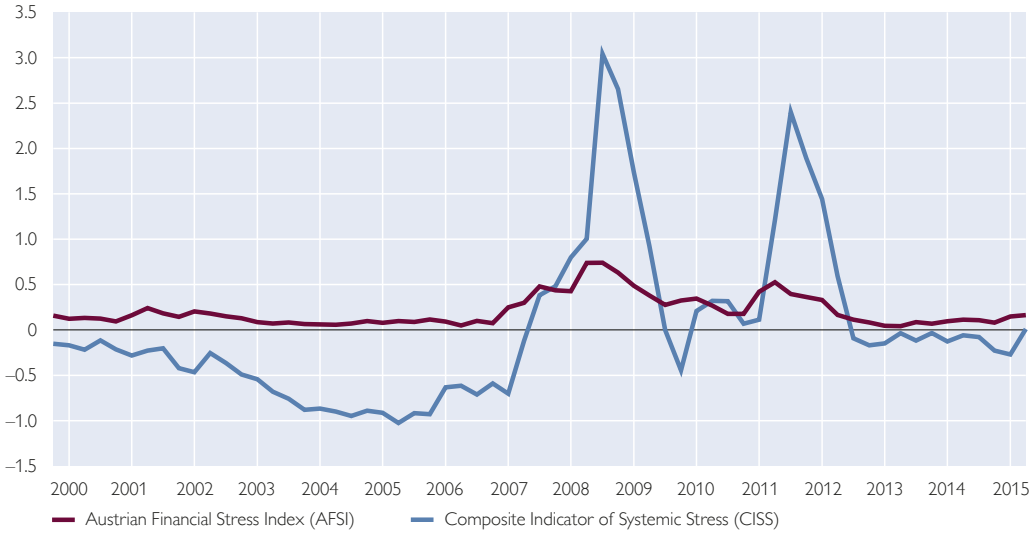
Market surveillance by and large confirms the weaknesses identified in this Financial Stability Report. The negative outlook of market observers reflects their expectation that Austrian banks' financial fundamentals will remain weak. Profitability will remain under pressure, as asset quality concerns in some key CESEE markets, including Croatia, Russia and Ukraine, are rising. So far the CESEE region is widely seen as not directly affected by the major slowdown in China or other key emerging market economies. The profitability of domestic business operations will remain low, given the pressure from low interest margins and strong competition. Some observers are questioning the profit diversification in CESEE, as major profit contributions have come from more volatile countries like Russia and Turkey. Further, politically motivated measures related to foreign-currency loans have led to increased uncertainty regarding the outlook for profits.

One of the most prominent potential vulnerabilities of Austrian banks is their fairly limited capitalization level, which still lags behind European peers. In this regard the FMSB's recommendation to introduce a systemic risk buffer was widely seen as a positive step.

The prospect of extraordinary government support for the Austrian banking sector is assessed as uncertain by rating agencies, following the full implementation of the European Bank Recovery and Resolution Directive, including bail-in powers. Therefore,

Chart 28

Austrian Financial Stress Index (AFSI)



Source: OeNB.

ratings of privately owned Austrian banks incorporate zero government support uplift.

Market intelligence shows that investor demand has weakened and funding costs have risen for Austrian bank debt instruments and capital instruments like additional tier 1 capital instruments due to events surrounding the HETA moratorium. Some banks have even lost market access according to some market participants. Austrian banks' pronounced risk profiles as well as HETA-related developments have been cited as explanations. If this negative sentiment persists for a longer period, it may put further pressure on banks' profitability and limit their room for maneuver.

Since the end of the double crisis period (2008–2012) the Austrian Financial Stress Index has settled just below zero. However, a recent increase in financial market volatility has led to an increase in the index. The closely related Composite Indicator of Systemic Stress (CISS) by the ECB, which measures euro area-wide financial stress, shows a similar movement.

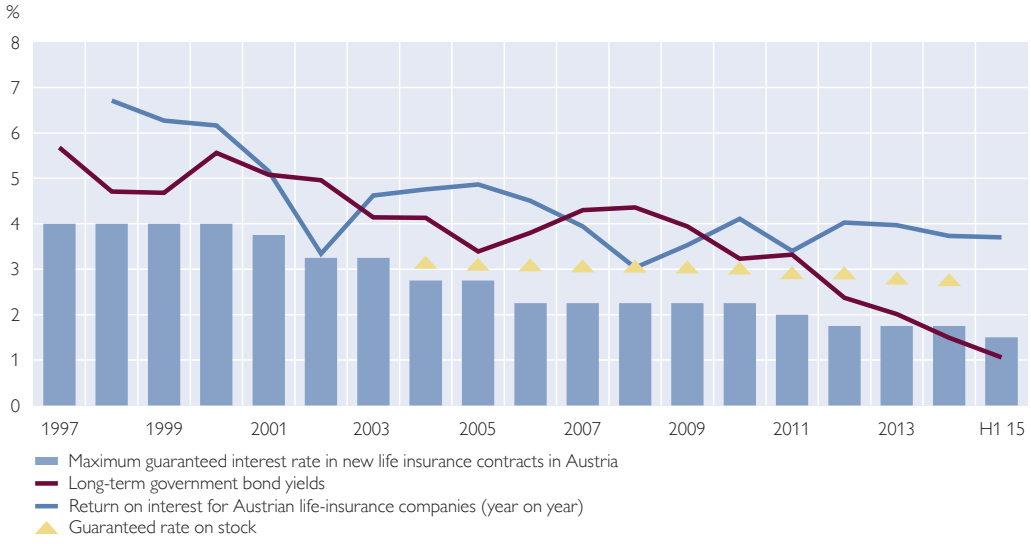
Prolonged period of low interest rates as a challenge for the insurance sector

Ultra-low interest rates and weak macroeconomic growth remain the key risks for the insurance sector. Low profitability and volatile financial markets also are challenges. In the first half of 2015, Austrian insurance companies still generated investment earnings of about 3.8%, but an increased reinvestment risk can be observed, as assets with a duration that is similar to that of the related liabilities are typically not available in the current market environment. The introduction of Solvency II and its new capital requirements, which will enter into force in 2016, are a further demanding task for the insurance sector and may have an influence on the allocation of investments, too.

The low interest rate environment most strongly affects insurers that face significant maturity mismatches in

Chart 29

Austrian insurance sector: return on investment and guaranted interest rates



Source: FMA, OeNB.

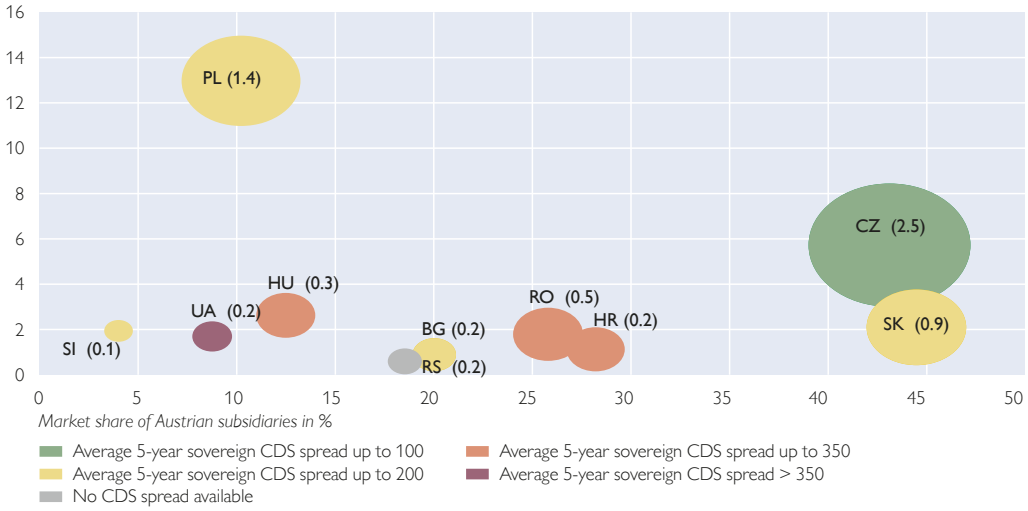
their assets and liabilities (i.e. liabilities have longer maturity periods than assets and/or guarantee rates are above the return rates of assets) and a gap between actual and long-term guaranteed returns in life insurance business. The funds of the Austrian insurance sector are primarily invested in the bond market, while the remaining assets are invested in participations, real estate and shares. Because of this strong dependency on bond yields, the low interest environment is extremely challenging for insurance undertakings. Chart 29 shows that the investment returns of life insurance companies are still about 1 percentage point higher than the average guaranteed rate on stock. The returns have been benefiting significantly from increased bond prices and thus valuation effects. The Austrian long-term government bond yield was at an all-time low at the end of the first half of 2015 and even below the maximum guaranteed rate for new life insurance contracts. In view of persistently low interest rates, the FMA will lower the maximum guaranteed rate in life insurance contracts to 1% with effect from January 1, 2016.

From a geographical perspective, CESEE has been the key growth market not only for Austrian banks but also for Austrian insurance companies because these markets offer higher margins and catching-up potential, as growth in developed economies has been subdued. Currently, Austrian insurance companies are active in 21 countries of the CESEE region, which accounted for about EUR 6.8 billion in premium income in 2014. The most important markets are the Czech Republic and Slovakia, where Austrian insurance companies hold market shares of more than 40%.

Business in emerging markets exposes Austrian insurers to higher legal, political and market risks. The financial crisis has slowed down the process of insurance penetration in the region, as growth perspectives are limited in the current macroeconomic environment.

Chart 30

Austrian insurance groups' exposure to CESEE



Source: SwissRe, FMA, Datastream.

Note: Premium income of Austrian subsidiaries in parentheses.

Chart 30 gives an overview of Austrian insurance companies' CESEE exposure; the x-axis shows the market share of Austrian subsidiaries, the y-axis the local market size; the size of the bubbles indicates the premium income of the Austrian subsidiary/subsidiaries per country. Finally, the color of the bubble signals the risk of the country measured by an average 5-year sovereign CDS spread.

Final assessment and recommendations

In the "new normal," Austrian banks have been facing a subdued operating environment in their core markets – Austria and CESEE – over the last years. What is encouraging is that Austrian banks have improved their risk-bearing capacity in an orderly way. However, the still uneven und fragile economic growth is putting a strain on banks' new business and makes it hard for them to resolve legacy issues of the past credit boom (high stock of NPLs in CESEE). This environment underlines the need for adapting the current business models, which hinge upon extensive branch networks. Therefore, there is no room for complacency, as the low interest rate environment puts further pressure on already low interest rate margins and on profitability.

The global environment of ultra-low interest rates affects Austrian banks in a critical phase, as they transition from a high- to a low-growth environment. In this regard, Austrian banks are vulnerable to shocks, as their risk profile and their risk-bearing capacity still need to be enhanced. Austrian banks are particularly vulnerable due to their significant CESEE exposure, which could be perceived in an undifferentiated way by market participants in times of turbulence. Given the higher uncertainty of future economic developments in key emerging markets (like China) and fragile conditions in important markets like Russia and Turkey, the exposure to CESEE could again take center stage. In these "risk off" times, Austrian banks' high stock of foreign-currency loans in Austria and CESEE increases their vulnerability further.

Against this background, the OeNB recommends that the following measures be taken:

- Banks should continue to strive for capital levels that are commensurate with their risk exposures. The OeNB notes that the trend of improving capitalization has slowed down. The OeNB thus welcomes the recommendation by the Financial Market Stability Board (FMSB) to activate the systemic risk buffer (SRB) and calls on banks to start preparations proactively.
- Banks and insurance undertakings should thoroughly review their business models, internal structures, branch networks and processes in order to increase their profitability and to be prepared for the possibility of a prolonged low growth and low interest rate environment. The OeNB positively notes ongoing efforts in this direction.
- Banks should refrain from trying to gain short-term growth at the cost of risk-inadequate pricing, as profit margins in Austria are narrow and margins in CESEE have come under pressure.
- Banks should further de-risk their loan portfolios by continuing to clean up their balance sheets and to pursue risk-adequate provisioning.
- Banks should adhere to the FMA minimum standards on foreign currency lending in their business in Austria and to the FMA's "Guiding

Principles" in their CESEE business. This also includes working proactively with borrowers on tailor-made solutions to reduce the risks for both sides. Such an approach also encompasses reducing the risk related to the underperformance of repayment vehicles.

– The OeNB recognizes that major improvements in local funding have taken place since 2011. Nevertheless, banks should further continue to strive for sustainable loan-to-local stable funding ratios at the subsidiary level and for risk-adequate pricing of intragroup liquidity transfers.

Special topics

Analyzing the systemic risks of alternative investment funds based on AIFMD reporting: a primer

Georg Lehecka and Eva Ubl[1]

This article discusses possible indicators that might be used to identify systemic risks caused by alternative investment funds (AIFs) on the basis of their reporting obligations under the Alternative Investment Fund Managers Directive (AIFMD). The introduction of comprehensive reporting obligations for AIFs and their managers (AIFMs) makes extensive AIF and AIFM data available to supervisors for the first time. In this context, Article 25 AIFMD introduces a macroprudential perspective to the supervision of securities and markets. The national competent authorities (NCAs) are required to use the reported data to assess whether the use of leverage by AIFs contributes to the build-up of systemic risk in the financial system, to disorderly markets or to risks to long-term economic growth. In addition, the NCAs have to assess whether AIFs or AIFMs potentially constitute important sources of counterparty risk to credit institutions or other systemically important institutions in another Member State. While literature on asset management and financial stability is expanding, literature on analyzing systemic risks on the basis of AIFMD reporting is sparse. In contributing to the discussion on macroprudential analysis under Article 25 AIFMD, this article may support supervisors in identifying and monitoring systemic risks in the AIFM sector.

JEL classification: E58, E61, G23, G28
Keywords: Financial stability, systemic risks, asset management, alternative investment funds, macroprudential supervision, regulation

"Risk can appear in all sorts of places in the financial sector." With these words, an article in *The Economist* started out its discussion of systemic risks in the asset management industry (Economist, 2014). An increasing body of literature analyzes and discusses the question of how asset managers may pose risks to financial stability (e.g. OFR, 2014; IMF, 2015; FSB-IOSCO, 2015). Indeed, we know, thanks to the collapse of Long-Term Capital Management (LTCM) in 1998, that highly leveraged hedge funds concentrated in a market segment can lead to financial instability.

In 2011, the European Alternative Investment Fund Managers Directive (AIFMD) came into force. It was transposed into Austrian law through the Alternative Investment Fund Managers Act (Alternatives Investmentfonds Manager-Gesetz – AIFMG), which entered into force on July 22, 2013. Based on the Undertakings for Collective Investment in Transferable Securities (UCITS) Directive and the AIFMD, all investment funds within the EU can be divided into two categories: UCITS or alternative investment funds (AIFs)[2]. An alternative investment fund manager (AIFM) is any legal person whose regular business activity consists of managing one or more AIFs. This includes e.g. managers of hedge funds, private equity funds, real estate funds and closed-end funds.

