TRANSITION REPORT 2015-16

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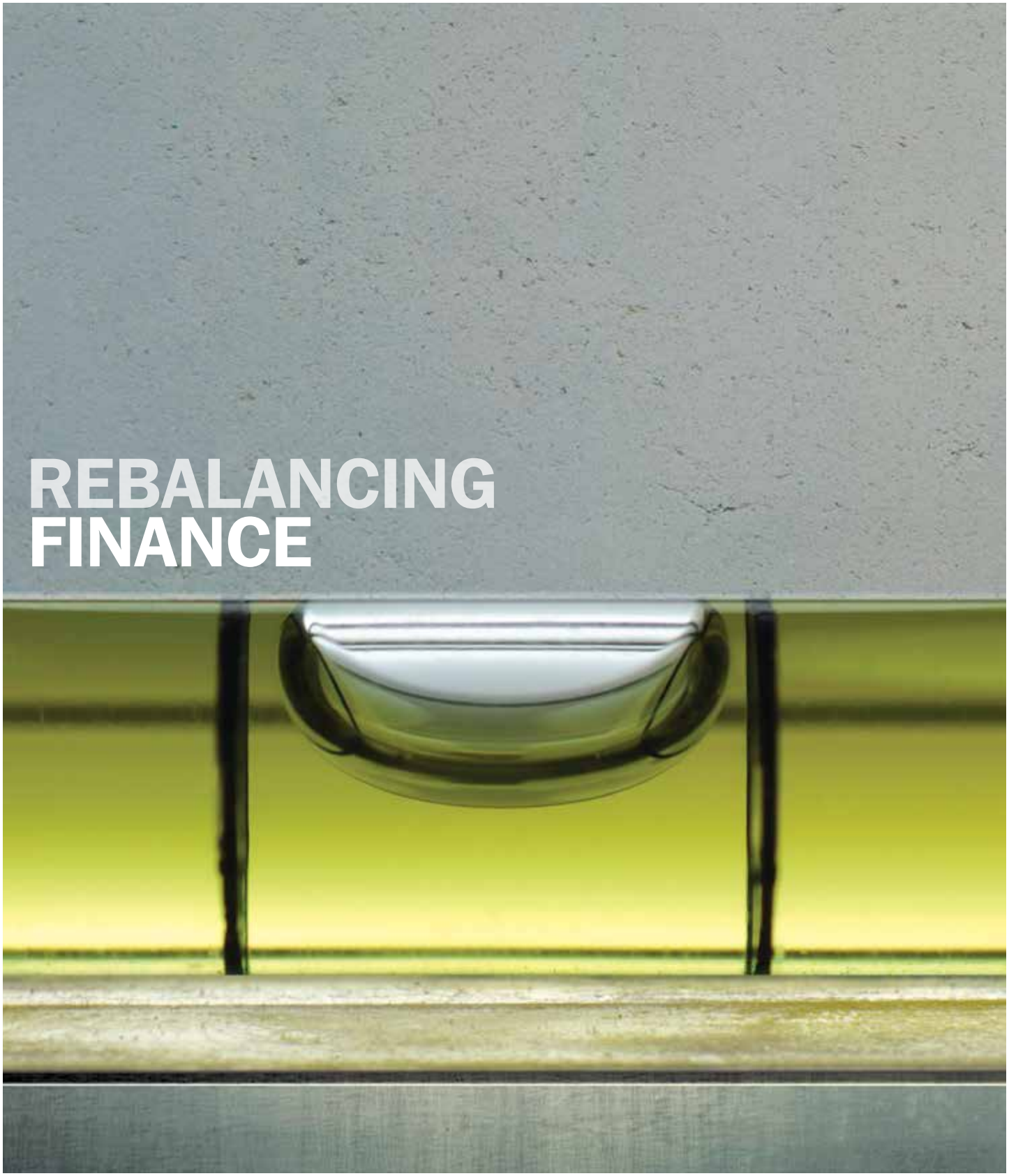

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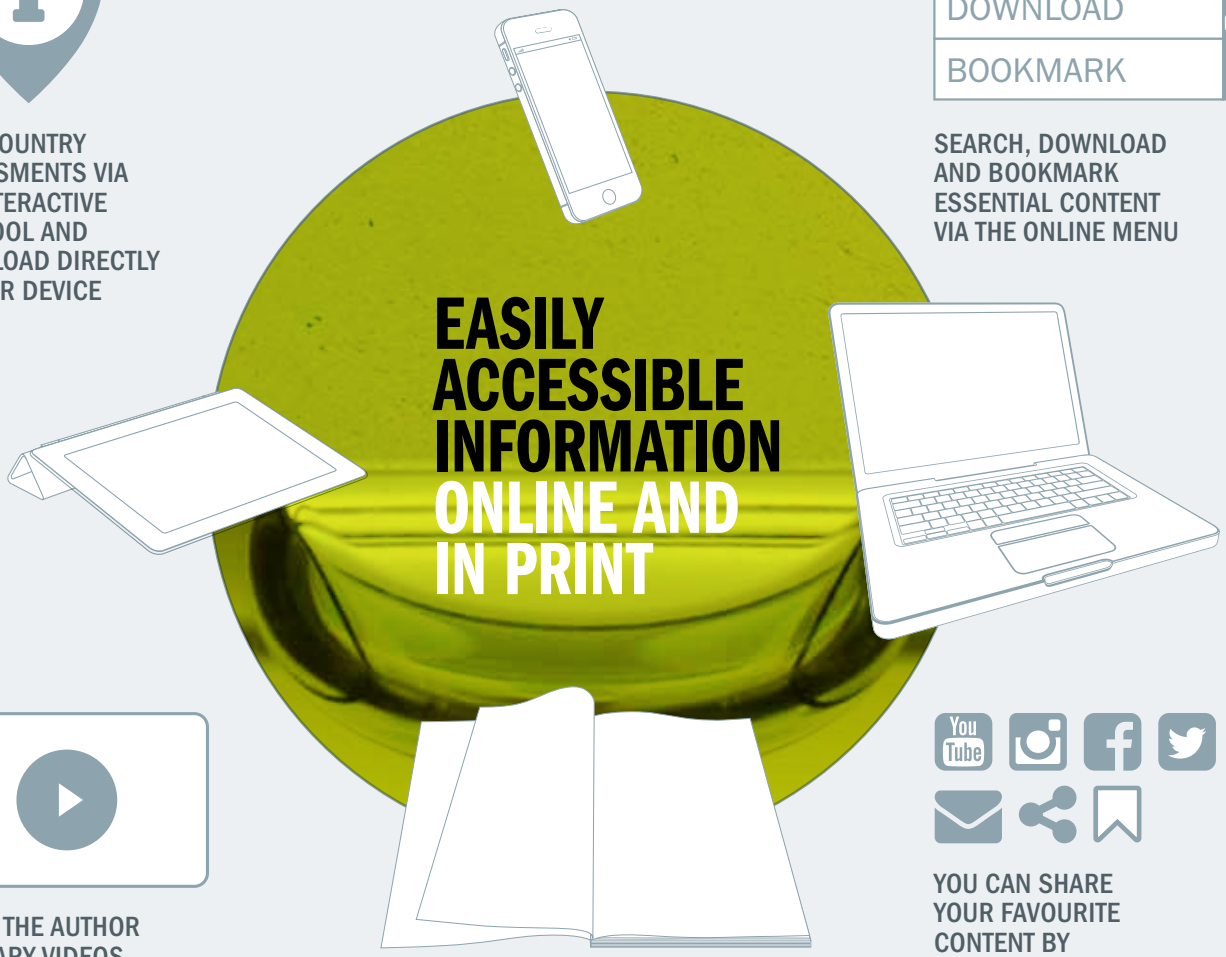

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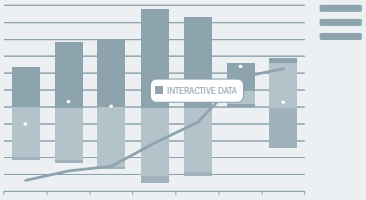

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ABOUT THIS REPORT

The EBRD seeks to foster the transition to an open market-oriented economy and to promote entrepreneurship in its countries of operations. To perform this task effectively, the Bank needs to analyse and understand the process of transition. The purpose of the *Transition Report* is to advance this understanding and to share our analysis with partners.

The responsibility for the content of the publication is taken by the Office of the Chief Economist. The assessments and views expressed are not necessarily those of the EBRD. All assessments and data are based on information as of early October 2015.