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[2] *An AIF is any collective investment undertaking, including investment compartments thereof, that gathers capital from a number of investors with a view to investing it in accordance with a defined investment policy for the benefit of those investors. The gathered capital may not directly serve any operational activity, and the fund must not fall under the UCITS Directive.*

The AIFMD aims to harmonize the rules governing the authorization and supervision of AIFMs across the EU. In particular, it aims to introduce a coordinated approach regarding the identification and analysis of risks that AIFMs and their activities may pose to the financial system while also tackling the consequences of risks for EU investors and markets.

To this end, the AIFMD introduces comprehensive supervisory reporting requirements for AIFMs (AIFMD reporting). AIFMs are obliged to regularly provide the national competent authorities (NCAs) of their home Member State with information on the main instruments in which they are trading and on the principal exposures and most important concentrations of the AIFs they manage in order to enable the NCAs to monitor systemic risk effectively. The introduction of these comprehensive reporting obligations for AIFs and AIFMs makes extensive AIF and AIFM data available to supervisors for the first time.

The NCAs are required under Article 25 AIFMD to use these reporting data for assessing whether the use of leverage by AIFs may contribute to the build-up of systemic risk in the financial system, to disorderly markets or to risks to long-term economic growth. In addition, NCAs have to assess whether AIFs or AIFMs potentially constitute important sources of counterparty risk to credit institutions or other systemically important institutions in another Member State. In Austria, Article 23 AIFMG provides the Oesterreichische Nationalbank (OeNB) with a mandate to analyze these systemic risks to financial stability. The OeNB must report any financial stability concerns it identifies to the Austrian Financial Market Authority (FMA) which, in its capacity as the Austrian NCA, may use the macroprudential instrument of imposing limits on the level of leverage allowed to AIFMs or issue other restrictions.

In this context, the AIFMD introduces a macroprudential perspective to the supervision of securities and markets (Liebeg and Trachta, 2013). While literature on asset management and financial stability in general is expanding, literature on analyzing systemic risks on the basis of AIFMD reporting under Article 25 AIFMD is still rather limited (e.g. FCA, 2015).

The purpose of this article is to discuss indicators that could be used for identifying the systemic risks caused by AIFs on the basis of AIFMD reporting. In discussing indicators for macroprudential analysis under Article 25 AIFMD, this article contributes to the literature by supporting supervisors in identifying and monitoring systemic risks in the AIFM sector.

The remainder of this article is structured as follows. Section 1 explains in more detail the data collected under AIFMD reporting. Section 2 discusses the identification of potential systemic risks posed by AIFs and their possible indicators. Section 3 presents a brief overview of the Austrian AIFM sector and its AIFMD reporting data. Finally, we provide a conclusion and outlook.

1 Reporting obligations under the AIFMD

The AIFMD and the Austrian AIFMG lay down comprehensive reporting obligations for AIFMs vis-à-vis NCAs. Other major legal sources for AIFMD reporting include Commission Delegated Regulation (EU) No. 231/2013 (level II regulation) as well as guidelines prepared by the European Securities and Markets Authority (ESMA) on reporting obligations under Articles 3(3)(d)

and 24(1), (2) and (4) AIFMD and, in Austria, the FMA's Alternative Investment Fund Manager Reporting Regulation (Alternative Investmentfonds Manager-Meldeverordnung – AIFM-MV).

Both authorized and registered AIFMs in Austria are obliged to provide the FMA with regular information pursuant to Article 22 AIFMG, Article 1(5)(4) AIFMG and Article 110 level II regulation. Authorized AIFMs have to submit their reporting files, according to Article 110(3) level II regulation and Article 2 AIFM-MV, to the FMA on a quarterly, half-yearly or yearly basis, depending on their leverage and total assets under management (AuM), including any assets acquired through use of leverage (Article 2 level II regulation). Subject to Article 1(5)(4) AIFMG, registered AIFMs have yearly reporting obligations to the FMA. According to Article 110(1) level II regulation and Article 2(4) AIFM-MV, AIFM reporting information shall be provided to the FMA as soon as possible and no later than one month after the end of the relevant reporting period. If an AIF is a fund of funds, the reporting period is extended by 15 days. Given the different reporting frequencies, which depend on an AIF's/AIFM's license, leverage and AuM, data covering the full-scale AIF market under a given jurisdiction are only available on a yearly basis.

The legal reporting obligations for registered and authorized AIFMs cover the main instruments in which they are trading, including a breakdown of financial instruments and other assets, and the markets of which they are a member or where they actively trade. For each of the EU AIFs it manages and for each AIF it markets within the EU, an AIFM must report a breakdown of investment strategies, principal exposures and most important investment concentration, the concentration of investors and the principal markets in which the respective AIF trades. In addition, authorized AIFMs have to report the instruments traded, individual exposures and risk profiles of the individual AIFs (including their market risk profiles, counterparty risk profiles, liquidity profiles, operational, stress test results and other risk aspects such as the leverage values of the AIFs in a detailed manner).

Under Article 111 level II regulation, the legal reporting obligations for AIFs that use substantial leverage require the provision of additional information such as information on the identity of the five largest sources of borrowed cash or securities and on the amount of leverage derived from these sources for each of the listed AIFs. Leverage is considered to be employed on a substantial basis when the exposure of an AIF, as calculated according to the commitment method[3] under Article 8 level II regulation, exceeds three times its net asset value (NAV).

Important reporting positions include the value of AuM as well as leverage values calculated according to two different methods: the so-called gross method and the commitment method. AuM as defined in Article 2 level II regulation distinctively differ from the NAV, as AuM include all assets acquired through the use of leverage (i.e. through borrowing of cash or securities, or leverage embedded in derivative positions, or by any other means). Derivative instrument positions have to be converted into the respective derivative's equivalent position in its underly-

[3] *Significant differences exist between the detailed calculation of leverage according to the "commitment method" under the UCITS Directive and according to the AIFMD level II regulation.*

ing assets, using the conversion methodologies given in Article 10 level II regulation. The absolute value of that equivalent position is then to be used for the calculation of AuM.

The calculation of leverage under the gross and commitment methods is defined in Articles 6 to 8 level II regulation. The exposure of an AIF calculated according to the gross method (Article 7 level II regulation) includes the sum of the absolute values of all positions, including derivative instruments converted into the equivalent position in their underlying assets, the exposure resulting from the reinvestment of cash borrowings, positions within repurchase or reverse repurchase agreements, securities lending or borrowing or other arrangements but excluding any cash and cash equivalents which are highly liquid investments held in the base currency of the AIF. The exposure of an AIF calculated according to the commitment method (Article 8 level II regulation) includes the sum of the absolute values of all positions including positions that increase leverage according to the gross method (including cash holdings), but applies netting and hedging arrangements as defined in Article 8(3) to (9) level II regulation. For both the gross and commitment method, the AIF's leverage has to be expressed as the ratio (in percent) of its exposure to its NAV.

For the purpose of macroprudential analysis, the FMA must forward the collected AIFMD reporting data to the OeNB. Given the obligation to cooperate (Article 61 AIFMG), the FMA must, where necessary to perform the required tasks, make all AIFMD reporting data available to the responsible authorities in other concerned Member States, to ESMA and to the European Systemic Risk Board (ESRB).

2 Identification of potential systemic risks caused by AIFs

Systemic risks are risks that arise at the level of the financial system as a whole, risks to financial stability and risks to financial intermediation such as to the efficient allocation of resources, the functioning of payment systems or to risk insurance (see e.g. Liebeg and Posch, 2011).

Concerns about potential systemic risks posed by AIFs have increased since the last financial crisis. Especially (highly) leveraged investment funds can generate or amplify risks such as market risks, liquidity risks and counterparty risks, which may lead to a misallocation of resources and to extreme losses for creditors.

While these potential sources of risks stemming from AIF activities are not directly caused by AIF leverage, their leverage may considerably amplify all these risks. Therefore, separate analyses of AIFs with substantial leverage[4] may be part of macroprudential analysis.

This article discusses these risks and their possible indicators on the basis of AIFMD reporting positions. The systemic risk caused by AIFs in the financial system is considered, in general, to arise from risks due to market failures (as discussed in section 2.1) or from counterparty risks (as discussed in section 2.2).

2.1 Risks of disorderly markets

AIFs can cause risks of market disruptions in single or multiple sectors in a variety of ways, e.g. by generating risks of fire sales, liquidity risks, risks of

[4] *"Substantial leverage" means that the exposure of an AIF as calculated according to the commitment method exceeds three times its NAV.*

herding and indirect contagion, risks arising from complex portfolios and possibly risks of high frequency trading (HFT).

2.1.1 Risks of fire sales

Asset fire sales are defined as the quick and sudden sale of assets, typically when the seller is in financial distress. In this situation, assets are sold below their intrinsic value, which reduces the asset value of the investment fund concerned. If the investment fund concerned dominates a market or market segment, price anomalies may arise or even cause a market failure. The probability of a sale of assets below their intrinsic value is higher for illiquid assets or an illiquid market segment. In this situation, a downward asset price spiral may be amplified by the imbalances between supply and demand in this market.

To identify risks of fire sales for AIFs, the following indicators may be derived from AIFMD reporting positions: (1) value of main instruments (aggregated) in relation to the total issue of these instruments; (2) main markets where instruments are traded; (3) value of invested instruments in relation to market size if data are available.

2.1.2 Liquidity risk

During the recent financial crisis, a severe drop in market liquidity was observed. This drove up trading costs and had an impact on asset pricing (Foran and Sullivan, 2015). The liquidity of an investment fund refers to the extent to which its holdings can be quickly converted to cash in relation to the redemption period of its shares. A liquidity mismatch arises when an investment fund is invested in illiquid assets and the redemption period is short. A run on an investment fund may develop a specific momentum depending on the structures of the given incentive: the first mover advantage, i.e. the advantage gained by those investors that redeem their fund shares first. The first movers get higher prices per share, and those that sell later may have to face decreasing share values due to fire sales of the investment fund and possibly decreasing asset prices. Given that investment funds may have these effects on market liquidity and that the investment funds industry (including AIFs) is growing, regulators have recently started to pay more attention to the regulation of investment funds' liquidity.[5]

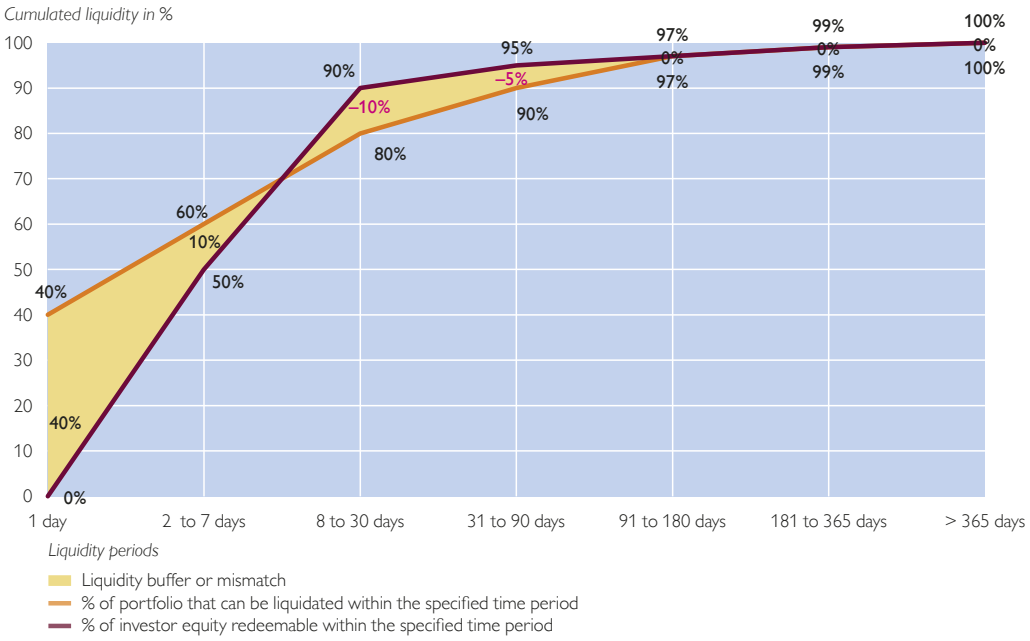
For the purpose of monitoring liquidity risks, an aggregate liquidity profile for the AIF sector (respectively, for individual AIFs and AIF subsectors such as real estate funds that are heavily exposed to liquidity risk) may be derived from the reported data. Reporting data on the liquidity profile of AIFs include the liquidity profile of their assets and of their asset redemption terms. The portfolio's liquidity profile is specified as the share of assets (in percent of the AIF's NAV) that can be liquidated within seven liquidity periods[6] and the investor liquidity profile is defined as the share of investor equity (in percent of the AIF's NAV) that can be redeemed within the same seven liquidity periods, respectively. The portfolio liquidity profile compares the (aggregate) portfolio liquidity of the assets held by AIFs with the (aggregate) redemption period for investors' shares

[5] *For example, the U.S. Securities and Exchange Comimission (SEC) proposed the introduction of liquidity management rules for mutual funds and exchange-traded funds on September 22, 2015 (http://www.sec.gov/news/press-release/2015-201.html).*

[6] *1 day or less, 2 to 7 days, 8 to 30 days, 31 to 90 days, 91 to 180 days, 181 to 365 days, more than 365 days.*

Chart 1

AIF liquidity profile (simulation)



Source: Simulated data, authors' calculations.

and identifies potential liquidity mismatches as indicators for liquidity risks. An example of such a liquidity mismatch depicted as a cumulative liquidity profile is given in chart 1.

2.1.3 Risks of herding and indirect contagion

Herding and indirect contagion among AIFs may also lead to market failures. Herding is defined as the similar investment behavior of investors. It may amplify the impact of price shocks in case AIFs sell the same assets simultaneously. In addition, herding may increase indirect contagion, which occurs as a result of AIFs applying similar business models. The solvency or liquidity concerns of a single AIF that result in asset sales can quickly spread to funds with a similar investment behavior and thus amplify risks of fire sales, which may lead to market failures. Again, the first mover advantage may have an amplifying effect in a potential spillover event.

Possible indicators suited to identify any herding behavior of AIFs may be based on investment concentrations in the aggregated AIF portfolio. Changes in the investment behavior of the AIF sector or its subsectors may be used as indicators for herding once time series data are available.

2.1.4 Risks emanating from a complex portfolio

The probability that AIFs cause market disruptions tends to be higher when investment strategies and instruments are complex. In challenging times for financial markets, investors tend to sell complex assets first (Elliott, 2015). Furthermore, the financial crisis has shown that substantial risks may arise from complex derivatives. Especially long-positioned OTC derivatives increase the risk of contagion to the

counterparties of the derivatives (Segoviani and Singh, 2008). These risks are lower for exchange-traded derivatives because of securities deposits and margin requirements.

Indicators by which to measure risks arising from a complex portfolio may be (1) the share of derivatives in AuM and (2) the share of OTC derivatives in total derivatives.

2.1.5 Potential risks arising from high frequency trading (HFT)

While the potentially negative impact of HFT is still under discussion (see e.g. Easley et al., 2011; Hendershott et al., 2011; Chaboud et al., 2014), some studies indicate that market anomalies may be accelerated by market activities connected to HFT (Barker and Pomeranets, 2011; Kirilenko et al., 2014). In addition, HFT could lead to a liquidity illusion (i.e. an overestimation of market liquidity) and has been known to have moved the market value of big companies.