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COUNTRY ABBREVIATIONS

Albania	**ALB**	Tajikistan	**TJK**
Armenia	**ARM**	Tunisia	**TUN**
Azerbaijan	**AZE**	Turkey	**TUR**
Belarus	**BEL**	Turkmenistan	**TKM**
Bosnia and Herz.	**BOS**	Ukraine	**UKR**
Bulgaria	**BUL**	Uzbekistan	**UZB**
Croatia	**CRO**		
Cyprus	**CYP**	Argentina	**ARG**
Egypt	**EGY**	Australia	**AUS**
Estonia	**EST**	Brazil	**BRA**
FYR Macedonia	**FYR**	Canada	**CAN**
Georgia	**GEO**	China	**CHN**
Greece	**GRC**	Czech Republic	**CZE**
Hungary	**HUN**	Finland	**FIN**
Jordan	**JOR**	France	**FRA**
Kazakhstan	**KAZ**	Germany	**GER**
Kosovo	**KOS**	India	**IND**
Kyrgyz Republic	**KGZ**	Indonesia	**IDN**
Latvia	**LAT**	Israel	**ISR**
Lithuania	**LIT**	Italy	**ITA**
Moldova	**MDA**	Japan	**JPN**
Mongolia	**MON**	Netherlands	**NED**
Montenegro	**MNG**	Saudi Arabia	**SAU**
Morocco	**MOR**	Singapore	**SGP**
Poland	**POL**	South Africa	**ZAF**
Romania	**ROM**	South Korea	**KOR**
Russia	**RUS**	Thailand	**THA**
Serbia	**SER**	United Kingdom	**UK**
Slovak Republic	**SVK**	United States	**USA**
Slovenia	**SLO**		

GLOSSARY

A glossary for this Transition Report is available at **tr-ebrd.com**.

CONTENTS

EXECUTIVE SUMMARY

It has been almost a decade since the *Transition Report* last looked in detail at the EBRD region's financial sectors. In that time, the global financial system has undergone major changes and nowhere have these changes been more profound than in the countries where the EBRD invests. This report looks at the evolution of finance in the transition region following the crisis of 2008-09 and considers the question of how finance should be rebalanced to provide more diverse and stable funding flows in support of economic development.

The report considers not only the quantity of finance but also its composition and quality. In many countries in the region, credit-fuelled boom-bust cycles have resulted in dual economies where some parts of the private sector are overindebted while others remain cut off from any access to credit or equity. This duality is reflected in the exceptionally high levels of non-performing loans (NPLs) compared with other emerging markets and advanced economies. Indeed, in half of the countries in the region NPLs exceed 10 per cent of total loans and 5 per cent of GDP. At the same time, many small and medium-sized enterprises (SMEs) are unable to finance their investment projects.

The four chapters in this *Transition Report* argue that the financial system needs to be rebalanced in a number of ways in order to provide more diverse sources of funding in support of growth. Equity financing, in particular, needs to play more of a role, so two of the chapters look in detail at the region's incipient private equity sector. These chapters highlight the special role that equity financing – and private equity capital in particular – can play in supporting investment, productivity increases and better management within firms. Thus, private equity could help to revitalise the transition process.

The need to shift from foreign currency-denominated finance to local currency credit markets is another priority. Seven years after the start of the financial crisis, the dollarisation of credit in the region (that is to say, the percentage of lending denominated in a foreign currency) remains exceptionally high by global standards. On average, around 50 per cent of the total debt of households, firms and governments was denominated in a foreign currency in 2014. Successful rebalancing in this regard will require not only macroeconomic stabilisation, but also, in some countries, changes to banks' funding models, with shifts from foreign wholesale funding to domestic sources. Furthermore, investment finance in the region would benefit from more diverse capital flows and investment partnerships, with other emerging markets and non-European advanced economies playing a greater role.

Finance is a vast subject area and a document such as this cannot hope to cover all of it. This report is by no means exhaustive, nor does it necessarily focus on the largest areas of finance. Instead, it looks in detail at a few issues – such as bank finance for small businesses, private equity investment and the geographical diversification of sources of foreign direct investment – that illustrate the broader themes of the report.

The last part of the report examines recent economic developments in the region. Over the last year, the economic outlook for the transition region has been reshaped by a significant decline in oil prices, increased geopolitical uncertainty and the launch of a quantitative easing programme in the eurozone. However, despite this challenging economic and political environment, the outlook for market reforms appears to have improved. Assessments of economic developments and structural reforms in individual countries across the transition region are available online at **tr-ebrd.com**.

REBALANCING FINANCE AND BOOSTING INVESTMENT

Prior to the financial crisis, a credit boom in the region boosted levels of investment and growth, but resulted in large and ever-increasing external imbalances financed by cross-border capital flows. With the crisis came a swift external adjustment, as cross-border capital flows declined dramatically and multinational banks withdrew funds from the region. That external adjustment has largely been successful, bringing domestic investment into line with the – predominantly low – levels of domestic savings. However, after years of sparse investment (compared with the levels observed in other emerging markets with similar characteristics) the region now has substantial investment financing needs, requiring an extra US$ 75 billion per year.

Despite investment levels declining and firms in many countries facing a credit crunch, the region's overall indebtedness (measured as the sum of public and private debt, both domestic and external) has continued growing at approximately the same rate as before the crisis. In fact, indebtedness has increased by 25 percentage points of GDP since 2007, reaching 123 per cent of GDP in 2014. This reflects the substantial weakening of growth in nominal GDP, the revaluation of a large percentage of debt denominated in foreign currency, significant increases in public debt following efforts to stimulate the economy after the crisis and the fact that NPLs are weighing heavily on banks' balance sheets.

Notwithstanding those increases in the total level of debt, in some economies – particularly in central Europe, the Baltic states and south-eastern Europe – the ratio of domestic corporate debt to GDP remains below the levels that would be expected on the basis of those countries' per capita income, the strength of their economic institutions and other relevant characteristics. In other countries, however, scope for raising debt levels appears to be more limited.

In order to meet the region's vast investment needs, local financial systems will need to be rebalanced further. In countries where NPL levels are high, dealing with that overhang is a priority. In addition, a further shift towards local currency-denominated funding has the potential to reduce credit risk and improve the sustainability of debt. Looking beyond debt, increased use of equity instruments, measures to boost savings and the diversification of cross-border funding could all strengthen financial resilience, underpin investment and help to revive income convergence.

http://2015.tr-ebrd.com/en/investment-gap

SMALL BUSINESSES AND THE CREDIT CRUNCH

This chapter uses a combination of macroeconomic, firm-level and bank-level data to gauge the extent to which firms across the transition region have become more credit constrained in the seven years since the onset of the global financial crisis. The analysis shows that while credit conditions for small businesses have tightened overall, there is substantial cross-country heterogeneity. Access to credit has deteriorated most in those countries that have experienced a decline in cross-border borrowing by banks, a decline in wholesale (rather than deposit) funding and/or a decline in bank leverage.

Within countries, the composition of local banking markets also plays a role. Analysis shows that when SMEs have a choice of various banks in their town or city, they tend to borrow from financially sound banks that have less hierarchical lending procedures, greater confidence in the quality of legal enforcement and a focus on establishing long-term lending relationships. This suggests that financial matters are not the only consideration in this regard and that organisational and institutional issues also have a key role to play in the debate about reviving lending to SMEs in the EBRD's countries of operations.

To stimulate SME lending, banks themselves can make additional efforts to streamline their loan application procedures. Surveys of firms reveal that many SMEs are discouraged from applying for credit by cumbersome and lengthy application procedures. The findings of this chapter also suggest that relationship banks have a special role to play as a stable source of SME finance. This highlights a potential downside of any short-term focus by banks (and their shareholders) on reducing the numbers of loan officers and other frontline staff who work directly with borrowers. Lastly, effective and efficient SME lending can also be stimulated by the establishment of well-functioning credit registries and decisive action to deal with NPLs, which are continuing to weigh on the balance sheets of many banks.

http://2015.tr-ebrd.com/en/credit-crunch

TRENDS AND VALUE CREATION IN PRIVATE EQUITY

The private equity sector has grown steadily across the transition region over the last two decades, in terms of both the volume of assets that it manages and the impact that it has on local economies. However, private equity remains an underutilised source of external funding for companies in the EBRD region. This chapter considers how private equity funds could help contribute to more diverse financial infrastructure, thereby stimulating growth and efficiency improvements.

Prior to the crisis, the EBRD region accounted for close to one-fifth of all private equity capital invested in emerging markets. This share has recently dropped to less than one-tenth. Sluggish economic growth in the region has had a negative impact on returns on private equity investment. Cross-border deleveraging by parent banks present in the region and the resulting reduction in the availability of credit has also affected the investment strategies of private equity funds. The use of debt in private equity transactions – a common method of generating financial returns in advanced economies – has always been more limited in the transition region and has declined further since the global financial crisis. Instead, private equity funds focus more on implementing operational improvements in investee companies. This typically involves identifying companies with considerable growth potential, scaling up investments and sales, entering new markets and aligning company managers' interests more closely with those of shareholders.