To monitor the risk arising from HFT in the AIF sector, the share of AuM of AIFs with an HFT strategy on their aggregated AuM may be used as an indicator.

2.2 Counterparty risks

Counterparty risk manifests itself as contagion risk emanating from investment funds toward their counterparties and transmitted mainly through liquidity and/or balance sheet channels. All bilateral transactions such as OTC derivatives generate counterparty risk. Counterparties can be creditors, owners, trading counterparties or counterparties based on securities lending activities. A particular focus in AIF risk assessment may be placed on systemically relevant institutions among the counterparties because they have the potential to spread risk into the market quickly.

Indicators that may be used to assess counterparty risks may be the size of the volumes outstanding vis-à-vis the AIFs' counterparties as a share in total assets or in the counterparty's equity. Further indicators may be the size of securities lending activities. Additional analysis might consider the ownership structure of the AIFM sector and examine the spreading of potential contagion risks through this channel.

2.3 Risks to long-term economic growth

Risks to long-term economic growth may materialize as a result of market failures caused by AIFs or decreasing investments in the real economy. Risks of market failures have already been discussed in section 2.1. The costs of substituting AIFs' direct investment in the real economy by direct investment by other financial intermediaries may be used as a proxy for the potential impact of reduced investments in the real economy on long-term growth. Costs of substitutability are calculated as the differences in prices of AIF financing and other sources of financing caused by AIFs' withdrawal from investing in the real economy. If the substitutability of capital is given, the costs of withdrawal of AIFs from investing in the real economy might be insignificantly low.

The size of AIFs' direct investments in the real economy may be derived from the reporting data as an indicator of potential risk to long-term economic growth. However, since the reporting data do not indicate in which country the investments were made, only rough estimates are possible.

3 The Austrian AIFM sector

In Austria, the majority of AIFs are institutional funds that are subject to both the AIFMD and the Austrian In-

vestment Fund Act. As at June 30, 2015, there were 27 authorized and 20 registered AIFMs managing 1065 AIFs in Austria. For AIFMD reporting as at June 30, 2015, however, only 24 AIFMs and 901 AIFs were subject to reporting requirements. They account for an aggregated NAV of EUR 85.5 billion and AuM of EUR 104.1 billion. The 901 AIFs can be broken down into 3 hedge funds, 8 real estate funds, 377 fund-of-funds and 513 other funds (which are the above-mentioned institutional funds). Only 3 funds (namely the hedge funds) had a substantial leverage and 493 had a leverage of more than 100% (as calculated either according to the gross method or to the commitment method). For the reporting date of June 30, 2015, the results of the OeNB's macroprudential analysis of the Austrian AIFM sector under Article 25 AIFMD do not indicate that the use of leverage by AIFs contributes to the build-up of systemic risk in the financial system, to disorderly markets or to risks to long-term economic growth, and neither do they pose significant counterparty risks.

4 Conclusions and outlook

Alternative investment funds (AIFs) may generate or amplify systemic risks in multiple ways. This article discusses possible indicators that may be used to identify systemic risks emanating from AIFs on the basis of AIFMD reporting data, which are now available to supervisors.

This novel macroprudential perspective toward the supervision of securities and markets in the EU builds on a harmonized approach to data collection and analysis under the AIFMD. At the current juncture, some data and measurement issues and statistical challenges across jurisdictions remain. Once data across all jurisdictions are available, an analysis of the full-scale EU AIF market by ESMA and/or the ESRB will be of significant value. In addition, once time series data are available, it will be possible to monitor trends in the investment, risks and leverage of AIFs. In this context, appropriate, harmonized and detailed indicators for use in macroprudential analysis should be developed for supervisors to be able to identify and assess systemic risks.

This article aims at starting the discussion on possible indicators that can be derived from AIFMD reporting data and used to identify potential risks caused by AIFs. It may be of particular interest for NCAs, supervisors and central banks. Finally, it may also be of interest for AIFMs as it helps understand AIFMD reporting requirements and their use for risk analysis.

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The Russian banking sector – heightened risks in a difficult environment

Stephan Barisitz[1]

The Russian banking sector has passed from excessive retail credit growth (up to early 2014) to a general contraction of credit (2015). This recent decrease is to a certain degree attributable to Western sanctions cutting off leading banks from cheap refinancing, but most notably to the steep fall of the oil price. The latter caused the ruble to plunge and pushed the Russian economy into recession. Temporary financial instability was reined in by the Bank of Russia's sharp increase of the key rate (largely reversed recently) and by expanding deposit insurance coverage. Liquidity injections, foreign currency repurchase agreements, and the recapitalization of a number of systemic banks also helped. Moreover, a degree of regulatory forbearance was introduced. As the economy shrinks, nonperforming loans are inevitably rising and profitability is declining. The banking sector is primarily exposed to credit risk, followed by liquidity and exchange rate risk. Connected lending is a structural problem now being finally tackled. Shock absorbers have eroded but still provide leeway: deposits are sizable and depositor confidence seems to have returned. Russian banks have a positive net external creditor position. Public debt is low and the country – notwithstanding terms-of-trade losses – continues to boast current account surpluses. Foreign currency reserves – after declining – have restabilized and remain substantial.

JEL classification: G21, G28, P34
Keywords: banking sector, banking crisis, credit risk, refinancing risk, exchange rate risk, connected lending, nonperforming loans, recapitalization, Russia

Faced with adverse developments, the Russian banking sector has become more crisis prone since the beginning of 2014. This study analyzes these developments, focusing in particular on the first three quarters of 2015.[2] Section 1 outlines the macroeconomic background, featuring the impacts of Western sanctions on Russia with respect to the geopolitical conflict in Ukraine, and of the sharp decline of the oil price. The authorities' salient policy reactions, including in the area of monetary policy, are also covered. Section 2 focuses on banking development in Russia from late 2013 to the fall of 2015, which essentially encompasses the movement from excessive retail credit growth to a general decline of lending. The particular measures taken by the government and the Central Bank of the Russian Federation (Bank of Russia) to stabilize the banking sector are dealt with in Section 3. Section 4 gives an assessment of Russian banking risks and shock-absorbing factors as they are perceived in early December 2015. Section 5 concludes with an outlook.

1 Sharply deteriorating macroeconomic background and the authorities' policy reactions

While Russia until recently had boasted impressive macroeconomic achievements (including low budget deficits or even budget surpluses, current account surpluses, modest external debt, high foreign currency reserves, and a positive net external creditor position), its

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[2] *This article ties in with previous Russian banking sector-related contributions in the OeNB's Financial Stability Report (Barisitz, 2013a; Wittenberger et al., 2014), but the environment for Russian banking activities has changed substantially in the meantime.*

economic growth was much less impressive – despite high oil prices – and declined to very modest single digits in 2013 (1.3%) and 2014 (0.6%). The likely reasons for this shortcoming are long-standing structural and institutional problems, such as a traditionally rough investment climate, a sprawling bureaucracy, pervasive corruption and stalled reforms. In this ambiguous situation, the country in 2014 experienced a double shock caused by (1) Western economic and financial sanctions imposed from March 2014 in connection with the outbreak of geopolitical tensions in Ukraine, and (2) the steep decline of the oil price from July 2014 (Urals grade crude: USD 105 per barrel) to January 2015 (around USD 45). The most severe restrictive measures were imposed in the summer of 2014 and have been prolonged since; these include tight limits on the access of Russian state-owned banks (SOBs) and state-owned enterprises (SOEs) to EU and U.S. capital markets and bank loans. As a consequence, many Russian credit institutions and firms were effectively cut off from financing themselves on Western markets.

The steep drop of the oil price triggered a sharp decline of the ruble (as illustrated in chart 1), which contributed to a spike in inflation. As a result of combating the slide of the ruble, the Bank of Russia's foreign exchange reserves (including gold) shrank by more than one-quarter in the twelve months until March 2015 (to about EUR 320 billion). After some erratic exchange rate movements and heightened deposit withdrawals (see section 2) in December 2014, the situation in the Russian foreign exchange market restabilized. This was partly due to the Bank of Russia's significant tightening of monetary policy, particularly its hefty increase of the key interest rate (the repo auction rate) by 6.5 percentage points to 17% in mid-December 2014. Restabilization was partly also attributable to the temporary recovery of the oil price (back to about USD 60–65 per barrel in May and June 2015), which helped the ruble regain some lost territory as well. However, practically all of this territory was lost again in July and August, when the oil price slid back to below USD 50 per barrel (chart 1).

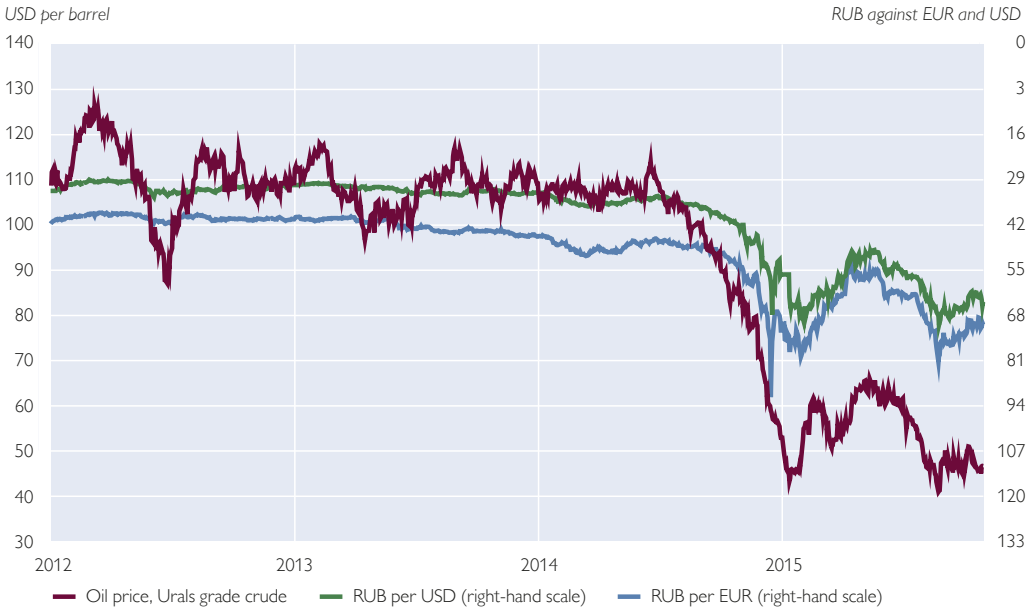
The worsening of Russia's terms of trade and the uncertainty triggered by the sanctions weakened investment activity and pushed the country into recession: GDP shrank by 3.7% in January–September 2015 (year on year). Given this adverse environment, a possible further destabilization of the economy was prevented by the authorities' multifold crisis-response policies, which include the move to a fully flexible exchange rate regime, which was brought forward to mid-November 2014 (instead of January 2015 as originally planned);[3] the Bank Capital Support Program (see below); and the partial anti-cyclical loosening of the traditionally rather tight fiscal stance.

Helped by the calming of financial markets and by the partial recovery of the ruble (from February 2015), the Bank of Russia decided to gradually reduce the key interest rate again (so far

[3] *The Bank of Russia declared that from November 10, 2014, it would no longer intervene to support the currency unless financial stability was in danger. Interventions to support the ruble did follow, namely in December 2014 and January 2015. Amid lower hydrocarbon prices, a more flexible exchange rate served as a partly-offsetting buffer for extractive enterprises' profits and for the state budget's revenues (expressed in rubles).*

Chart 1

Russia: oil price and ruble exchange rates



Source: Thomson Reuters.

in five steps by 6 percentage points to 11.0%) in order to combat the deepening recession. Climaxing in March at 16.9%, CPI inflation (year on year) subsequently eased, but remained relatively high through November (at around to 15%). From May to July, the Bank of Russia carried out foreign currency purchases to shore up foreign exchange reserves. Yet the renewed decline of the oil price and the weakening of the ruble caused the Bank of Russia to suspend these purchases. Since April, foreign currency reserves (including gold) have stabilized and slightly recovered, running to EUR 344 billion at end-November 2015. Largely depending on oil price developments, the Russian recession has probably reached its trough in the second half of 2015, before it might ease in 2016.

2 Banking development: from excessive retail credit growth (late 2013) to general credit contraction (2014–15)

In late 2013 and early 2014, dynamic Russian banking activity, largely driven by excessive retail credit growth, was slowing down. The annual growth rate of total lending (to resident sectors, excluding interbank loans) eased from 14% in 2012 to 10% in 2013 (in real terms, exchange rate-adjusted, see chart 2). The expansion of retail lending declined from 31% to 21%; at the same time, the share of household credits in total credits increased slightly to about one-third, as table 1 shows. The reasons for the slowdown of (retail) credit growth included the weakening of GDP growth (from 3.4% in 2012 to 1.3% in 2013) as well as some prudential measures taken by the Bank of

Russia in 2013 that focused on reining in unsecured consumer lending, which had expanded to more than half of total retail loans.[4]

While credit growth (in real terms and exchange rate-adjusted) continued to slacken, albeit modestly, in the first half of 2014, deceleration gained momentum in the second half and turned into contraction in 2015. This was caused by a number of factors (some of them already mentioned above):

– Western financial sanctions imposed in the summer of 2014 cut off leading banks and enterprises from cheap refinancing and further weakened the investment climate and growth prospects in Russia.[5]
– The precipitous fall of the oil price and major deterioration of the terms of trade (particularly in late 2014), whose effect cascaded throughout the economy (on incomes, consumption as well as investment), was the most important factor leading from anemic GDP growth in 2014 (0.6%) into recession in 2015 (January–September: –3.7% year on year).
– The plunge of the ruble and the jump of inflation in December 2014 prompted the Bank of Russia to raise the key rate sharply (from 10.5% to 17%), which in turn also pushed up lending rates in the real economy, even if by less than originally expected or with a delay.[6]

Now spearheaded again, but in the opposite sense, by decelerating and then shrinking retail lending (+12% by end-June 2014, +1% by end-2014, –18% by end-October 2015, year on year), overall credit activity went into contraction (+7%, +2%, and –11% in the analogous periods; see chart 2).[7] The depreciation of the ruble had a considerable impact on the share of foreign currency-denominated loans in total loans (mid-2014: 12%, end-October 2015: 21%; see table 1). In Russia, foreign currency loans are strongly concentrated in loans to enterprises (where the share of foreign currency loans expanded from 18% to 30% in the above time span).[8] As far as they are exporters, corporations can be expected to possess hedges for an important part of their foreign exchange risk. However, regarding industries such as construction, trading and transportation, experts estimate that 30%–50% of these sectors' loans go to borrowers without stable foreign exchange revenues (Ulyanova et al., 2015, p. 6). Households, which are also often unhedged in this respect, have only taken up 2%–3% of their loans in foreign currencies. Thus, the problem of unhedged retail foreign currency credit borrowers running into trouble after a strong devaluation – repeatedly encountered in other CESEE countries – does not apply to Russia.