An estimated US$ 1 trillion remains available to private equity funds for investment in companies around the world. A more outward-oriented approach and greater emphasis on innovation could help companies in the EBRD region attract a larger share of those funds. Export activity increases the size of companies' markets, which is particularly important for firms in smaller economies with limited domestic growth potential. Meanwhile, innovative companies could attract venture capital – an area where the region lags behind other emerging markets.

http://2015.tr-ebrd.com/en/private-equity

PRIVATE EQUITY AS A SOURCE OF GROWTH

Private equity can be a useful source of external finance for companies. Perhaps more importantly, the active involvement of private equity fund managers can also assist investee companies to reach new customers, run operations more efficiently and improve their management of cash and inventories. Private equity support also tends to help companies to gain better access to credit.

The analysis in this chapter, and elsewhere in the report, shows that private equity investment in companies in the transition region has a positive effect on employment, capital investment and productivity. These positive effects, in turn, translate into higher levels of revenue and profit relative to similar companies that do not receive such investment. Furthermore, the results suggest that capital spending following private equity investment supports job creation. In contrast, capital expenditure and job creation tend not to coincide in advanced economies, where private equity funds typically target mature firms and focus on cutting costs and restructuring the labour force.

The number of companies in the region that have strong growth prospects and could potentially attract private equity investment is more than 10 times the number of companies that have actually received investment in recent years. Enabling more companies to attract financing from private equity funds could potentially generate additional employment and investment in the region.

Levels of private equity financing are sensitive to the region's growth prospects. Thus, a return to growth is likely to result in an uptick in private equity flows. However, policy-makers can also support such flows by strengthening the protection of minority shareholders, improving corporate governance and fostering the development of public equity markets. In addition, improving the enforcement of information disclosure rules can help shareholders to have a greater say in the management of companies. Meanwhile, the establishment of specialist stock exchanges for SMEs that reduce listing costs and the regulatory burden can improve access to equity financing. The latter can also make SMEs more attractive as investment targets for private equity funds, as they increase the likelihood of those funds exiting their investments with higher valuations.

http://2015.tr-ebrd.com/en/growth-capital

MACROECONOMIC OVERVIEW

Over the last year, the economic outlook for the transition region has been reshaped by a significant decline in oil prices, increased geopolitical uncertainty and the launch of a quantitative easing programme in the eurozone. Although economic growth has picked up in many commodity-importing countries and is expected to strengthen further, average growth in the region has been weighed down by the negative shocks faced by Russia and other commodity exporters, and consequently, countries with strong economic ties to Russia.

As a result, the annual growth rate of the transition region as a whole is projected to decline for the fourth consecutive year in 2015, falling close to zero, before picking up moderately in 2016.

http://2015.tr-ebrd.com/en/outlook

STRUCTURAL REFORM

While the political and economic environment remains challenging, the outlook for market reforms appears to have improved. There are opportunities for reform in many sectors and countries that would help to bring economic structures and institutions more into line with those of advanced market economies. Significant progress has been made with the enhancement of infrastructure in the last year, with cash-strapped governments increasingly realising the value of fostering private-sector involvement in the building and maintenance of transport links and municipal services. However, many transition countries still lag behind best practices when it comes to promoting the sustainable use of natural resources and economically inclusive growth.

http://2015.tr-ebrd.com/en/reforms

REBALANCING FINANCE
Diversifying funding to foster growth

It has been almost a decade since the EBRD last published a *Transition Report* that focused on the financial system. Back in 2006, economic growth in the region was in excess of 6 per cent, several percentage points higher than in the eurozone. The EBRD region was even home to the world's fastest-growing economy: Azerbaijan. The region's strong economic growth was underpinned by large inflows of foreign direct investment and rapid growth in domestic credit. The 2006 report's encouraging conclusion was that economic and institutional reforms were continuing apace across the transition region.

However, it also warned that cross-border capital could be withdrawn very quickly in a crisis and that foreign direct investment, which was underpinning growth and convergence in the region, was more mobile than people generally realised. Two years later, those warnings began to look rather prescient. The global financial crisis and the subsequent eurozone debt crisis have resulted in capital inflows from traditional European sources declining to a mere trickle. The financial world has undergone profound changes, both globally and in the EBRD's countries of operations.

As we publish this year's *Transition Report*, the region's annual growth rate is hovering around zero. In fact, the region's income levels have hardly converged at all with those of advanced economies in the post-crisis period. Russia's economy, which expanded rapidly before the 2008-09 crisis, has experienced a sharp decline in economic growth. Cross-border flows of capital and foreign direct investment have shrunk, while credit growth has been weak (and even negative in some countries). Furthermore, the reform process has stalled across the region, as the 2013 report highlighted.

Although growth has recently picked up among a number of commodity importers in the region, the recession in Russia – which has been exacerbated by declines in commodity prices – has had a negative impact on economies that have close ties with that country on account of trade, investment and remittances. Geopolitical tensions and the expected tightening of monetary policy in the United States are also weighing on the region's economies. As a result, growth in the EBRD region as a whole has virtually ground to a halt in 2015 and is expected to recover only moderately in 2016.

This is a good time, therefore, to look at how the financial sector can act as a stable and robust engine of economic development in such challenging and uncertain circumstances.

The report begins by showing how far the transition region is currently lagging behind in terms of investment. This investment gap is casting a serious shadow over the region's long-term growth prospects – a finding echoed in the last two *Transition Reports*. In order to boost investment and close that gap, new funding sources need to be explored. Indeed, this report suggests that the challenge is not only to increase the quantity of finance that is available to firms and households, but also to rebalance its composition and improve its quality. Such rebalancing and diversification will involve changes in a number of different areas.

First, a key theme of this year's report is the need to reduce the region's overwhelming reliance on debt financing and increase the role played by equity. A combination of economic contractions and unfavourable exchange rate movements have resulted in a situation where the total domestic and external debt of households, firms and governments in the transition region is now *higher* than it was on the eve of the global financial crisis. Despite a decline in the availability of new loans, particularly for small businesses (see Chapter 2), the debt burden has continued to rise.

Against that background, the report highlights the special role that equity financing can play in supporting investment and productivity increases in firms, with a particular focus on private equity. Evidence suggests that private equity investors operating in the region improve firms' access to credit and help companies to scale up capital expenditure and hire new workers, resulting in higher levels of revenue and productivity. However, relatively few firms in the region have attracted private equity investment to date. There are several ways in which policy-makers could help to improve access to private equity, including tightening rules on corporate governance and making it easier for private equity funds to exit investments through public equity markets. The capital markets union that is currently under discussion could play an important role in improving access to equity in central Europe and parts of south-eastern Europe.

Second, there is a need to shift from foreign currency-denominated finance to local currency credit markets. The dollarisation of credit in the region (that is to say, the percentage of lending that is denominated in a foreign currency) remains exceptionally high by global standards and only a few countries in the region have seen noticeable declines in dollarisation levels in the wake of the global financial crisis. As a result, many firms and households remain vulnerable to sudden exchange rate movements, the risk of which has increased in light of the expected monetary tightening in the United States.

Efforts to reduce dollarisation will be dependent on the gradual rebalancing of banks' funding sources, with shifts from foreign to domestic channels. The ability of banks – both foreign and domestically owned – to access abundant cross-border funding played an important role in supporting the strong credit growth and economic convergence that was observed prior to the crisis. However, a more balanced funding model is now needed to ensure that local banking systems become more resilient to shocks in the longer term.

Third, the right balance needs to be struck between public debt, household debt and corporate debt. The analysis in this report shows that firms in many countries – particularly small and medium-sized enterprises – remain relatively underserved by the financial sector. Survey evidence suggests that in many cases these firms are discouraged from applying for credit by cumbersome and lengthy application procedures.

Lastly, rebalancing also involves a shift towards a more diverse network of cross-border investment partnerships, complementing the strong existing links with advanced European

economies. There is scope for stronger economic ties between the transition region and both the other emerging markets and non-European advanced economies, which would make overall funding flows more stable. Intra-regional links could also be strengthened.

Rebalancing does not mean shifting from one extreme to the other. Instead, this *Transition Report* calls for the gradual and sustainable optimisation of the financial system structure. Even if more equity financing does become available, debt will continue to play a major role, often helping to leverage the benefits of equity financing. Some lending will always be conducted in a foreign currency – serving the needs of companies with key markets abroad, for instance – but such lending would normally make up a small percentage of total credit in the financial systems of more advanced economies. And economic forces of gravity dictate that advanced European economies will remain important trade and investment partners for the region, even as economic links with other countries multiply and grow stronger.