[4] *For more details on these measures, see Barisitz (2013a, p. 94).*

[5] *Yet sanctions indirectly also supported domestic lending in that Russian companies that had lost access to Western financial markets redirected some credit demand to the (more expensive) home market (Fitzgeorge-Parker, 2015, p. 82).*

[6] *In any case, in Russia banks on average only finance about 10%–15% of total investment; more than 50% comes from retained earnings, which however, have also suffered from the recession (Sapir, 2015).*

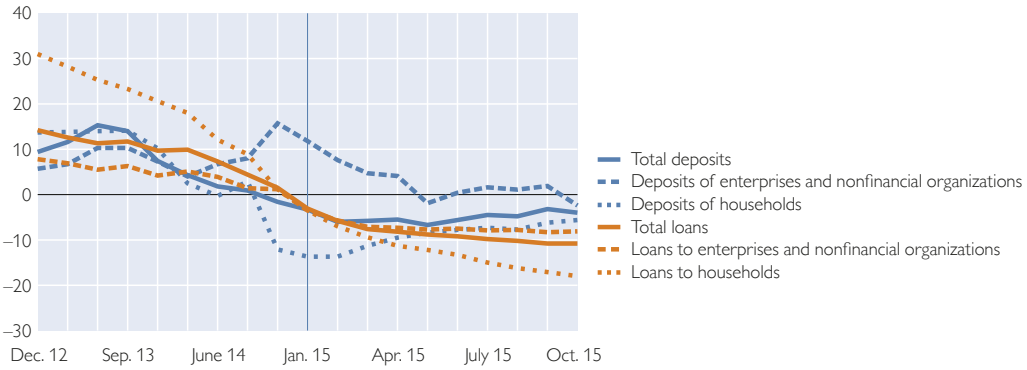
[7] *Only measured in exchange rate-adjusted, but not deflated, terms, total lending still increased 3% in the year to end-October 2015.*

[8] *Foreign currency-denominated loans even made up about 45% of the loan stock of the top ten Russian corporate borrowers as at end-September 2015 (BOFIT, 2015).*

Chart 2

Growth of bank deposits and loans

Real, year on year, exchange rate-adjusted, %, resident sectors excl. interbank



Source: Bank of Russia.

However, given the continuing recession, the lack of new lending, the plunge of the ruble, and aggravating problems for existing unhedged borrowers, Russia is grappling with swelling nonperforming loans (NPLs): The NPL ratio according to the narrow definition rose from 6.0% of total loans at end-2013 to 8.3% at end-September 2015. The NPL ratio according to the broader definition increased from 12.9% to 16.2% (table 1).[9] Thus, credit quality has declined to levels last witnessed in the 2008–9 crisis. The buildup of loan loss provisions has been somewhat lagging behind NPLs of the narrow definition; at end-September 2015, the former attained 7.6% of the value of total loans.[10]

The slowdown, and shrinkage, of credit in the second half of 2014 and in early 2015 is well visible in the decline of the loan-to-deposit ratio from about 130% in early 2014 to 112% at end-October 2015. While the shock of the ruble's accelerated drop in early December 2014 had triggered short-lived bank runs and retail deposit withdrawals,[11] the Bank of Russia's sizable key rate adjustment in the middle of the month followed by commercial banks' strong hikes of deposit interest rates, as well as the State Duma's swift passage of legislation that raised the maximum deposit insurance coverage from RUB 700,000 (about EUR 10,000 at the time) to RUB 1.4 million, contributed to calming the situation again.

[9] *For details about the respective narrow and broader NPL definitions, see explanations in footnotes 2 and 3 of table 1. For a more elaborate discussion of these matters, see Barisitz (2013b).*

[10] *This merits a note of caution: given recent Bank of Russia regulatory forbearance measures, the reported risk-weighted assets may not (fully) correspond to their market value. See also table 1.*

[11] *During the month of December 2014, household deposits shrank by more than 3% (in real terms and exchange rate-adjusted). These outflows partly financed a buying spree targeting consumer durables, cars and even apartments, in which Russian households effectively replaced some pecuniary savings with in-kind savings, which, it was rightly hoped, would provide a hedge against a burst of inflation anticipated at the time.*

Table 1

Russia: selected banking sector stability indicators

	End-2012	End-2013	End-June 14	End-2014	End-March 15	End-June 15	End-Sep. 15
Credit risk							
Total loans (to resident sectors excl. interbank, ratio to GDP, %[1]	42.3	47.0	47.5	53.6	53.2	51.8	54.6
Total loans, annual real growth, exchange rate-adjusted, %	+14.2	+9.7	+7.3	+1.5	–7.6	–9.2	–10.8
Loans to households (share in total loans, %)	29.3	32.0	32.2	29.7	28.9	28.6	27.3
Nonperforming loans (% of total loans incl. interbank, narrow definition)[2,10]	6.1	6.0	6.5	6.8	7.5	8.2	8.3
Nonperforming loans (% of total loans incl. interbank, broader definition)[3,10]	13.4	12.9	13.6	13.6	15.5	16.2	16.2
Ratio of large credit risks to total banking sector assets, %[4,10]	25.8	25.1	26.2	25.1	25.5	25.2	26.1
Market and exchange rate risk							
Loan-deposit spread (short-term retail deposits – medium- and long-term corporate loans)	5.0	5.5	6.3	0.7	5.5	5.5	5.4
Loan-deposit spread (short-term retail deposits – medium- and long-term retail loans)	13.6	12.2	12.2	5.1	10.9	9.9	9.7
Foreign currency loans (share in total loans, %)	12.3	12.9	12.3	18.3	19.8	19.5	22.2
Foreign currency loans to enterprises (share in loans to enterprises, %)	16.5	18.6	17.8	26.0	27.8	27.3	30.5
Foreign currency loans to households (share in loans to households, %)	3.1	2.3	1.9	2.6	2.6	2.3	2.6
Foreign currency deposits (share in total deposits, %)	17.9	19.1	21.2	29.6	30.5	29.1	32.4
Liquidity risk							
Total deposits (from resident sectors excl. interbank, ratio to GDP, %)[5]	34.1	37.1	36.8	43.3	43.3	43.5	48.4
Total deposits, annual real growth, exchange rate-adjusted, %	+9.4	+7.4	+1.8	–1.6	–5.8	–5.6	–3.2
Loan-to-deposit ratio, %	124.2	126.5	129.1	123.8	122.9	119.1	112.8
Ratio of highly liquid assets to total assets, %	11.1	9.9	11.1	10.4	11.2	11.1	11.3
Banks' external assets (share in total assets, %)[6]	13.0	13.2	13.8	13.7	15.0	15.4	16.4
Banks' external liablities (share in total liabilities, %)[7]	10.8	10.3	9.7	10.5	9.8	9.1	9.4
Liabilities to the Bank of Russia (share in banks' total liabilities, %)[8]	5.4	7.7	8.7	12.0	10.2	9.4	7.3
Profitability							
Return on assets, %[10]	2.3	1.9	1.7	0.9	0.5	0.3	0.0
Return on equity, %[10]	18.2	15.2	13.6	7.9	4.8	2.4	0.4
Shock-absorbing factors							
Capital adequacy ratio (capital to risk-weighted assets, %)[10]	13.7	13.5	12.8	12.5	12.9	12.9	13.0
Tier 1 capital ratio N 1. 2 (Basel III)[10]	8.5	9.1	9.2	9.0	9.1	9.1	9.1
Loan loss provisions (ratio to total loans, %)[10]	6.1	5.9	6.2	6.5	7.1	7.5	7.6
Claims on the Bank of Russia (share in banks' total assets, %)[9]	4.4	3.9	3.3	4.2	3.2	2.9	2.7
Memorandum items							
Total banking sector assets (ratio to GDP, %)	79.6	86.7	88.5	109.4	105.2	101.9	109.9
RUB/USD (end of period)	30.37	32.73	33.63	56.26	58.46	55.52	66.24
RUB/EUR (end of period)	40.23	44.97	45.83	68.34	63.37	61.52	74.58
CPI inflation (year on year, end of period)	6.6	6.5	7.8	11.4	16.9	15.3	15.7

Source: Bank of Russia, OeNB calculations.

[1] *Loans and other placements with nonfinancial organizations, government agencies and individuals.*
[2] *Share of problem loans (category IV) and loss loans (category V) according to the Bank of Russia Regulation no. 254-P (Bank of Russia, 2004).*
[3] *Share of doubtful (category III), problem (category IV) and loss loans (category V) according to the Bank of Russia Regulation no. 254-P (Bank of Russia, 2004).*
[4] *Large borrowers are those with loans exceeding 5% of their regulatory capital.*
[5] *Deposits and other funds of nonfinancial organizations, government agencies and individuals.*
[6] *Funds placed with nonresidents including loans and deposits, correspondent accounts with banks and securities acquired.*
[7] *Funds raised from nonresidents including loans from foreign banks as well as deposits of legal entities and individuals.*
[8] *Loans, deposits and other funds received by credit institutions from the Bank of Russia.*
[9] *Accounts with the Bank of Russia and authorized agencies of other countries.*
[10] *Data for 2015 are subject to regulatory forbearance measures and therefore may not be fully comparable with previous data.*

While household deposits had still expanded 10% at end-2013 (in real terms and exchange rate-adjusted, year on year), they were flat in mid-2014, shrank 12% by end-2014, and recorded a smaller decline, namely of 6%, at end-October 2015.

Growth of enterprise deposits, particularly in the second half of 2014, offset part of the decrease of retail deposits: As depicted in chart 2, total deposits still grew 2% by mid-2014, decreased 2% by end-2014, and were 4% below the year-earlier figure at end-October 2015. The referred-to expansion of enterprise deposits could mean that large SOEs followed the government's recommendation to increase their accounts; but this essentially appears to have been a one-off measure in late 2014. Largely due to revaluation effects, the share of foreign exchange deposits in total deposits rose from 19% at end-2013 to 32% at end-October 2015.

3 What have the Bank of Russia and the government done so far to stabilize the banking sector?

Apart from the above-mentioned adjustment of deposit insurance coverage, the authorities' efforts to stabilize the banking sector comprised liquidity injections, capital support and regulatory forbearance:

– The Bank of Russia temporarily stepped up financing of banks, including the provision of foreign exchange through foreign exchange repos.[12] Thus, banks' liabilities to the monetary authority grew from below 8% of their total liabilities in early 2014 to 12% at the end of the year, and thereby reached a level equaling the peak attained during the financial crisis of 2008/09, before declining again to 7% at end-September 2015 (table 1).
– Another important step was the State Duma's approval in late December 2014 of a law on recapitalizing banks with a total sum of RUB 1 trillion, later reduced to RUB 840 billion (or about EUR 12.5 billion), which corresponds to around 13% of the sector's aggregate capital, via the Deposit Insurance Agency (DIA). Within the framework of this Bank Capital Support Program, 27 large credit institutions (each possessing at least RUB 25 billion in capital, excluding Sberbank) were assigned the highest funding priority, followed by other banks directly or indirectly affected by sanctions, and top regional lenders. The capital support has been delivered through the budget and financed through the sale of federal bonds (Obligatsii federalnogo zaima – OFZs).[13]
– The State Duma also passed a bill allowing the government to invest up to 10% of the National Welfare Fund (NWF, i.e. about EUR 6.5 billion) in subordinate deposits and bonds of banks in order to support financing of large infrastructure projects.[14] Moreover, the Bank of

[12] *The monetary authority created, and commercial banks intensively used, instruments for foreign currency liquidity supply, such as foreign currency repurchase credit and swap arrangements. This was, of course, greatly facilitated by the Bank of Russia's decision to float the ruble.*

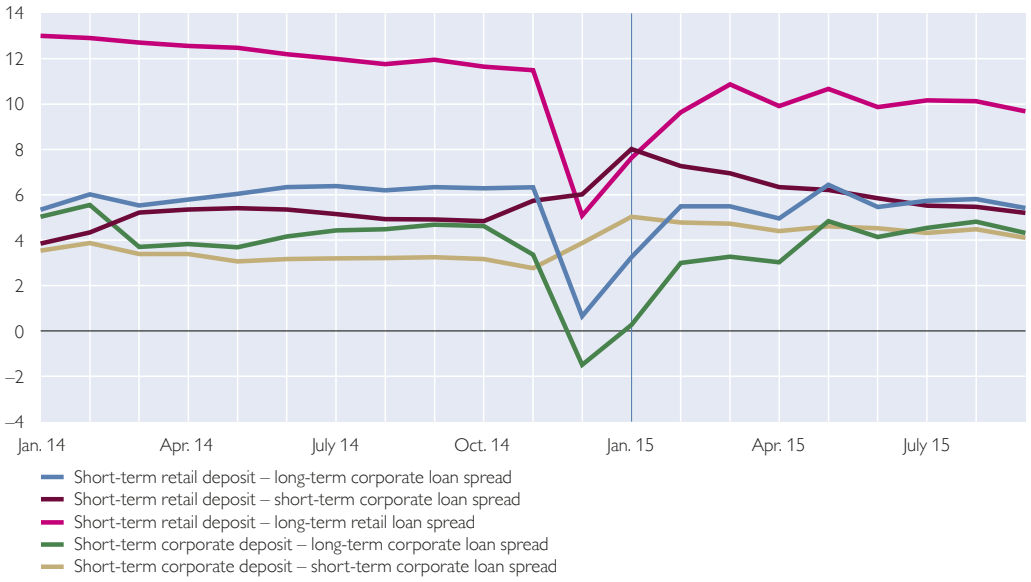
[13] *As of September 2015, eleven credit institutions had reportedly been recapitalized at a total cost of RUB 599 billion (about EUR 8 billion) (World Bank Group, 2015, p. 18).*

[14] *As of September 2015, RUB 64 billion (about EUR 900 million) in NWF assets had actually been deposited in banks (World Bank Group, 2015, p. 19). Altogether, the authorities are reported to have earmarked up to 15% of GDP in budgetary and nonbudgetary funds to maintain liquidity and support capitalization in the major banks. This is comparable to the support provided in the crisis of 2008/09 (Standard&Poor's RatingsDirect, 2015a, p. 6).*

Chart 3

Growth of bank deposits and loans

Real, year on year, exchange rate-adjusted, %, resident sectors excl. interbank



Source: Bank of Russia.

Note: The spreads are based on ruble-denominated loans and deposits.

Russia is authorized to support Sberbank with subordinate deposits, loans or bonds amounting to up to 100% of its capital, if necessary (IMF, 2015a, p. 16). Budget and NWF means are also used to support systemically important companies and strategic SOEs, which of course may facilitate their repayment of bank loans.

– Finally, the Bank of Russia has allowed banks some flexibility in classifying overdue loans and in provisioning (inter alia by applying October 1, 2014, exchange rates to foreign currency-denominated assets and liabilities, subsequently adjusted to more devalued, more realistic levels).[15] This is based on the expectation that difficult times and losses will be temporary. But it implies that in reality NPLs are likely to be higher than reported, and that the health of the banking sector as measured by prudential indicators may be overstated.

The crisis has left its mark on the sector's profitability. At least initially, the most important factor squeezing profits has been tightened net interest margins caused by three factors: (1) increased refinancing costs as a (direct and indirect) consequence of the Western financial sanctions, (2) increased deposit rates following the ruble slump-triggered hoisting of the key rate (in December 2014), and (3) limited room for lending rate hikes because of the economy's slide into recession. While the step-by-step reduction of the key rate from early 2015 has contributed to loosening the margin again, the situation remains delicate because of the deepening economic downturn

[15] *In September 2015, such allowable exchange rates were moved from 45 to 55 RUB/USD and from 52 to 64 RUB/EUR.*

(Bank of Russia, 2015a, p. 44; Triebe, 2015a, p. 17; Triebe, 2015b, p. 10). Chart 3 shows sharply declining, and then only partly recovering, loan-deposit spreads (as based on ruble-denominated figures). Rising loan loss provisions are also increasingly weighing on profitability. This is also true for Austrian banks (see below).

While return on equity was still satisfactory in mid-2014 (13.6%), it fell sharply in the following months (end-2014: 7.9%, end-September 2015: 0.4%). After the banking sector's capital adequacy had declined from 13.5% at end-2013 to 12.5% a year later[16], it recovered somewhat to 13.0% at end-September 2015 (table 1). This recovery was certainly due to the above-mentioned recapitalization steps, but to some degree the consequences of regulatory relaxations have to be factored in too.[17] The authorities plan to eliminate forbearance rules from January 2016. Russian credit institutions continue to boast a net investor position. Against the backdrop of the sanctions and with forced deleveraging, Russian banks' net external assets most recently rose to 7% of their total assets.

Due to particularly cautious credit stances and to selective divestment in the crisis environment, the share of majority foreign-owned banks in total sector assets gradually declined from 15.3% at end-2013 to 12.6% at end-September 2015. Foreign-owned banks have boasted above-average profitability. Some have reportedly profited from the downturn of the ruble, others from the relatively high interest rates (Karwacki 2015). SOBs, in contrast, have maintained and even further increased their predominance in the sector. The share of majority state-owned banks rose slightly to about 55% of total banking assets at end-2014. This can be explained inter alia by SOBs' preferential access to public assistance and by some crisis-triggered takeovers of weaker institutions.[18]

[16] *This decline was inter alia influenced by the Bank of Russia's introduction of the stricter Basel III capital requirements (see Barisitz, 2013a, p. 97).*

[17] *According to expert estimates, the contribution of the government's crisis-response measures to the recovery of the capital adequacy ratio came to 1.2 percentage points (Vasileva, 2015, p. 3). At the same time, in the view of the Bank of Russia, forbearance measures have helped save up to 2 percentage points on capital adequacy levels (IMF, 2015b, p. 8).*

[18] *For a comparison of the efficiency of public, private and foreign-owned banks in Russia, see Mamonov and Vernikov (2015).*

Box 1

Austrian banks' activities in Russia

Gernot Ebner, Tina Wittenberger[1]

Russia is an important market for Austrian banks (in foreign and domestic ownership). They operate three subsidiaries there, whose aggregate total assets came to EUR 33 billion in the first half of 2015. This amount corresponds to 11% of the total assets held by Austrian banks' subsidiaries in CESEE. Thus, in terms of total assets, the exposure toward Russia is the third largest after the Czech Republic (EUR 67 billion) and Croatia (EUR 35 billion). The claims of Austrian banks on Russia (relative to home country GDP) have remained among the highest in Europe. Also, at about 3%, they hold a significant market share given that the market share of all fully foreign-owned banks in Russian banking sector assets amounted to around 7% at end-August 2015 (FitchRatings, 2015, p. 6).

The loan book of Austrian subsidiaries in Russia is dominated by corporate loans (75%). In recent years, lending to households has grown at a higher pace, however. As of end-June 2015, total loan growth stagnated (year on year). Credit quality measured by the nonperforming loans ratio worsened by nearly 2 percentage points (year on year) to 6.3% in the second quarter of 2015.

The net profit of Austrian banks' subsidiaries in Russia weakened markedly from high levels, namely by almost 30% year on year, in the first half of 2015. The main drivers of this deterioration were the weak operating environment (a slowdown in credit growth, the need for substantially higher loan loss provisions, higher funding costs, and compression in interest margins) and the ruble depreciation. Despite the strong reduction, profits from Russia remained the second-largest contribution (after profits from the Czech Republic) to the aggregated net result of Austrian banks' subsidiaries in CESEE and they are still above the respective average.

Overall, the outlook for banks in Russia remains weak, given the pressure arising from the economic downswing and the turn in the credit cycle.

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In early 2015, the Bank of Russia carried out banking sector stability stress tests, proceeding from end-2014 banking data and assuming as a scenario a serious worsening of external economic conditions, including a decline of the oil price to USD 40 per barrel and a GDP contraction of 7%. The stress tests factor in the above-mentioned recapitalization measures. As a result of the sharp economic deterioration, the ratio of "bad" loans is assumed to more than double to 18% of total loans. The overall capital adequacy ratio would decline from 12.5% (end-2014) to 10.9%, which is still above the minimum ratio of 10%; yet about 190 banks (comprising 43% of total assets) would not be able to meet the minimum ratio and would feature a total capital shortage of around EUR 10 billion. The retail deposit volume could shrink 4% (in real terms). The sector would probably dip into the red (featuring losses of up to EUR 5 billion) (Bank of Russia, 2015b, pp. 53–56). Given the most recent (July–August 2015) decline of the oil price below USD 50 per barrel, the described downside scenario does not seem that far removed from reality.

Not necessarily directly related to the above crisis, the Bank of Russia – equipped with enhanced supervision authority since mid-2013 – has tightened supervisory activities and has been

quite active in attacking practices of "connected" or "related-party lending"[19]. Thus, licenses of many small, and some medium-sized, banks that were found to adhere to extremely risky business models or to engage in fraudulent practices, e.g. money laundering, were withdrawn. In a number of cases, the reasons cited included financial issues such as undercapitalization or insolvency.[20] This "cleaning up campaign" as well as bank mergers contributed to the decline of the number of banks from end-2013 to end-October 2015 by 166 or 18% to 757.

4 Assessment of current Russian banking risks and shock-absorbing factors

Salient risks affecting the banking sector currently include credit risk, liquidity and refinancing risk, exchange rate risk, and connected lending risk (structural risk).

4.1 Credit risk

Nonperforming loan ratios have grown markedly until end-September 2015 – to 8.3% according to the narrow definition, or 16.2% according to the broader definition. These ratios are, respectively, one-quarter or one-fifth higher than they were a year ago – which may understate the actual expansion – due to forbearance. With the continuing recession in the second half of 2015 and the lackluster economic recovery to be expected later, NPL ratios are likely to swell further, before they eventually stabilize or decline.[21] Perhaps a trace of a silver lining can be perceived in the fact that Sberbank in October 2015 announced a reduction of its interest rates on new consumer loans.

4.2 Liquidity and refinancing risk

With the likelihood that Western sanctions remain in place at least until 2016 or for the foreseeable future, pressure on large banks' and enterprises' refinancing channels and liquidity supply may become a long-term component of the Russian banking environment.[22] No more large disruptive foreign debt payment deadlines (like in December 2014) can be expected in the coming years (except perhaps in December 2015, when total scheduled debt service payments come to about two-thirds of their amount of December 2014)[23]. While overall debt service

[19] *As explained in Barisitz and Lahnsteiner (2010, p. 84), "connected lending" or "related-party lending" is typically conducted through "pocket banks" that function as extended financial departments or treasury accounts of owner firms or businessmen. Possibly to conceal this, beneficiary ownership relationships tend to be arranged in an opaque manner.*

[20] *As a result of these stepped-up activities, in the summer of 2015, the DIA was reported to have almost exhausted its funds in compensating depositors of failed banks. But, if needed, the DIA can claim public financial support.*

[21] *In the specific case of a further substantial deterioration of the economic situation in Ukraine, the direct impact on Russian banks would be limited, since the most important Russian banking groups feature an aggregate exposure to Ukraine of less than 3% of their total assets (Standard&Poor's RatingsDirect, 2015b, p. 2).*

[22] *While enterprises' refinancing problems do not directly affect banks, roll-over risk of enterprises can turn into credit risk for banks, and firms' increased demand for foreign currency can push up exchange rate risk.*

[23] *According to information of the Bank of Russia, Russian commercial banks are due to make about EUR 4.4 billion of principal and accrued interest payments in December 2015, and EUR 22.2 billion in the entire year 2016. Russian corporations are slated to make payments, respectively, of EUR 15.8 billion and EUR 58.8 billion. Not all of these payables are denominated in foreign exchange. About one-tenth of banks' external debt and one-fifth of corporations' external debt constitute ruble liabilities. Moreover, at least one-third of corporations' debt service payments are estimated to pertain to "intra-group operations," which (according to experience) feature a higher likelihood of being rolled over. Finally, stable indebtedness data for the second quarter of 2015 suggest that Russian corporations actually managed to get at least part of their other external debt refinanced in international markets too.*

appears bearable, restricted access to EU and U.S. capital markets will continue to dampen banks' earnings and profitability and render them financially more fragile.

4.3 Exchange rate risk

The Russian economy and the ruble remain extremely sensitive and vulnerable to oil price movements. After plunging in December 2014/January 2015 and partially recovering in the spring of 2015, the oil price and the ruble dropped again substantially and highly synchronically in July and August 2015 (almost reaching their low points of late January). However, a panic reaction of depositors like in December 2014 did not happen. The authorities' above-mentioned crisis-response measures certainly contributed to this outcome. Still, the situation remains fragile and a further slump of the oil price to a new low, which cannot be excluded, could rattle confidence anew.

4.4 Connected or related-party lending risk

While, as mentioned above, in recent years, connected lending activities of many smaller and some medium-sized banks have been reined in or eliminated by Bank of Russia intervention, such practices can also exist in larger credit institutions. It cannot be excluded that underlying structural financial problems unexpectedly "erupt" in a systemically important institution, which cannot be simply wound up. As already documented by painful experience,[24] bailouts or recapitalizations in such cases can be very costly.

4.5 Shock-absorbing factors

Shock-absorbing factors have eroded in recent years, but still provide leeway. Depending on the NPL definition, loan loss provisions are at best partly adequate to cover loans that have turned bad. While capital adequacy – following bank recapitalization measures in early 2015 – appears sufficient at present, the continuing economic downturn and lackluster prospects thereafter imply that in all likelihood further capital injections will become necessary soon. However, raising state liabilities for this purpose should not be a problem because Russian state debt (domestic and foreign) continues to be modest (as of mid-2015: about 15% of GDP).

Given the credit contraction and the boost of enterprise deposits in late 2014, the loan-to-deposit ratio has declined again from previous levels and is currently not excessive (end-October 2015: 112%). While depositors are still sensitive to exchange rate and inflation movements, a degree of confidence seems to have returned to household depositors recently: retail savings have somewhat recovered since early 2015 (+4% in real terms and exchange rate-adjusted from end-January to end-October 2015).[25] Another factor providing a cushion are credit institutions' net external assets, which were built up in the post-2008/09-crisis years and at end-September 2015 amounted to 7% of total assets (table 1). Moreover, the fact that SOBs account for the majority of Russian banking assets (with Sberbank comprising more than a quarter) implies that the authorities are directly responsible for the

[24] *As a case in point, in 2011, Bank Moskvy (Bank of Moscow), Russia's fifth-largest credit institution at the time, had become insolvent. The insolvency was reportedly linked to dubious real estate investments and credit fraud. The bailout package of EUR 9.8 billion was the largest for any bank in CESEE history.*

[25] *Over the summer of 2015, inflows of savings into long-term deposits grew again (after they had sharply declined at the beginning of the year), while growth of short-term deposits slowed down (Bank of Russia, 2015c, p. 22).*

survival of most of the largest players, which may generate some confidence in crisis times.

Enhanced ruble exchange rate flexibility appears to have on balance strengthened the Bank of Russia's hand in crisis times in that the monetary authority should no longer risk losing substantial amounts of foreign exchange reserves (as it did in 2008/09 and again in 2014) in defending an exchange rate that has become unsustainable. In any case, Russia's foreign currency reserves (including gold), while having declined substantially (at end-2013 they had still stood at EUR 372 billion), remain sizable and have somewhat recovered recently (end-November 2015: EUR 344 billion or about 25% of GDP or 13 import months). Notwithstanding the deteriorated terms of trade, Russia's current account surpluses continue to be high (3.2% of GDP in 2014, about 5.5% of GDP in January–September 2015). Finally, the country registers a positive and large net investor position (about 18% of GDP).

5 Outlook

Save any surprising major negative event, like a severe escalation of the geopolitical tensions in Ukraine triggering further Western sanctions on Russia (unlikely, at least at the moment), a systemic crisis of the Russian banking sector is not to be expected in the near future. Admittedly, the Russian recession in 2015 is pushing up nonperforming loans and loan loss provisions, which will put a drag on any revival of credit activity. The volatility and overall weakness of oil and other commodity price developments can create additional instability and also retard the recovery. In the full year 2015, the sector may be barely profitable. Some further recapitalization measures of stressed credit institutions are likely to be needed in the future. Confidence in the sector is fragile, but existent. While a number of shock-absorbing factors, as mentioned above, have weakened, and the government's capacity to provide financial support has become more restrained, the authorities still have important means at their disposal to support banks: public debt is low, and foreign currency reserves remain sizable. Banks' recovery will probably follow the recovery of the real sector. While the recession is expected to ease in 2016, economic growth is only expected to return in 2017. In an environment of widespread uncertainties, Russian economic expansion will probably be subdued in the coming years, which implies that banks may take an extended period to fully recover.

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Systemic liquidity and macroprudential supervision

Synopsis of the 2nd Macroprudential Supervision Workshop in Vienna

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This article presents a synopsis of a workshop on systemic liquidity and macroprudential supervision held at the Oesterreichische Nationalbank on October 28, 2015. We introduce the concept of systemic liquidity and argue that it can be a driving force of systemic risk. Systemic liquidity is shown to be endogenous and cyclical, and to reflect the interaction between banks, other financial intermediaries and financial markets. We then summarize the main conclusions from the individual contributions to the workshop. Finally, we present key questions to be addressed when developing a macroprudential policy to contain systemic liquidity risk.

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Keywords: macroprudential supervision, liquidity

1 The concept of systemic liquidity

Systemic liquidity may be characterized by four defining features (for more details, see Van Lelyveld et al., forthcoming).

First, systemic liquidity is an endogenous concept, as the liquidity of assets is determined by the state of the financial system. In technical terms, it is not a time- and state-invariant function of a particular asset, but a function of the leverage of the issuer, the risk tolerance of market participants, and the overall macroeconomic and financial environment.

Second, in the upswing of the financial cycle, the financial sector is subject to an illusion of systemic liquidity. In this phase, investors regard most assets as highly liquid because contractual maturities are relatively short and bid-ask spreads are narrow. At the same time, the issuers of these very same assets view their access to funding via these instruments as stable, as reflected in (temporarily) high roll-over rates. In essence, the liquidity illusion affects both sides of financial institutions' balance sheets, as behavioral maturities are much longer than contractual maturities – at least for as long as the upturn lasts.