The optimal situation in terms of debt instruments, currency breakdowns, sources of funding and investment partners will be different in each country, being shaped by local factors, and it will evolve over time. Nevertheless, this report provides general guidance that, taken together, will help to ensure that financial systems offer a diverse range of funding options that meet the demands of small businesses, larger firms and households, thereby helping income levels to continue converging with those of advanced economies. In this regard, this report develops themes highlighted as part of the Addis Ababa Action Agenda that was adopted earlier this year, including the contribution that deeper domestic capital markets and cross-border equity flows can make to sustainable development.

This report does not seek to cover all major areas of finance, as that would be impossible to do in any depth. Instead, it focuses on a few specific issues – the geography of foreign direct investment, small businesses' access to bank finance and the impact of private equity financing – that serve to illustrate its broader arguments.

The report is very much forward-looking. In order to better reflect this approach, this publication has the title *Transition Report 2015-16*, a convention that we intend to follow in the coming years.

Hans Peter Lankes
Acting Chief Economist
EBRD

REBALANCING AND DIVERSIFICATION WILL INVOLVE CHANGES IN A NUMBER OF DIFFERENT AREAS.

REBALANCING FINANCE AND BOOSTING INVESTMENT

123%
DEBT-TO-GDP RATIO OF THE REGION'S NON-FINANCIAL SECTOR

25
PERCENTAGE POINTS
INCREASE IN THAT DEBT-TO-GDP RATIO BETWEEN 2007 AND 2014

AROUND
US$75
BILLION A YEAR
CONSERVATIVE ESTIMATE OF THE REGION'S ADDITIONAL INVESTMENT FINANCING NEEDS

The global financial crisis has triggered a dramatic reduction in external imbalances in the transition region, but this rebalancing has come at the expense of investment. The region needs to invest around US$ 75 billion more per year to bring investment back to the levels expected of economies at this stage of development. However, despite those lower levels of investment and the credit crunch, the debt of the non-financial sector in the region has actually increased. Meeting those additional investment needs will require financial sector rebalancing, with greater use of equity instruments, resolution of non-performing loans and more diverse cross-border funding.

Introduction

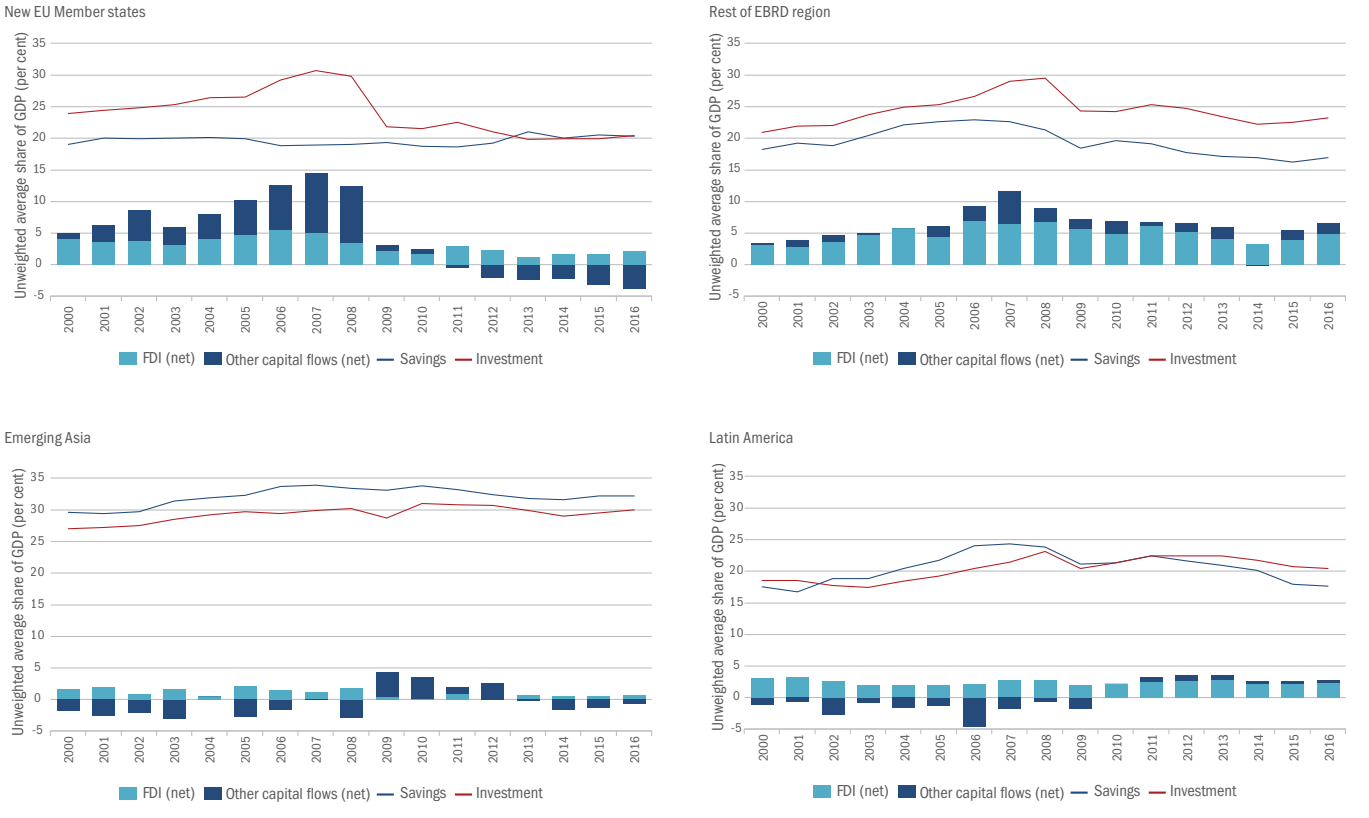
Seven years have now passed since Lehman Brothers collapsed in September 2008. By and large, the financial crisis of 2008-09 was initially considered to be the result of a lending boom that turned into a bust. Over time, however, concerns have been raised that this latest crisis did not follow the usual pattern of boom-bust credit cycles, whereby indebtedness rises quickly during the boom period and then readjusts during the bust phase.[1] Instead, in both advanced and emerging market economies, the overall stock of debt has actually continued to rise since the crisis. Recent estimates suggest that the global debt-to-GDP ratio increased by 17 percentage points between 2007 and 2014, reaching 286 per cent,[2] with advanced economies seeing particularly strong increases in levels of public debt. Some view the large stock of debt *before* 2008 and the increase in overall indebtedness *since* the crisis as the main reasons for the sluggish post-crisis recovery in the global economy.[3]

[1] See Schularick and Taylor (2012) for analysis of credit-fuelled crises.
[2] See McKinsey Global Institute (2015).
[3] See, for instance, Lo and Rogoff (2015).

This raises a number of interrelated questions. Have similar trends been observed in the region where the EBRD invests? Has indebtedness continued to rise? And if so, has it reached excessive levels? How have savings, investment and investment needs evolved since the crisis? And if both investment needs and debt levels are high and rising, how can these trends be reconciled, both historically and in the future? Answering these questions may provide some insight into how finance in the post-crisis world can be rebalanced, made more diverse and better support the long-term convergence of incomes with the levels of more advanced economies.

This chapter starts by looking at the savings-investment balance in the region and the rapid adjustment of countries' external positions following the 2008-09 crisis. It considers the implications of this adjustment for investment financing needs, showing that the region needs to considerably increase investment. It then looks at the evolution of total debt, finding that this has continued rising steadily, despite the fact that credit granted to companies (adjusted for inflation) has been contracting in many countries. The discussion then moves on to the factors that explain how lower investment levels and the credit crunch can co-exist with rising debt levels. The chapter then assesses the implications that this has for the financing of future investment needs, considering both debt and equity instruments. It first looks at how overall debt levels in the region compare with those in other emerging markets (examining the quantity of debt, the composition of debt and, importantly, the quality of debt) before looking at alternative financing options involving a greater role for equity. Lastly, in light of the current shortage of domestic savings, the chapter turns its attention to foreign-financed equity, examining the levels of foreign direct investment (FDI) after the crisis and opportunities for the geographical diversification of FDI flows.

CHART 1.1. Savings, investment and capital flows as a percentage of GDP



Source: IMF and authors' calculations.
Note: Data represent simple averages. The new EU member states are Bulgaria, Croatia, Cyprus, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia. Emerging Asia comprises China, Hong Kong Special Administrative Region, India, Indonesia, Malaysia, the Philippines, South Korea, Thailand and Vietnam. Latin America comprises Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay and Venezuela.