Third, systemic liquidity is driven by interconnectivity – within the banking sector, between banks and nonbank financial intermediaries (such as money market and hedge funds), and between financial institutions and financial markets (Shin, 2010; ECB, 2015). This interdependence within the financial system amplifies booms and busts, transforming liquidity into a systemic phenomenon (Gorton and Metrick, 2012). It leads to increasing "liquidity leverage," as a shrinking share of truly stable liabilities finances an increasing share of truly illiquid assets. As liquidity leverage rises across the financial system, systemic liquidity risk does so, too. When the financial cycle turns, systemic liquidity evaporates. In these cases, contractual maturities become binding, financial entities are forced to reduce liquidity leverage, network effects materialize (one institution's assets being another institution's liabilities) and feedback loops aggravate the liquidity shock (Schmitz, 2013).

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The fourth feature of systemic liquidity is that liquidity leverage is highly correlated with capital leverage, but is also a distinct source of systemic risk. The interaction between these two types of leverage increases the vulnerability to shocks, because liquidity shocks have an impact on solvency and vice versa (Puhr and Schmitz, 2014, and Basel Committee on Banking Supervision, 2015). Beyond a tipping point, liquidity and capital leverage force institutions to increase their stable and loss-absorbing funding from external sources (Brunnermeier and Pedersen, 2009). However, in times of stress, these sources will seek to reduce their exposure to liquidity risk and credit risk, thus aggravating funding shortages and liquidity shortages. Hence, reducing liquidity leverage may actually prompt asset fire sales that precipitate losses in the financial intermediation chain, fueling systemic risk.

Current regulatory requirements do not capture these features of systemic risk. While the novel liquidity requirements of the Basel III framework, especially the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR), will serve to mitigate liquidity risks at the level of individual banks (see European Banking Authority, 2013 and European Banking Authority, 2015), they do not take account of the endogenous and cyclical characteristics of systemic liquidity risk across the banking sector or beyond banking. In other words, a macroprudential perspective on liquidity risk needs to be developed.

2 Systemic liquidity and the interaction between banks, other financial intermediaries and financial markets

The research presented at the workshop provided concrete proposals on how to grapple with systemic liquidity risk. *Giovanni di Iasio* provided a model of the interaction between banks (and other financial companies with nominally fixed liabilities) and shadow banking (activity-based definition). He argued that the emergence of shadow banking is a response to the increasing demand for safe and liquid assets. This increasing demand stems from institutional cash pools accumulated by corporates, households and reserves managers. To meet this demand for safe and liquid assets, shadow banking manufactures shadow collateral from private investment projects (e.g. asset-backed securities). Shadow banking thereby exposes itself to capital and liquidity leverage, but offers higher yields than traditional safe and liquid assets such as government bonds and bank deposits. The model endogenizes the liquidity risk of shadow banks and shows that complex shadow banking with high liquidity risk can be a competitive equilibrium. The general equilibrium model shows that financial sector interconnectivity is not a temporary phenomenon that can easily be eliminated by more stringent investment rules for banks and other regulated financial intermediaries. Consideration should thus be given to introducing minimum liquidity requirements for nonbanks and to supplementing this with time-varying liquidity regulation for both banks and nonbanks.

Analyses of systemic liquidity require broad-based data. In this context, *Laurent Grillet-Aubert* presented an overview of the European Systemic Risk Board's (ESRB's) emerging framework for monitoring liquidity mismatches in nonbank financial intermediaries. Comprehensive reporting data are available for banks, but they hardly capture the interlinkages between banks and shadow banking. In fact, the re-

porting framework for shadow banking is only in the early stages of use. While recent initiatives address some of the gaps (e.g. the Money Markets Statistics Regulation or the Securities Financing Transactions Regulation), the ESRB has to draw on many different data sources to map out the interaction between the different segments of the financial sector. The recent ECB report on financial structures (ECB, 2015) similarly presents a range of data sources on which future analyses of systemic liquidity risk can build. The ESRB aims at publishing reports on market liquidity, shadow banking, and macroprudential policies beyond banking.

Julien Jardelot, who provided an overview of the ongoing review of the European Market Infrastructure Regulation (EMIR) and the Securities Financing Transactions Regulation (SFTR), underscored the importance of better data. These aim at filling regulatory gaps, strengthening supervision, increasing market transparency and reducing product complexity. Emphasis is currently placed on monitoring shadow banks better, e.g. through reporting requirements for repos, securities and commodity lending/borrowing, and margin lending transactions as well as rehypothecation. The reported data are indispensable for gauging systemic liquidity risk.

A crucial question for policy is the effect of market liquidity shocks on the real economy. In this light, *Puriya Abbassi* reported empirical evidence of the effects of interlinkages between banks and financial markets. The paper analyzes a highly granular data set for German banks over 2005 to 2012 and focuses on the spillover from banks' security trading to their credit supply to firms. During the crisis, banks with greater trading expertise are shown to have increased their investments in securities and especially in those securities that had suffered large price drops, with the strongest impact on low-rated and long-term securities. This behavior was particularly prevalent among better capitalized banks. On average, the return on these investments was positive, which indicates that stronger banks profit from asset fire sales of weaker banks. From a systemic perspective, these banks provided market liquidity at a time and for asset classes when and where it was most needed. However, the banks that increased their securities portfolios most are also found to have cut lending to the real economy most. In all, the paper illustrates how financial markets can influence bank behavior.

Further evidence of the interaction between markets and banks was presented by *Ronald Heijmans* and *Richard Heuver*. The paper combines data on unsecured and secured money markets with data on Eurosystem monetary policy operations. It finds that interest rate policy (based on the minimum bid rate) became less effective after the unsecured money market dried up and financial markets became fragmented. Increased turnover on secured money markets partly substituted for the reduction of unsecured turnover, but the former also dropped sharply after the first long-term refinancing operation (LTRO). In fact, as central bank operations expanded, the deposit rate came to be the effective policy rate. In sum, the paper provides evidence of the interaction between components of systemic liquidity and monetary policy (see also Schmitz, 2013 and 2015). This interaction should be taken into account in the development of macroprudential liquidity instruments.

Fundamental to the concept of systemic liquidity is that liquidity shocks can emanate from, or lead to, conta-

gion beyond the realm of the banking sector. Liquidity shocks can spread via direct links between financial institutions (one institution's asset being another's liability), via common exposures to funding markets and via the financial infrastructure. Against this background, *Dawid Żochowski* analyzed the resilience of central counterparties (CCPs). The point of departure is that CCPs, given the mandatory central clearing of all standardized OTC derivatives, have become "super-systemic." This underscores the need for stress testing CCPs by means of integrated stress scenarios for clearing members (banks) and asset prices. Based on the risk-sharing arrangements between CCPs and clearing members (the CCP loss absorption waterfall), contagion risks can be modeled and assessed. Eventually, the stress test methodology should also integrate potential contagion among CCPs. The insights from these network analyses can subsequently feed into policy contingencies.

3 Policy responses to systemic liquidity risks

Policymakers' awareness of systemic liquidity risk is rising (European Systemic Risk Board, 2014; Constâncio, 2015). However, a macroprudential policy response to these risks is subject to several preconditions. First, a deep understanding is needed of the drivers of systemic liquidity, both between different segments of the financial system and across time. Next, the market failures and externalities governing systemic liquidity need to be mapped out, to motivate the case for public intervention. Third, the impact on systemic liquidity of available tools for banks (LCR, NSFR), nonbank financial intermediaries (including leverage and liquidity requirements for investment funds) and market infrastructure (including margin requirements) needs to be assessed. Indeed, a macroprudential toolkit to address systemic liquidity is likely to integrate existing microprudential liquidity requirements. Currently, the LCR is in force in the EU and the NSFR is scheduled for introduction in 2018. Thus, policymakers need to assess the likely effects of these tools on bank behavior as well as potential unintended consequences.

To provide perspective, *Patty Duijm* and *Peter Wierts* presented evidence of the impact of the Dutch liquidity requirement (introduced in 2003 and similar to the LCR) on bank balance sheets. In the wake of a shock to their liquidity position, banks are found to adjust both their assets, increasing their liquidity risk-bearing capacity, and their liabilities, reducing their liquidity risk exposure (see also European Banking Authority, 2013). However, the adjustment on the liability side is more pronounced, especially when the shock threatens to cause a violation of the regulatory requirement. Moreover, developments in the liquidity ratio during 2007 to 2008 are shown not to have foreshadowed the systemic crisis that subsequently emerged. The authors thus uncover an aggregate liquidity cycle characterized by strong increases and decreases in both liquid assets and liabilities, which, however, largely cancel each other out in the Dutch liquidity ratio. The ratio is found to be procyclical, closely tracking the leverage cycle. The authors conclude that a macroprudential liquidity policy is needed to accompany the microprudential liquidity requirements.

In a similar vein, *Antoine Lallour* presented a study on the power of the NSFR as a predictor of bank failures during the financial crisis of 2008 and 2009. Based on bank balance sheet structures in 2006, the study finds that

while an NSFR-like ratio is correlated with subsequent bank failure, this result stems largely from the stability of liabilities (especially the level of retail deposits). Simpler ratios, such as the core funding ratio (CFR, deposits as a share of total assets), perform much better, especially in conjunction with the capital adequacy ratio. The results further point to the complementarity of liquidity and capital regulation, rather than substitutability (see also Puhr and Schmitz, 2014, and Basel Committee on Banking Supervision, 2015).

Michael Wedow proposed a way forward for macroprudential policy development in the area of systemic liquidity in the banking sector. While the legal foundations for macroprudential liquidity tools for the banking sector are in place, they have been applied in only five EU countries to date. In these cases, they addressed structural liquidity risks at the level of the banking system (e.g. foreign exchange mismatches). He questions the effectiveness of the LCR and the NSFR as macroprudential tools to address cyclical systemic risk given the static assumptions underlying these ratios. In fact, the systemic "liquidity illusion" may lead to an underestimation of liquidity risks in both the numerator and the denominator of the LCR, such that the LCR is unlikely to constitute a binding constraint on bank behavior during the buildup of systemic liquidity risk (this is in line with the findings of Duijm and Wierts). Wedow identifies potential instruments to address systemic liquidity risks, such as time-varying liquidity buffers or a Pigouvian tax. On the interaction between capital and liquidity requirements in addressing cyclical systemic liquidity risk, he concurs with Duijm and Wierts that the two are complements rather than substitutes. Activating the countercyclical capital buffer is unlikely to be sufficient to avoid the buildup of systemic liquidity risk and may need to be complemented by macroprudential liquidity tools. Finally, the design of macroprudential liquidity tools for banks has to take account of the potential interaction with monetary policy.

4 Roadmap for further work

The workshop was organized to stimulate policy development in the area of systemic liquidity. The following strands were identified for further work:

Metrics need to be developed that capture the dynamics of liquidity across the financial system and over the course of time. This work has to merge data and expertise on the banking sector, shadow banks, financial markets, asset encumbrance and interconnectedness. These metrics can help establish a minimum level of liquidity security to be maintained in the financial system.

The existence of market failures and negative externalities linked to systemic liquidity risks needs to be spelled out to justify public policy intervention.

Analysis is needed on the desirable coverage and instruments of macroprudential policy to contain systemic liquidity risk:

- Coverage determined by interconnectivity between banks, nonbank financial intermediaries, shadow banking, and financial markets as well as the inherent liquidity risks in these subsectors.
- Instruments to be assessed include:
  1. time-varying liquidity requirements for banking,
  2. quantitative minimum requirements beyond the banking sector, tailored to the maturity mismatches and interconnections of these sub-

sectors (e.g. liquidity buffers, redemption fees and redemption gates for mutual funds, and minimum haircuts for secured funding transactions),

3. periodic system-wide liquidity stress tests (see Schmitz, forthcoming), and
4. the removal of incentives to misprice and misallocate liquidity (e.g. regulatory arbitrage, underpriced insurance of systemic liquidity risk; see Basel Committee on Banking Supervision, 2014) in combination with credible exit strategies for illiquid banks and nonfinancial corporates as well as shadow banks.

Capital leverage and liquidity leverage are correlated. Nevertheless, evidence from the recent financial crisis suggests they are not substitutes. While adding countercyclical requirements to the leverage ratio will thus serve to limit systemic liquidity risks, analyses need to establish the added value of supplementary macroprudential liquidity requirements.

The CRR (Regulation (EU) No 575/2013, Capital Requirements Regulation) and the CRD IV (Directive 2013/36/EU, Capital Requirements Directive) provide for Pillar 2 liquidity requirements for the banking sector. However, for purposes of effectiveness, governance and transparency, macroprudential liquidity requirements should not overlap with Pillar 2 liquidity requirements.

The institutional allocation of systemic liquidity instruments requires further study. As systemic liquidity highlights the interlinkages across the financial system, any segregation of instruments across the different parts of the financial sector is unlikely to be optimal. Given financial integration across the euro area, as well as the interaction with monetary policy, the dynamics of systemic liquidity are likely to be determined primarily within the single currency area rather than the national financial systems. Macroprudential instruments and powers to address systemic liquidity risk could thus be granted to national designated authorities and could be coordinated for the euro area banking system by the ECB, which would have topping-up powers. This would dovetail with the current institutional setting for macroprudential policy and would reduce the inaction bias that is most likely during upswings characterized by liquidity illusion. At the same time, the ESRB could monitor systemic liquidity risk across the nonbank and market segments of the euro area and EU financial sector and, if needed, issue targeted warnings or recommendations for policy action.

These policy priorities have been discussed by the relevant ECB and ESRB bodies, and form an input to their work programs going forward.

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Presentations at the 2nd Macroprudential Supervision Workshop on Systemic Liquidity (Vienna, October 28, 2015) [* denotes presenters]

Puriya Abbassi* (Deutsche Bundesbank), Rajkamal Iyer (MIT), José-Luis Peydró (ICREA-Universitat Pompeu Fabra) and Francesc R. Tous (Bank of England). Securities trading and credit supply by banks: micro-evidence, Journal of Financial Economics. Forthcoming.

Giovanni di Iasio* (Banca d'Italia and INET) and Zoltan Poszar (Credit Suisse and INET). A model of shadow banking.

Patty Duijm* and Peter Wierts* (De Nederlandsche Bank). The effects of liquidity regulation on bank assets and liabilities, International Journal of Central Banking. Forthcoming.

Laurent Grillet-Aubert* (ESRB). Non-bank risk monitoring and liquidity mismatches – An ESRB perspective.

Ronald Heijmans*, Zion Gorgi and Richard Heuver* (De Nederlandsche Bank). Interaction between systemic liquidity and monetary policy.

Julien Jardelot* (European Commission). Current developments: EMIR Review and the SFTR.

Antoine Lallour* (Bank of England) and Hitoshi Mio (Bank of Japan). Bank behavioural responses to the NSFR.

Michael Wedow* (ECB). The macroprudential frame of bank liquidity regulation.

Dawid Żochowski* (ECB). Liquidity stress tests of CCPs.

Annex of tables

Annex of tables

Cutoff date for data: November 18, 2015

Conventions used in the tables:

x = No data can be indicated for technical reasons

. . = Data not available at the reporting date

Revisions of data published in earlier volumes are not indicated.