Savings, investment and financing needs

External imbalances before the crisis

The last time the *Transition Report* was dedicated to the subject of finance, back in 2006, financial sectors across the region were booming, economies were enjoying strong rates of growth and income was converging with the levels seen in advanced economies in the European Union. In particular, cross-border capital flows played a key role in supporting growth in emerging Europe during the 2000s.

To a large extent, those strong capital inflows came in the form of FDI and were accompanied by deeper institutional integration with more advanced European economies in the context of the EU accession of countries in central and south-eastern Europe.[4] Inflows of FDI, as well as other capital inflows, enabled Europe's emerging markets to sustain relatively high levels of investment given their traditionally low levels of domestic savings (see Chart 1.1). In turn, these high investment levels supported growth. Most capital inflows in the region came from countries in the eurozone, such as Austria, Germany and Italy.

Increased foreign ownership of banks played a very important role, both as a form of FDI in the financial services sector and as a channel for the financing of investment.[5] Foreign banks' access to parent funding improved the availability of credit in the host economies and helped to reduce the adverse impact of local financial shocks, including the impact of the Russian crisis of 1998.[6] However, this then increased the vulnerabilities that are associated with having a higher percentage of debt denominated in or indexed to a foreign currency.[7]

Swift external adjustment

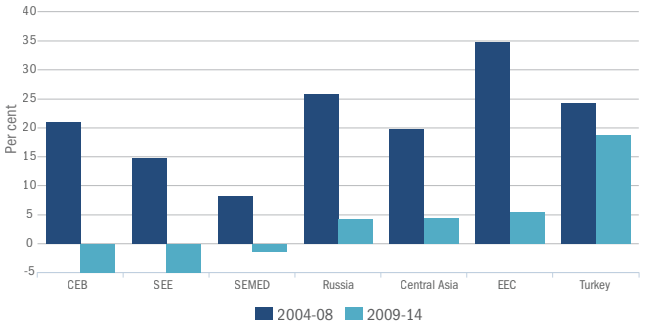
Following the 2008-09 crisis, net capital flows from advanced European economies fell sharply as Europe battled its economic crisis and the eurozone experienced a protracted recession. Cross-border lending, particularly in the form of syndicated loans, declined very quickly, falling by around 60 per cent in the year after the collapse of Lehman Brothers.[8]

In the face of this major shock, external adjustment in the region has been impressive. In many countries, vast current account deficits (which in some cases exceeded 20 per cent of GDP before the crisis) declined swiftly and large external imbalances were eliminated or dramatically reduced within months.

The fact that a large proportion of foreign investment in emerging Europe came in the form of FDI played a stabilising role during the global financial crisis, since FDI is less prone to sudden reversals than other types of capital inflow, such as portfolio investment.[9] The Vienna Initiative – coordinated efforts by host and home supervisors, cross-border banks and international financial institutions – helped to ensure that foreign banks did not embark on an immediate large-scale withdrawal from the region. That initiative helped, at least temporarily, to stabilise lending by the 17 banks that signed commitment letters.[10]

At the same time, banking sectors across the transition region – particularly in central Europe and the Baltic states (CEB) and south-eastern Europe (SEE) – have continued to deleverage,

CHART 1.2. Annual growth rate of domestic corporate debt, adjusted for inflation and exchange rate movements



Source: IMF, national authorities via CEIC Data, BIS and authors' calculations.

as discussed in the Macroeconomic Overview. As a result, average real growth in domestic credit granted to companies (that is to say, growth adjusted for inflation and exchange rate movements) has been negative in the CEB and SEE regions, as well as in the southern and eastern Mediterranean (SEMED; see Chart 1.2). Small and medium-sized enterprises (SMEs) in these regions have been particularly affected by this credit crunch, as discussed in Chapter 2.

Investment shortfall

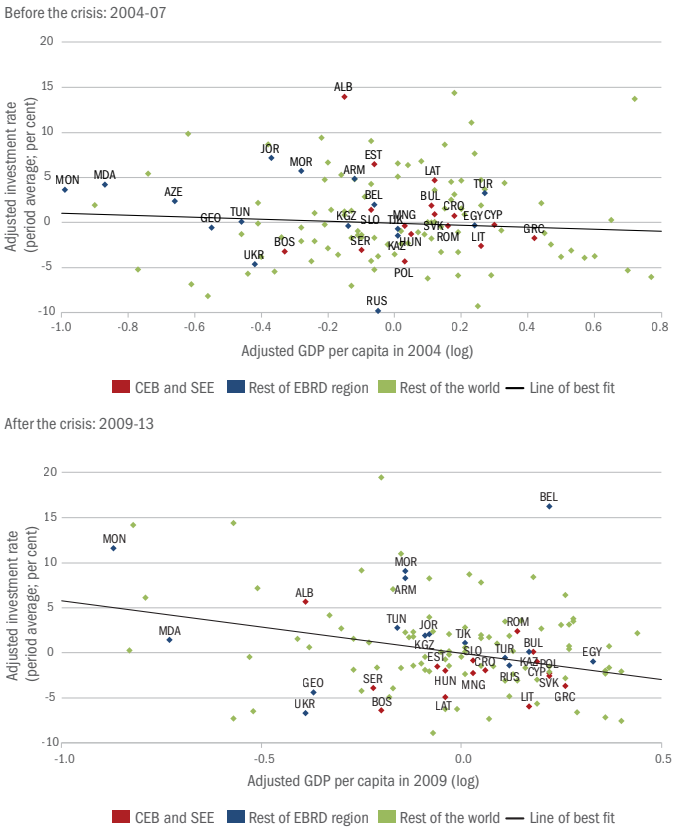
While the external adjustment has been swift, it has resulted in strong declines in investment (see Chart 1.1). Investment in the transition region has stood at close to 20 per cent of GDP since 2008 – a modest figure for middle-income economies. The fall in the rate of investment has been particularly sharp in the new EU member states, which were more reliant on cross-border capital flows from the EU-15 economies for the financing of investment prior to the crisis (as well as being the countries where the credit crunch has been most pronounced). However, a broadly similar pattern has been observed in the rest of the region as well. At the same time, the increase in domestic savings (calculated as the sum of household savings, corporate savings and government savings) in emerging Europe has been very limited. Marked increases in domestic savings rates have mostly been limited to economies where levels of domestic savings before the crisis were particularly low – such as the single digit figures observed in Bulgaria and Lithuania.

In some ways, this type of adjustment may not be particularly surprising. In a crisis, governments typically seek to stimulate aggregate demand in the short term by boosting consumption (both private and public) at the expense of savings. In the longer term, however, higher levels of savings are needed to sustain adequate levels of investment without accumulating ever larger stocks of debt. Thus, short and longer-term policy objectives may be at odds with each other and may need to be reconciled.

[4] See Friedrich et al. (2013).
[5] See EBRD (2009) for a discussion of this issue.
[6] See De Haas and Van Lelyveld (2006 and 2014).
[7] See Brown and De Haas (2012).
[8] See De Haas and Van Horen (2012).
[9] See, for instance, Levchenko and Mauro (2006).
[10] See De Haas et al. (2015) for empirical evidence.

The transition region's adjustment through low investment rates stands in stark contrast with the post-crisis experiences of emerging markets in Asia and Latin America (see Chart 1.1). The majority of emerging Asian economies traditionally enjoy much higher levels of domestic savings, which are more than sufficient to finance the high levels of investment in these countries.[11] This trend has hardly been affected by the 2008-09 crisis. Indeed, investment has actually increased somewhat as a share of GDP as a result of the large public capital spending programmes that were adopted in China and a number of other countries in the region in the wake of the global crisis. In Latin America, on the other hand, investment levels were somewhat on the low side throughout the 2000s but they have, if anything, increased since the crisis. This underscores the unique nature of the post-crisis external adjustment observed in Europe's emerging market economies.

CHART 1.3. Fixed capital investment and GDP per capita: before and after the crisis



Source: IMF, Penn World Tables 8.0 and authors' calculations.
Note: The trend line shows a linear relationship between fixed capital formation as a percentage of GDP (averages for the periods 2004-07 and 2009-13, conditional on a number of country-level characteristics) and the log of GDP per capita at purchasing power parity at the start of the period.

Is this adjustment a cause for concern? The answer depends on whether those reduced investment levels are broadly typical of economies at this stage of development and whether a protracted period of low investment puts long-term growth in emerging Europe at risk.[12]

Investment financing needs

In order to shed some light on this issue, we can look at annual gross fixed capital formation – physical investment in things like factories, buildings and computers – and compare it with the levels of investment observed elsewhere, while taking into account differences in the existing stock of capital, the level of income per capita, the stability of the macroeconomic environment and other relevant characteristics of individual economies.