Discrepancies may arise from rounding.

International financial market indicators

Table A1

Short-term interest rates[1]

	2009	2010	2011	2012	2013	2014	H1 14	H1 15
	Three-month rates, period average, %							
Euro area	1.23	0.81	1.39	0.57	0.22	0.21	0.30	0.02
U.S.A.	0.69	0.34	0.34	0.43	0.27	0.23	0.23	0.24
Japan	0.59	0.39	0.34	0.33	0.24	0.21	0.21	0.17
United Kingdom	1.23	0.74	0.88	0.86	0.50	0.50	0.50	0.50
Switzerland	0.38	0.19	0.12	0.07	0.02	0.01	0.02	–0.75
Czech Republic	2.19	1.31	1.19	1.00	0.46	0.36	0.37	0.32
Hungary	8.64	5.51	6.19	6.98	4.31	2.41	2.68	1.86
Poland	4.42	3.92	4.54	4.91	3.02	2.55	2.71	1.77

Source: Bloomberg, Eurostat, Thomson Reuters.

[1] *Average rate at which a prime bank is willing to lend funds to another prime bank for three months.*

Table A2

Long-term interest rates[1]

	2009	2010	2011	2012	2013	2014	H1 14	H1 15
	Ten-year rates, period average, %							
Euro area	4.03	3.78	4.31	3.05	3.01	2.28	2.77	1.22
U.S.A.	3.24	3.20	2.77	1.79	2.34	2.53	2.68	2.06
Japan	1.34	1.17	1.12	0.85	0.71	0.55	0.61	0.37
United Kingdom	3.36	3.36	2.87	1.74	2.03	2.14	2.35	1.67
Switzerland	2.20	1.63	1.47	0.65	0.95	0.69	0.87	0.01
Austria	3.94	3.23	3.32	2.37	2.01	1.49	1.83	0.57
Czech Republic	4.84	3.88	3.71	2.78	2.11	1.58	2.03	0.50
Hungary	9.12	7.28	7.64	7.89	5.92	4.81	5.42	3.38
Poland	6.12	5.78	5.96	5.00	4.03	3.52	4.10	2.52

Source: ECB, Eurostat, Thomson Reuters, national sources.

[1] *Yields of long-term government bonds.*

Table A3

Stock indices

	2009	2010	2011	2012	2013	2014	H1 14	H1 15
	Annual change in %, period average							
Euro area: EURO STOXX	–25.29	13.38	–3.60	–6.36	17.53	13.07	19.09	12.84
U.S.A.: S&P 500	–22.35	20.24	11.27	8.74	19.14	17.58	19.65	11.55
Japan: Nikkei 225	–23.07	7.22	–5.94	–3.37	48.80	14.22	19.87	29.11
United Kingdom: FTSE 100	–14.86	19.76	3.90	0.96	12.75	3.24	5.60	2.03
Switzerland: SMI	–18.15	14.27	–6.96	4.88	24.14	9.26	10.18	6.60
Austria: ATX	–36.45	19.85	–3.69	–14.79	16.94	–2.36	5.37	–2.97
Czech Republic: PX 50	–29.2	21.7	–5.1	–14.6	2.53	1.62	2.72	0.06
Hungary: BUX	–18.7	40.1	–8.7	–12.0	3.26	–3.89	–2.79	8.93
Poland: WIG	–21.3	33.6	4.4	–6.7	16.07	8.06	12.21	4.07

Source: Thomson Reuters.

Table A4

Corporate bond spreads[1]

	2009	2010	2011	2012	2013	2014	H1 14	H1 15
	Percentage points, period average							
	Euro area							
AA	2.17	1.33	1.90	1.47	0.89	0.61	0.70	0.61
BBB	5.23	2.95	3.75	3.56	2.25	1.73	1.80	1.70
	U.S.A.							
AA	2.57	1.32	1.68	1.50	1.12	0.88	0.87	0.95
BBB	4.51	2.21	2.34	2.59	2.17	1.76	1.75	1.96

Source: Thomson Reuters.

[1] *Spreads of seven- to ten-year corporate bonds against ten-year government bonds (euro area: German government bonds).*

Financial indicators of the Austrian corporate and household sectors

Table A5

Financial investment of households[1]

	2009	2010	2011	2012	2013	2014	H1 14	H1 15
	EUR billion, four-quarter moving sum							
Currency	0.9	1.0	1.1	0.6	1.2	0.8	1.1	1.0
Deposits	7.6	1.6	4.6	3.8	1.9	3.2	2.0	5.8
Debt securities[2]	–0.4	1.5	1.8	0.2	–1.8	–4.2	–2.1	–5.4
Shares and other equity[3]	1.7	1.7	0.8	1.1	–0.1	2.3	0.5	0.7
Mutual fund shares	0.9	2.4	–1.4	0.9	2.7	3.5	2.5	4.5
Insurance technical reserves	4.6	3.7	2.1	2.7	2.4	2.4	3.0	0.6
Other accounts receivable	0.2	0.7	1.0	1.2	1.1	2.4	2.4	1.6
Total financial investment	15.5	12.6	10.0	10.5	7.4	10.4	9.4	8.8

Source: OeNB (financial accounts).

[1] Including nonprofit institutions serving households.
[2] Including financial derivatives.
[3] Other than mutual fund shares.

Table A6

Household[1] income and savings

	2009	2010	2011	2012	2013	2014
	EUR billion, four-quarter moving sum					
Net disposable income	171.9	172.9	177.9	185.8	185.9	190.7
Savings	19.5	16.2	14.1	17.3	13.8	15.0
Saving ratio in %[2]	11.3	9.3	7.9	9.2	7.3	7.8

Source: Statistics Austria (national accounts broken down by sectors).

[1] Including nonprofit institutions serving households.
[2] Saving ratio = savings / (disposable income + increase in accrued occupational pension benefits).

Table A7

Financing of nonfinancial corporations

	2009	2010	2011	2012	2013	2014	H1 14	H1 15
	EUR billion, four-quarter moving sum							
Debt securities[1]	4.3	1.4	4.2	2.8	1.7	–0.5	–1.3	–1.3
Loans	–10.1	5.8	6.4	4.5	1.6	1.3	2.0	1.5
Shares and other equity	2.9	0.5	9.7	2.3	4.5	7.9	7.9	6.7
Other accounts payable	–5.8	5.9	3.3	0.6	3.3	2.3	3.8	3.5
Total external financing	–8.7	13.5	23.6	10.2	11.1	11.0	12.4	10.4

Source: OeNB (financial accounts).

[1] Including financial derivatives.

Table A8

Insolvency indicators

	2009	2010	2011	2012	2013	2014	H1 14	H1 15
Default liabilities (EUR million)	4,035	4,700	2,775	3,206	6,255	2,899	1,093	811
Defaults (number)	3,741	3,522	3,260	3,505	3,266	3,275	1,645	1,520

Source: Kreditschutzverband von 1870.

Note: Default liabilities for 2013 include one large insolvency.

Table A9

Housing market indicators

	2009	2010	2011	2012	2013	2014
	2000=100					
Residential property price index						
Vienna	133.5	143.9	156.1	180.7	196.3	204.6
Austria	119.8	127.3	132.7	149.1	156.0	161.4
Austria excluding Vienna	114.8	121.1	124.0	137.4	141.1	145.4
	2000=100					
Rent prices[1]						
Vienna: apartments	116.3	117.7	121.0	126.3	129.5	134.9
Austria excluding Vienna: apartments	144.7	145.9	148.2	144.1	162.5	158.9
Austria excluding Vienna: single-family houses	101.5	101.7	97.1	94.6	95.5	97.4
Rents of apartments excl. utilities, according to CPI	96.7	100.0	103.3	107.8	111.2	115.6
OeNB fundamentals indicator for residential property prices[2]						
Vienna	–5.1	–1.1	5.2	14.2	18.6	19.9
Austria	–12.2	–8.6	–5.1	0.2	–0.9	–0.9

Source: OeNB, Vienna University of Technology.

[1] *Free and regulated rents.*

[2] *Deviation from fundamental price in %.*

Austrian financial intermediaries[1]

Table A10

Total assets and off-balance sheet operations

	H1 14	H1 15	2009	2010	2011	2012	2013	2014
	End of period, EUR million							
Total assets on an unconsolidated basis	917,346	895,503	1,029,043	978,559	1,014,278	982,114	927,155	896,424
of which: total domestic assets	*634,402*	*613,092*	*691,465*	*659,561*	*693,394*	*678,500*	*645,275*	*611,540*
Total assets on a consolidated basis	1,071,601	1,078,976	1,139,961	1,130,853	1,166,313	1,163,595	1,089,713	1,078,155
Total assets of CESEE subsidiaries[1]	284,191	292,963	254,356	263,800	270,045	276,352	264,998	285,675
Leverage ratio (consolidated, %)[2]	5.4	5.9	5.2	5.8	5.8	6.1	6.5	5.7

Source: OeNB.

[1] Including Yapı ve Kredi Bankası (not fully consolidated by parent bank UniCredit Bank Austria) since 2014.
[2] Definition up to 2013: Tier 1 capital after deduction in % of total assets. Definition as of 2014 according to Basel III.

Note: Data on off-balance sheet operations refer to nominal values on an unconsolidated basis.

Table A11

Sectoral distribution of domestic loans

	H1 14	H1 15	2009	2010	2011	2012	2013	2014
	End of period, EUR million							
	All currencies combined							
Banks	147,161	125,518	195,737	169,596	184,789	169,364	147,537	123,732
Nonbanks	327,993	332,494	311,510	321,340	329,886	330,209	326,594	328,249
of which: nonfinancial corporations	*141,303*	*136,430*	*132,346*	*135,427*	*138,930*	*140,383*	*140,291*	*137,328*
households[1]	*139,915*	*144,849*	*128,178*	*135,215*	*138,355*	*139,048*	*139,052*	*140,988*
general government	*25,180*	*28,153*	*24,923*	*26,374*	*29,015*	*27,972*	*26,007*	*27,626*
other financial intermediaries	*21,456*	*22,955*	*26,063*	*24,324*	*23,586*	*22,806*	*21,244*	*22,307*
	Foreign currency							
Banks	16,254	14,662	42,780	25,851	25,288	19,422	16,013	14,939
Nonbanks	38,546	37,615	53,539	58,742	57,298	47,647	40,104	36,267
of which: nonfinancial corporations	*6,536*	*6,281*	*11,473*	*12,550*	*12,181*	*9,155*	*6,985*	*6,378*
households[1]	*27,219*	*26,729*	*37,064*	*40,040*	*38,718*	*32,904*	*28,385*	*25,376*
general government	*2,713*	*3,080*	*1,628*	*2,627*	*3,266*	*2,827*	*2,477*	*2,774*
other financial intermediaries	*2,073*	*1,524*	*3,374*	*3,525*	*3,133*	*2,761*	*2,257*	*1,739*

Source: OeNB.

[1] Including nonprofit institutions serving households.

Note: Figures are based on monetary statistics.

[1] Since 2007, the International Monetary Fund (IMF) has published Financial Soundness Indicators (FSIs) for Austria (see also www.imf.org). In contrast to some FSIs that take only domestically-owned banks into account, the OeNB's Financial Stability Report takes into account all banks operating in Austria. For this reason, some of the figures presented here may deviate from the figures published by the IMF.

Table A12

Loan quality

	H1 14	H1 15	2009	2010	2011	2012	2013	2014
	End of period, % of claims on nonbanks							
Specific loan loss provisions for loans to nonbanks (unconsolidated)	3.6	3.3	2.8	3.2	3.2	3.4	3.5	3.3
Specific loan loss provisions for loans to nonbanks (consolidated)[1]	4.9	4.4	3.5	4.1	4.3	4.6	4.8	4.5
Specific loan loss provisions for loans to nonbanks (Austrian banks' subsidiaries in CESEE)	7.7	7.0	5.3	6.5	7.3	7.6	8.0	7.3
Nonperforming loan ratio (unconsolidated)[2]	4.5	4.6	4.2	4.7	4.5	4.7	4.1	4.4
Nonperforming loan ratio (consolidated)[2]	8.7	6.9	6.7	8.0	8.3	8.7	8.6	7.0
Nonperforming loan ratio (Austrian banks' subsidiaries in CESEE)	14.2	12.0	9.6	13.4	15.0	14.7	14.9	11.8

Source: OeNB.

[1] *Estimate.*
[2] *Estimate for loans to corporates and households (introduced in Financial Stability Report 24 to better indicate the loan quality in retail business; not comparable to former ratios).*

Table A13

Exposure to CESEE

	H1 14	H1 15	2009	2010	2011	2012	2013	2014
	End of period, EUR million							
Total exposure according to BIS	197,523	197,063	203,975	209,352	216,086	209,818	201,768	184,768
Total indirect lending to nonbanks[1]	178,962	180,879	160,248	168,710	171,311	171,117	161,439	177,389
Total direct lending[2]	50,412	43,018	50,665	49,460	52,010	51,539	52,926	43,144
Foreign currency loans of Austrian banks' subsidiaries in CESEE	78,939	72,814	77,396	84,601	88,282	85,382	79,047	76,736

Source: OeNB.

[1] *Lending (net lending after risk provisions) to nonbanks by all fully consolidated subsidiaries in CESEE.*
[2] *Direct lending to nonbanks and nonfinancial institutions in CESEE according to monetary statistics.*

Table A14

Profitability on an unconsolidated basis

	H1 14	H1 15	2009	2010	2011	2012	2013	2014
	End of period, EUR million							
Operating income	9,972	10,630	17,850	19,705	19,227	19,115	18,967	19,943
of which: net interest income	*4,604*	*4,622*	*8,769*	*9,123*	*9,622*	*8,813*	*8,814*	*9,306*
securities and investment earnings	*1,974*	*2,133*	*3,328*	*4,026*	*3,662*	*3,670*	*3,018*	*3,550*
fees and commission income	*2,051*	*2,263*	*3,605*	*3,950*	*3,835*	*3,848*	*4,073*	*4,260*
trading income	*190*	*193*	*486*	*664*	*325*	*631*	*495*	*368*
other operating income	*1,152*	*1,418*	*1,662*	*1,942*	*1,784*	*2,153*	*2,567*	*2,458*
Operating expenses	*6,622*	*6,257*	*11,080*	*11,547*	*11,714*	*12,193*	*12,835*	*13,906*
of which: staff costs	*3,566*	*3,037*	*5,697*	*5,802*	*5,998*	*6,243*	*6,507*	*7,384*
other administrative expenses	*2,135*	*2,226*	*3,766*	*3,940*	*4,028*	*4,124*	*4,301*	*4,459*
other operating expenses	*921*	*994*	*1,617*	*1,805*	*1,688*	*1,827*	*2,027*	*2,063*
Operating profit/loss	3,350	4,373	6,770	8,159	7,513	6,922	6,132	6,038
Net profit after taxes	2,835	3,796	43	4,207	1,211	3,214	–935	–6,691
Return on assets (%)[1]	0.3	0.4	0.0	0.4	0.1	0.3	–0.1	–0.7
Return on equity (%, tier 1 capital)[1]	4.0	5.8	0.1	5.8	1.6	4.3	–1.2	–9.9
Interest income to gross income (%)	46	44	49	46	50	46	47	47
Cost-to-income ratio (%)	66	59	62	59	61	64	68	70

Source: OeNB.