The second panel of Chart 1.3 shows the average annual rate of gross fixed capital formation (that is, investment net of change in inventory levels) as a percentage of GDP for various countries in the post-crisis period (2009-13), plotted against those countries' GDP per capita at the start of the period, adjusted for differences in purchasing power. The figures take account of various economic characteristics of those countries. The first panel depicts the same relationship in the build-up to the financial crisis (2004-07). Countries with a lower income per capita – typically economies in the catching-up phase – tend to have higher rates of investment,[13] and this relationship has become more pronounced since the global financial crisis.

While countries in emerging Europe and Central Asia used to invest roughly the same amount as their peers around the world before the financial crisis, they have invested significantly less in the post-crisis period. This decline appears to be particularly large in the CEB and SEE regions (with the corresponding dots in Chart 1.3 dropping from around the fitted line to below the fitted line). This is a first piece of evidence suggesting that the sustained decline in investment may indeed be a cause for concern and that the region's investment needs will rise substantially in the future.

This analysis is supported by a regression framework that relates investment (gross fixed capital formation as a percentage of GDP) in the pre and post-crisis periods to the initial levels of income per capita and capital stock as well as various other country-level characteristics. For instance, countries that have experienced stronger economic growth in the preceding period – a proxy for investors' perceptions of growth potential – tend to invest more.[14] Higher average inflation (a reflection of a lack of macroeconomic stability) is associated with lower investment levels, while greater political stability is associated with higher levels of investment.

According to this regression analysis,[15] investment levels in the region in the mid-2000s were a little higher than would be expected on the basis of countries' economic characteristics, although the differences between the observed and expected levels of investment were not statistically significant. Meanwhile, even during the pre-crisis period, investment levels in Russia were markedly lower than those of its peers.[16]

However, since the 2008-09 crisis economies in the CEB and SEE regions have been investing, on average, 3 to 4 percentage

[11] This could be for cultural reasons, or it could be because these countries' welfare systems are less generous than the European model (see World Bank, 2012).
[12] See also EBRD (2013) for a discussion of this issue.
[13] See Murphy et al. (1989).
[14] Growth is lagged to exclude feedback from weak investment to contemporaneous growth, as well as to focus on potential growth. Observed growth may also play a role as firms respond to weaker demand in their post-crisis economies. However, the IMF (2015b) finds that in the aftermath of the 2008-09 crisis the decline in investment in emerging economies has been two to four times stronger than those normally observed during recessions.

points of GDP less than comparable emerging market economies elsewhere (with these differences being statistically significant). In eastern Europe and the Caucasus (EEC; excluding Belarus) the corresponding gap is as much as 7 percentage points of GDP. Estimates also point to weaker than expected investment in other regions in the post-crisis period (see Chart 1.4) – with the exception of Belarus, Mongolia and Morocco, where investment levels have remained relatively high (see Chart 1.3).

Reflecting broader trends in investment, recent spending on infrastructure – a particular type of investment which benefits large numbers of businesses and consumers – has also been low by historical standards (see Box 1.1). Estimates based on long-term trends suggest that infrastructure spending needs to rise by at least half a percentage point of GDP, unless significant improvements can be made in terms of the cost-efficiency of infrastructure spending.[17]

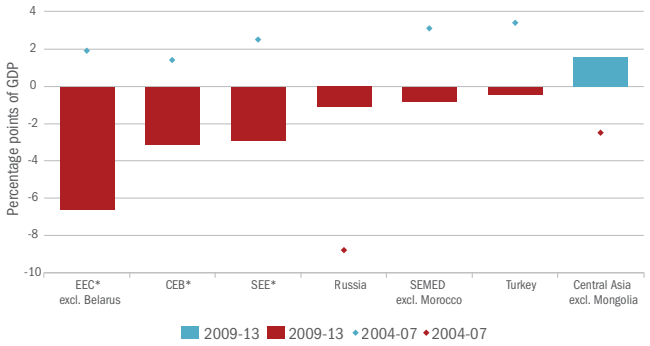
This shortage of investment is unlikely to be sustainable in the long term without negative implications for growth, so the investment rate will need to increase accordingly. Indeed, Table 1.1 (left-hand columns) indicates that the region requires around US$ 75 billion of additional investment *per year*. The cumulative shortfall for the period 2016-20 is estimated at over US$ 400 billion (using IMF World Economic Outlook assumptions about the growth of economies' nominal GDP).

Another way of estimating shortfalls in investment relative to peers is to individually match countries from the region where the EBRD invests to groups of countries outside the region that have similar economic characteristics, rather than accounting for differences in economic characteristics by means of a regression analysis. Average differences in investment rates between groups of countries from the region and their matched peers from outside the region provide an alternative set of estimates of investment shortfalls.

The overall estimates reported in Table 1.1 (right-hand columns) are similar to the estimates obtained using the regression analysis (both in terms of levels and in terms of their statistical significance). If anything, they are somewhat larger, doubling the estimated investment needs for some regions. The estimated investment needs are higher in the case of both the CEB and SEE regions, but somewhat lower for Russia.

In fact, both sets of estimates in Table 1.1 are fairly conservative. They do not involve any assessment of the required level of investment and are based entirely on comparing investment levels in the region with those in other economies that are comparable in terms of their income per capita, capital stocks and other characteristics, assuming that the region's economies need to gradually scale up investment to the average levels observed in countries with similar economic characteristics.[18]

CHART 1.4. Estimated investment surplus/shortfall as a percentage of GDP



Source: IMF, Penn World Tables 8.0 and authors' calculations.
Note: These estimates are based on pooled ordinary least squares with standard errors clustered by country. The explanatory variables include the log of capital stock per worker at the start of the period, GDP per capita at purchasing power parity and a number of other country-level characteristics. * denotes values that are statistically significant at the 5 per cent level.

TABLE 1.1. Estimated annual shortfall in investment

Region	Regression analysis (global sample)		Matching with countries with similar characteristics	
	% of GDP	US$ billions	% of GDP	US$ billions
Total EBRD region	1.34	59.5	1.26	56.1
CEB	3.15	28.1	6.13	54.6
SEE	2.95	16.5	6.21	34.7
EEC excl. Belarus	6.57	11.6	2.58	4.6
Turkey	0.42	3.1	4.74	35.7
Russia	1.12	13.2	0.70	8.2
SEMED excl. Morocco	0.77	2.9	2.72	10.4
Central Asia excl. Mongolia	-1.63	-5.4	-1.12	-3.7
Belarus, Mongolia *and* Morocco	-10.81	-18.9	-9.58	-16.8
Total investment gap (US$ billions at 2015 prices)				
Main estimate		75.4		148.1
Conservative estimate I		59.5		56.1
Conservative estimate II		56.1		93.9
Conservative estimate III		51.1		127.6

Source: IMF, Penn World Tables 8.0 and authors' calculations.
Note: These values represent coefficients for regional dummies when regressing gross fixed capital formation as a percentage of GDP on the log of capital stock per worker at purchasing power parity at the start of the period, the log of GDP per capita, average inflation and a number of other country-level characteristics. Positive values correspond to investment gaps. Conservative estimate 1 is based on a single coefficient for the entire region. Conservative estimate 2 only takes into account statistically significant coefficients and assumes the rest to be equal to zero. Conservative estimate 3 subtracts negative investment gaps for subregions from the main estimate.

[15] Other factors include education, demographic characteristics, the quality of economic institutions, the initial level of debt, and indicators related to the structure of output and dependence on commodities.
[16] See EBRD (2012) for a detailed discussion.
[17] See McKinsey Global Institute (2013) and IMF (2014) for a discussion and estimates.
[18] For a less conservative approach, see, for instance, Lopez de Silanes et al. (2015) who estimate additional financing needs of 5 per cent of GDP or more to meet SME demand for funding in Poland and Romania.

Debt finance: is the transition region overleveraged?

How can the region's large additional investment needs best be financed? Funding additional investment will require a combination of debt and equity financing. This chapter looks at both, starting with debt.

Rising debt levels

Given the decline in physical investment in the region in recent years and the credit crunch faced by SMEs in many countries, it may come as a surprise to learn that the overall debt of the non-financial sector in the transition region (which comprises the debt of governments and households, as well as firms' domestic and external debt) *increased* from 98 per cent of GDP in 2007 to 123 per cent of GDP in 2014.[19] This increase is broadly in line with global trends but somewhat stronger than the average, totalling 25 percentage points of GDP compared with a global average increase of 17 percentage points. It has also been broadly based: both countries with relatively low initial levels of debt and those with higher levels of indebtedness have increased their debt levels, and they have done so to a similar extent (see Chart 1.5).

Chart 1.5 confirms that average debt increases in the region have outpaced those observed elsewhere. Excluding Cyprus and Greece, debt levels have increased most strongly in Ukraine, Mongolia, Armenia and Slovenia (the countries that lie furthest away from the 45-degree diagonal line), while in terms of aggregate debt levels, the most indebted countries are Hungary, Jordan and Croatia.

In fact, annual changes in the region's debt-to-GDP ratio before and after the 2008-09 crisis have been fairly similar (see red dots in Chart 1.6). Before the crisis, the nominal stock of debt expanded very rapidly but so did nominal GDP. And since the crisis, growth in nominal debt has slowed significantly, but economic growth has slowed as well.

What explains this rapid increase in total gross debt against the background of weak investment, continued deleveraging by parent banks with subsidiaries in the region (see Macroeconomic Overview) and the severe credit constraints faced by firms? To answer this question, it is important to look not only at the quantity of debt, but also at its composition and its quality. Three developments in particular have played a key role in this regard. First, the prevalence of debt denominated in foreign currency has led to revaluations of the stock of debt when currencies have depreciated. Second, increases in public debt and active use of external borrowing by larger companies have added to the stock of debt. Third, non-performing loans (NPLs) continue to clog up the balance sheets of banks and companies and inflate the debt-to-GDP figures, while at the same time weighing on the flow of fresh credit to the economy. The next few sections explore these various factors in turn.

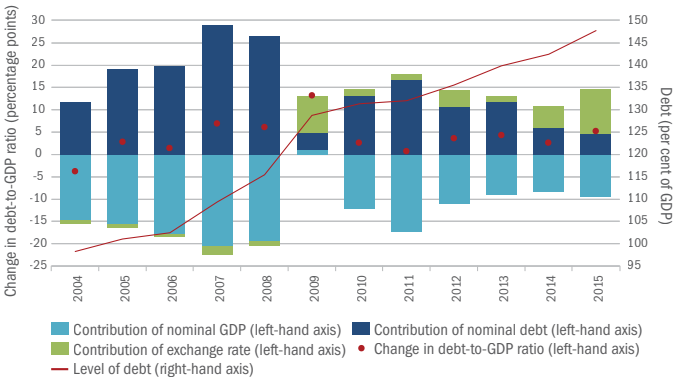
A continued reliance on foreign currency-denominated debt

The depreciation of the region's currencies against the US dollar and the euro meant that in 2009, 2012 and 2014 a significant percentage of the increase in the debt-to-GDP ratio was due to the revaluation of the existing stock of debt (both external

CHART 1.5. Debt levels in 2007 and 2014 as a percentage of GDP

Source: IMF, national authorities via CEIC Data, BIS and authors' calculations.
Note: Total debt comprises public debt, domestic private-sector debt and external debt of non-financial companies. Cyprus and Greece are not shown.

CHART 1.6. Contributions to changes in debt-to-GDP ratios



Source: IMF, national authorities via CEIC Data, BIS and authors' calculations.
Note: Data represent simple averages. Debt comprises public debt, domestic private-sector debt and external debt of non-financial companies. The contribution made by exchange rates is based on approximate assumptions about the currency composition of debt denominated in foreign currency.

[19] If Greece is excluded, the corresponding increase in the debt-to-GDP ratio is from 89 per cent in 2007 to 115 per cent in 2014.

and domestic debt denominated in foreign currency). On the basis of current trends, this revaluation effect will be even stronger in 2015. One example of such an effect was the jump in the effective cost of mortgages denominated in Swiss francs following the franc's sharp appreciation against the euro in January 2015. These mortgages were popular in several CEB countries before the crisis owing to their low nominal interest rates. In fact, prior to the crisis, the region's currencies also had a tendency to appreciate, reducing the burden of foreign currency-denominated debt.

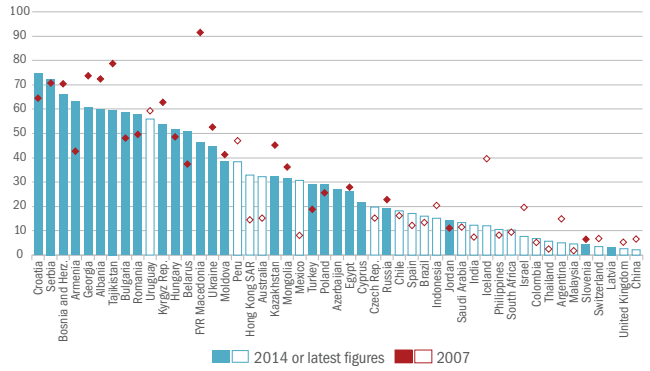
The level of dollarisation (that is to say, credit denominated in US dollars or another foreign currency as a percentage of total credit) is high in most countries in the region (see Chart 1.7). Indeed, it is now significantly higher than in most emerging market or advanced comparator economies. While dollarisation ratios in Latin American countries, for instance, have been steadily declining since the mid-1990s, dollarisation levels in the region where the EBRD invests have barely changed (as can be seen from the fact that the diamonds in Chart 1.7 corresponding to 2007 figures tend to be close to the bars indicating the latest data). Even in countries which have seen significant declines in dollarisation (such as Albania, FYR Macedonia, Georgia and Tajikistan), the initial levels were exceptionally high, so dollarisation remains at elevated levels.

Dollarisation ratios are even higher if they are calculated on the basis of the entire stock of debt (rather than just domestic debt), as external debt of governments and companies denominated in foreign currency represents a significant proportion of total debt in many countries. This is also true of other emerging markets. However, even using this broader measure, the level of dollarisation in the region where the EBRD invests remains significantly higher than in other emerging market economies (the averages of 51 and 28 per cent, respectively).

The second round of the EBRD's Banking Environment and Performance Survey (BEPS II), which was conducted in 2011 across the region where the EBRD invests, provided insight into the main reasons for the high levels of dollarisation in the region. As part of the survey, banks' CEOs were asked to assess the importance of various factors in terms of explaining the underlying trends in foreign currency lending. The factors can be grouped together in three main categories. The first related to funding – the availability of funding in foreign and local currencies from parent banks, international markets and domestic depositors. The second captured the relative terms of loans in foreign and local currencies (as regards their interest rates and maturities) and demand from clients (including the competitive pressures that banks face to respond to clients' demand for foreign currency denominated loans). The third group reflected changes in the perceived riskiness of foreign currency lending according to the respondent, the regulator or risk managers.

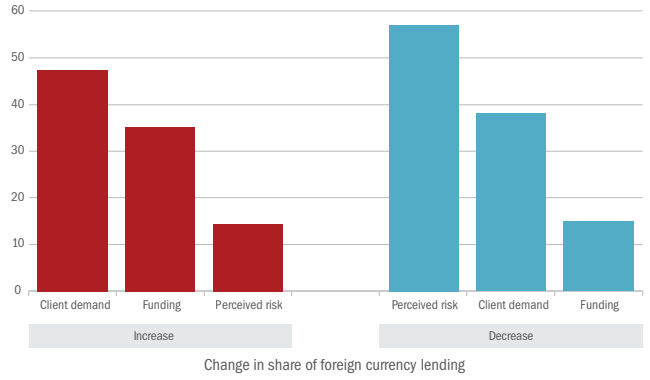
Their answers suggest that clients' demand for foreign currency lending (owing to lower interest rates and/or longer maturities on offer) and competitive pressures are the main factors driving up dollarisation, while declines in dollarisation are mainly due to the increased riskiness of foreign currency lending

CHART 1.7. Percentage of domestic corporate and household debt denominated in foreign currency



Source: IMF, national authorities via CEIC Data and authors' calculations.
Note: Data for 2007 are not shown for countries that have subsequently adopted the euro.

CHART 1.8. Percentage of managers that report the given factor explains/ contributes to an increase/decrease in the proportion of foreign currency lending



Source: BEPS II and authors' calculations.
Note: The percentages refer to the proportion of managers who reported that the respective groups of factors were very important (top category in the five-point scale).

15-30%
ESTIMATED INCREASE IN BILATERAL INWARD FDI IN RESPONSE TO A SUBSTANTIAL REDUCTION IN CORRUPTION

as perceived by risk managers and regulators (see Chart 1.8). Funding conditions also play a role, particularly in encouraging dollarisation.