[1] *Annual surplus in % of total assets and tier 1 capital, respectively.*

Table A15

Profitability of Austrian subsidiaries[1] in CESEE

	H1 14	H1 15	2009	2010	2011	2012	2013	2014
	End of period, EUR million							
Operating income	6,811	6,217	13,396	13,436	13,622	13,268	13,307	12,160
of which: net interest income	*4,440*	*4,271*	*8,693*	*9,333*	*9,402*	*8,781*	*8,414*	*9,069*
securities and investment earnings	*36*	*32*	*50*	*47*	*70*	*61*	*63*	*27*
fee and commission income	*1,696*	*1,633*	*2,916*	*2,954*	*3,092*	*2,992*	*3,164*	*3,475*
trading income	*257*	*268*	*1,238*	*368*	*426*	*790*	*749*	*–139*
other operating income[2]	*894*	*13*	*818*	*1,227*	*1,058*	*1,230*	*1,672*	*–273*
Operating expenses	*3,715*	*3,039*	*6,267*	*6,678*	*6,814*	*6,950*	*7,009*	*6,413*
of which: staff costs	*1,502*	*1,415*	*2,739*	*2,870*	*2,997*	*2,992*	*2,922*	*2,979*
other administrative expenses	*2,213*	*1,624*	*3,529*	*3,809*	*3,817*	*3,958*	*4,087*	*3,435*
Operating profit/loss	3,096	3,178	7,129	6,757	6,809	6,317	6,298	5,747
Net profit after taxes	1,007	1,490	1,775	2,063	1,757	2,093	2,216	747
Return on assets (%)[3]	0.7	1.0	0.7	0.8	0.7	0.8	0.8	0.3
Return on equity (%, tier 1 capital)[3]	7.7	. .	8.2	9.2	7.2	8.2	8.4	9.9
Interest income to gross income (%)	65	69	65	69	69	66	63	75
Cost-to-income ratio (%)[2]	55	49	47	50	50	52	53	53

Source: OeNB.

[1] *Since the first quarter of 2014, pro rata data of Yapi ve Kredi Bankasi, a joint venture of UniCredit Bank Austria in Turkey, have been included.*
[2] *As from end-2014, other operating income and other operating expenses are netted under other operating income.*
[3] *End-of-period result expected for the full year after tax as a percentage of average total assets and total tier 1 capital, respectively.*

Table A16

Profitability on a consolidated basis

	H1 14	H1 15	2009	2010	2011	2012	2013	2014
	End of period, EUR million							
Operating income	16,922	14,463	37,850	37,508	37,207	37,673	35,271	28,717
of which: net interest income	*9,135*	*9,349*	*19,451*	*20,390*	*20,426*	*19,259*	*18,598*	*19,345*
net fee-based income	*3,661*	*3,863*	*7,160*	*7,678*	*7,592*	*7,260*	*7,590*	*7,741*
net profit/loss on financial operations	*497*	*–77*	*2,560*	*997*	*845*	*1,137*	*670*	*426*
other operating income	*3,629*	*1,329*	*8,679*	*8,443*	*8,344*	*10,016*	*8,413*	*1,205*
Operating expenses	*14,068*	*8,726*	*22,230*	*24,030*	*26,839*	*25,582*	*27,318*	*19,833*
of which: staff costs	*4,951*	*4,681*	*9,522*	*9,941*	*10,279*	*10,391*	*10,378*	*9,543*
other administrative expenses	*3,207*	*3,344*	*5,979*	*6,262*	*6,316*	*6,410*	*6,628*	*6,569*
other operating expenses[4]	*5,910*	*701*	*6,729*	*7,827*	*10,244*	*8,781*	*10,311*	*3,721*
Operating profit/loss	2,854	5,737	15,620	13,478	10,369	12,090	7,953	8,884
Net profit after taxes	–594	2,637	1,530	4,577	711	2,966	–1,035	685
Return on assets (%)[1]	–0.0	0.6	0.2	0.5	0.1	0.3	–0.0	0.1
Return on equity (%, tier 1 capital)[1,4]	–0.6	9.9	3.6	8.2	1.7	5.1	–0.7	0.9
Interest income to gross income (%)[2,4]	54	65	51	54	55	51	53	67
Cost-to-income ratio (%)[3]	78	60	53	58	66	62	73	68

Source: OeNB.

[1] *End-of-period result expected for the full year before minority interests as a percentage of average total assets and average tier 1 capital, respectively.*
[2] *Until mid-2013, figures represent the ratio of net interest income to total operating income less other operating expenses.*
[3] *All figures represent the ratio of total operating expenses less other operating expenses to total operating income less other operating expenses.*
[4] *As from end-2014, other operating income and other operating expenses are netted under other operating income.*

Note: Due to changes in reporting, the comparability of consolidated values as from 2008 with earlier values is limited. As from end-2014, other operating income is netted with other operating expenses.

Table A17

Solvency

	H1 14	H1 15	2009	2010	2011	2012	2013	2014
	End of period, EUR million							
Own funds	90,287	89,541	80,574	86,228	88,071	88,204	88,994	87,584
Total risk exposure	581,498	561,947	633,313	653,313	649,613	621,925	578,425	562,790
	End of period, eligible capital and tier 1 capital, respectively, as a percentage of risk-weighted assets							
Consolidated total capital adequacy ratio	15.5	15.9	12.8	13.2	13.6	14.2	15.4	15.6
Consolidated tier 1 capital ratio	11.8	12.2	9.3	10.0	10.3	11.0	11.9	11.8
Consolidated core tier 1 capital ratio (core equity tier 1 as from 2014)	11.8	12.1	8.5	9.4	9.8	10.7	11.6	11.7

Source: OeNB.

Note: As from 2014, figures are calculated according to CRD IV requirements. Therefore, comparability with previous figures is limited.

Table A18

Liquidity risk

	H1 14	H1 15	2009	2010	2011	2012	2013	2014
	End of period, %							
Short-term loans to short-term liabilities	66.7	63.0	72.5	64.2	65.9	66.0	59.0	61.7
Short-term loans and other liquid assets to short-term liabilities	121.9	118.8	124.8	118.9	118.1	120.6	109.0	116.5

Source: OeNB.

Table A19

Market indicators of selected Austrian financial instruments

	June 15	Oct. 15	2009	2010	2011	2012	2013	2014
Share prices	*% of mid-2005 prices, end of period*							
Erste Group Bank	67	68	66	92	36	61	65	49
Raiffeisen Bank International	27	29	76	83	40	60	49	25
EURO STOXX – Banks	49	44	70	52	33	36	45	43
Uniqa	52	55	80	90	58	61	60	50
Vienna Insurance Group	70	66	81	89	72	91	81	83
EURO STOXX – Insurance	113	120	75	71	59	76	102	106
Relative valuation: share price-to-book value ratio	*%, end of period*							
Erste Group Bank	0.96	0.98	0.80	1.30	0.48	0.88	0.93	0.71
Raiffeisen Bank International	0.51	0.54	1.12	1.15	0.53	0.83	0.92	0.47
EURO STOXX – Banks	0.80	0.77	0.94	0.64	0.36	0.60	0.96	0.72
Uniqa	0.93	0.98	1.41	2.25	1.18	1.13	1.07	0.90
Vienna Insurance Group	0.88	0.83	1.03	1.21	0.90	1.14	1.02	1.05
EURO STOXX – Insurance	0.93	0.99	1.03	0.94	0.69	0.81	0.93	1.15

Source: Thomson Reuters, Bloomberg.

Table A20

Key indicators of Austrian insurance companies

	H1 14	H1 15	2009	2010	2011	2012	2013	2014
	End of period, EUR million							
Business and profitability								
Premiums	9,251	9,571	16,381	16,652	16,537	16,341	16,608	17,077
Expenses for claims and insurance benefits	6,767	7,788	12,348	11,882	12,826	12,973	13,150	14,157
Underwriting results	425	333	132	373	295	455	592	477
Profit from investments	1,857	1,715	2,729	3,203	2,964	3,391	3,354	3,211
Profit from ordinary activities	1,098	898	744	1,101	1,162	1,395	1,524	1,421
Acquisition and administrative expenses	2,190	1,879	3,241	3,382	3,541	3,499	3,528	3,573
Total assets	113,324	115,217	99,227	105,099	105,945	108,374	110,391	113,662
Investments								
Total investments	106,894	108,173	92,260	98,300	99,776	103,272	105,496	107,442
of which: debt securities	*41,463*	*41,553*	*36,397*	*38,223*	*37,813*	*37,614*	*39,560*	*41,667*
stocks and other equity securities[1]	*12,521*	*12,539*	*12,811*	*12,559*	*12,363*	*12,505*	*12,464*	*12,619*
real estate	*5,720*	*5,898*	*5,246*	*5,703*	*5,236*	*5,371*	*5,689*	*5,858*
Investments for unit-linked and index-linked life insurance	19,911	20,014	12,822	15,325	15,870	18,330	19,127	20,179
Claims on domestic banks	16,380	14,616	17,168	16,458	16,405	16,872	16,687	15,800
Reinsurance receivables	1,041	1,083	1,218	1,229	1,733	1,933	824	918
Risk capacity (solvency ratio), %	378	381	300	356	332	350	368	380

Source: FMA, OeNB.

[1] *Contains shares, share certificates (listed and not listed) and all equity instruments held by mutual funds.*

Table A21

Assets held by Austrian mutual funds

	H1 14	H1 15	2009	2010	2011	2012	2013	2014
	End of period, EUR million							
Domestic securities	50,643	53,547	48,765	51,001	50,046	50,963	49,757	52,116
of which: debt securities	*15,481*	*14,021*	*16,013*	*15,884*	*16,683*	*17,527*	*16,203*	*15,467*
stocks and other equity securities	*3,618*	*3,559*	*2,863*	*3,696*	*2,991*	*3,637*	*3,610*	*3,345*
Foreign securities	105,705	116,788	89,845	96,684	87,458	96,854	99,647	110,397
of which: debt securities	*66,280*	*71,462*	*61,961*	*61,744*	*58,695*	*63,661*	*62,972*	*69,642*
stocks and other equity securities	*17,441*	*19,116*	*12,663*	*15,540*	*12,097*	*14,208*	*16,278*	*17,910*
Net asset value	156,348	170,335	138,610	147,684	137,504	147,817	149,404	162,513
of which: retail funds	*85,370*	*94,083*	*85,537*	*88,313*	*78,299*	*84,158*	*83,238*	*89,163*
institutional funds	*70,978*	*76,252*	*53,073*	*59,372*	*59,205*	*63,659*	*66,167*	*73,350*
Consolidated net asset value	133,570	144,919	115,337	123,794	116,747	126,831	128,444	138,642

Source: OeNB.

Table A22

Structure and profitability of Austrian fund management companies

	H1 14	H1 15	2009	2010	2011	2012	2013	2014
	End of period, EUR million							
Total assets	634	683	642	699	661	644	670	725
Operating profit	70	98	106	142	125	111	131	158
Net commissions and fees earned	170	207	258	302	284	283	310	368
Administrative expenses[1]	114	128	185	199	195	205	219	246
Number of fund management companies	29	29	30	29	29	29	29	29
Number of reported funds	2,123	2,089	2,182	2,203	2,171	2,168	2,161	2,118

Source: OeNB.

[1] Administrative expenses are calculated as the sum of staff and material expenses.

Table A23

Assets held by Austrian pension funds

	H1 14	H1 15	2009	2010	2011	2012	2013	2014
	End of period, EUR million							
Total assets	18,317	19,903	13,734	14,976	14,798	16,335	17,385	19,011
of which: direct investment	*973*	*1,061*	*1,239*	*968*	*1,139*	*1,139*	*1,640*	*1,065*
mutual funds	*17,344*	*18,842*	*11,235*	*13,944*	*13,626*	*15,278*	*15,745*	*17,946*
foreign currency (without derivatives)	*6,761*	*7,620*	*x*	*x*	*x*	*5,714*	*5,964*	*7,578*
stocks	*6,038*	*7,106*	*x*	*x*	*x*	*4,805*	*5,472*	*6,250*
debt	*8,261*	*9,297*	*x*	*x*	*x*	*8,464*	*7,650*	*9,163*
real estate	*580*	*618*	*x*	*x*	*x*	*567*	*583*	*576*
cash and deposits	*1,480*	*1,636*	*x*	*1,181*	*1,624*	*1,488*	*2,033*	*1,598*

Source: OeNB, FMA.

Table A24

Assets held by Austrian severance funds

	H1 14	H1 15	2009	2010	2011	2012	2013	2014
	End of period, EUR million							
Total direct investment	1,488	1,467	884	1,004	1,393	1,442	1,528	1,415
of which: euro-denominated	*1,429*	*1,438*	*866*	*985*	*1,363*	*1,415*	*1,507*	*1,299*
foreign currency-denominated	*59*	*29*	*17*	*19*	*30*	*27*	*21*	*x*
accrued income claims from direct investment	*16*	*13*	*15*	*16*	*19*	*22*	*21*	*15*
Total indirect investment	5,281	6,394	1,946	2,569	2,891	3,834	4,701	5,912
of which: total of euro-denominated investment in mutual fund shares	*4,669*	*5,523*	*1,858*	*2,379*	*2,741*	*3,540*	*4,220*	*5,190*
total of foreign currency-denominated investment in mutual fund shares	*612*	*871*	*88*	*190*	*151*	*294*	*481*	*722*
Total assets assigned to investment groups	6,769	7,837	2,830	3,573	4,284	5,254	6,218	7,306

Source: OeNB.

Note: Due to special balance sheet operations, total assets assigned to investment groups deviate from the sum of total indirect investments.

Table A25

Transactions and system disturbances in payment and securities settlement systems

	H1 14	H1 15	2009	2010	2011	2012	2013	2014
	Number of transactions in million, value of transactions in EUR billion							
HOAM.AT								
Number	2	..	1	1	1	1	1	1
Value	3,682	..	9,305	9,447	7,667	9,974	5,906	7,438
System disturbances	x	..	5	4	1	1	3	x
Securities settlement systems								
Number	1	..	2	2	2	2	2	2
Value	209	..	365	398	439	418	369	377
System disturbances	1	..	x	x	x	1	5	2
Retail payment systems								
Number	457	..	574	617	665	688	1,005	x
Value	36	..	46	49	50	55	72	x
System disturbances	1	..	19	25	4	4	2	x
Participation in international payment systems								
Number	51	..	31	31	36	41	53	113
Value	1,711	..	1,225	1,164	1,306	1,820	1,643	2,463
System disturbances	x	..	x	x	x	x	x	x

Source: OeNB.

Note: Annual data refer to the respective 12-month period, semiannual data refer to the respective six-month period.
Figures for mid-2015 are not yet available due to new reporting tools.

Notes

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http://www.oenb.at/en/Publications/Economics/Conference-on-European-Economic-Integration-CEEI.html
The proceedings have been published with Edward Elgar Publishers, Cheltenham/UK, Northampton/MA, since the CEEI 2001.
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