Firms and households may continue to demand foreign currency credit that appears to be cheaper as they often fail to take into account the high costs of servicing foreign currency debt when domestic currency depreciates. This creates negative externalities for the economy as a higher debt burden, following depreciation of the local currency, leads to weaker aggregate demand which in turn makes it even harder for firms to service their obligations. Reducing the dollarisation of lending in the region may therefore require a more proactive stance by regulators, as well as the fine-tuning of risk management practices within banks. It also requires an established track record of sound macroeconomic policies, which will help to anchor the inflation expectations of both lenders and borrowers.[20]

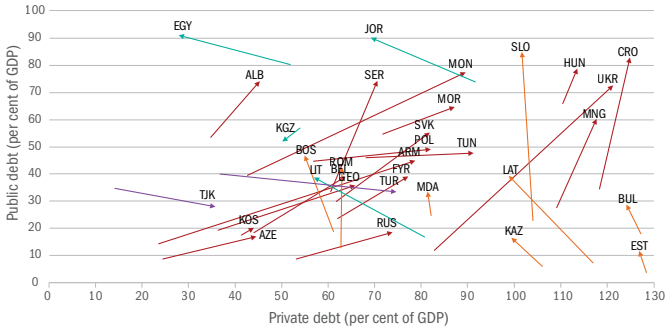
A shift from private to public debt

Private-sector deleveraging is often accompanied by an increase in government debt. As private firms reduce their leverage, they cut investment and employment, thus reducing aggregate demand in the economy. Reduced demand for their products may force firms to deleverage more, creating a vicious circle of deleveraging and falling demand. In fact, there is evidence that leverage amplifies the effect of economic crises on employment and investment.[21] Governments then frequently step in to boost demand and create more accommodative conditions for deleveraging – often at the cost of higher public debt. In some instances, governments may also be called upon to directly bail out financial institutions or large companies. These bailouts are also often financed – either directly or indirectly – by public debt.

In most countries in the region, both public and private-sector debt levels increased over the period 2007-14 (see red arrows in Chart 1.9). In almost all countries where private debt-to-GDP ratios did decline, public debt increased. The only exception was the Kyrgyz Republic, which benefited from a partial write-off of its debt owed to Russia. In fact, in almost all of those countries, public debt increased by more than private debt declined (see orange arrows), sometimes by a large margin (particularly in Slovenia and Latvia). Only in Egypt, Jordan and Lithuania did the shift from private to public debt result in an overall reduction in the level of debt (see green arrows).

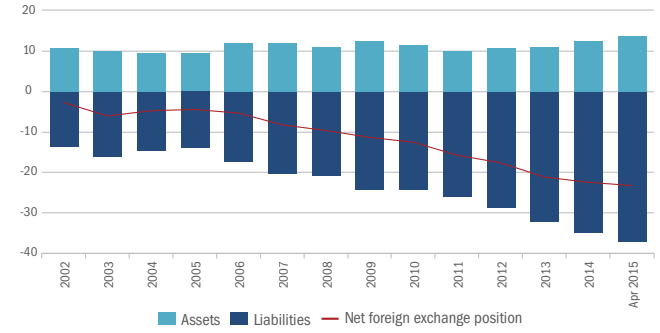
Furthermore, in some countries where debt levels were relatively modest at the start of the 2008-09 crisis, policy responses included measures to encourage credit growth. This helped to boost aggregate demand in the economy in the short term but potentially with the effect of increasing vulnerabilities in the longer term. Turkey, for instance, relaxed restrictions on the provision of foreign currency-denominated lending to unhedged borrowers in 2009, subject to certain conditions. The net foreign currency-denominated liabilities of Turkey's corporate sector have since risen significantly, from around 10 to 20 per cent of GDP (see Chart 1.10). Indeed, Turkey stands out as one of only two countries in the region where public debt has declined since 2007 but private debt has increased significantly (see purple arrows in Chart 1.9).

CHART 1.9. Changes in levels of public and private debt as a percentage of GDP, 2007-14



Source: IMF, national authorities via CEIC Data, BIS and authors' calculations.
Note: Selected countries. Data comprise public debt, domestic private-sector debt and external debt of non-financial companies. The initial observation for Kosovo relates to 2009.

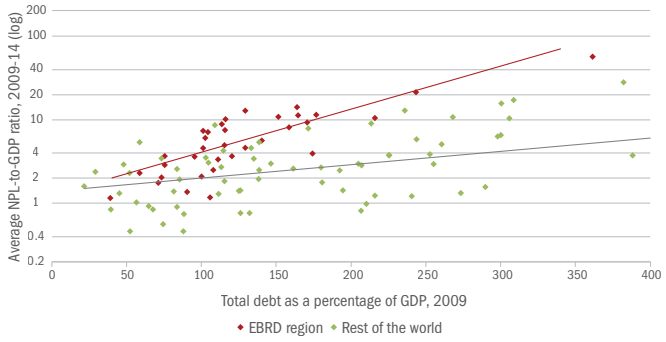
CHART 1.10. Net foreign currency-denominated liabilities of Turkey's corporate sector as a percentage of GDP



Source: Central Bank of Turkey, IMF World Economic Outlook and authors' calculations.

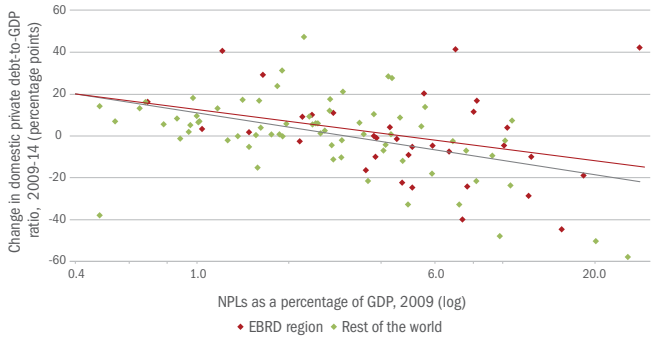
[20] See Zettelmeyer et al. (2010) for a discussion of this issue.
[21] See, for instance, Sharpe (1994) and Chodorow-Reich (2014).

CHART 1.11. Initial debt levels and NPLs



Source: IMF, national authorities via CEIC Data, BIS and authors' calculations.
Note: National definitions of NPLs may vary.

CHART 1.12. NPLs and increases in domestic private debt-to-GDP ratios



Source: IMF, national authorities via CEIC Data, BIS and authors' calculations.
Note: National definitions of NPLs may vary.

3 to 4
PERCENTAGE POINTS OF GDP
INVESTMENT DEFICIT IN CENTRAL AND SOUTH-EASTERN EUROPE RELATIVE TO SIMILAR ECONOMIES ELSEWHERE

The overhang of NPLs

The prevalence of NPLs in the region is another factor that helps to explain how rising levels of debt co-exist with low investment levels and restrictive credit constraints. In fact, the removal of NPLs from the balance sheets of banks and companies can create space for the growth of new credit. In this case, the provision of fresh credit to the economy need not result in significant increases in overall levels of indebtedness, provided that NPLs are written off.

Seven years after the crisis began, NPL ratios (that is to say, NPLs as a percentage of total loans) remain above 15 per cent in many countries in the SEE region, as well as Kazakhstan and Ukraine (see the Macroeconomic Overview for a more detailed discussion of this issue). More generally, countries in the region where the EBRD invests are among those with the highest NPL ratios worldwide (see Chart 1.11). Indeed, of the 25 countries with the highest average NPL levels (as a percentage of GDP) during the post-crisis period, 16 are from emerging Europe or Central Asia.

On average, higher initial levels of indebtedness at the time of the global financial crisis are associated with higher subsequent levels of NPLs (both relative to the total stock of loans and relative to the country's GDP; see Chart 1.11). This relationship holds across a sample of more than 100 countries worldwide and is especially pronounced in the region where the EBRD invests.

Although the overall ratio of corporate debt to GDP in central and south-eastern Europe may not be too high, as Chart 1.11 suggests, outstanding debt has a disproportionate tendency to be owed by firms with poor cash flows and/or low levels of equity capital. This concentration of debt in firms with poor liquidity and solvency indicators is greater in parts of the transition region than, for instance, in southern Europe.[22] As a result, even as firms' average profitability has improved, NPL levels have continued to rise.

Higher levels of NPLs are, in turn, associated with weaker subsequent growth in domestic credit to the private sector (see Chart 1.12 and Chapter 2). Furthermore, high NPL levels are associated with weak investment, both across a large sample of developed and developing countries and within the specific region where the EBRD invests (see Box 1.2 for a discussion on how rising NPLs and weaker growth can reinforce each other in a vicious circle).

Thus, removing NPLs from the balance sheets of banks and companies could help to reinvigorate credit growth while achieving overall private-sector deleveraging – thereby making more funds available to finance investment. In order to effectively deal with overhangs of NPLs, countries must: (i) tighten provisioning requirements and eliminate forbearance; (ii) facilitate out-of-court restructuring and simplify bankruptcy procedures for firms; (iii) avoid unfavourable tax treatment of NPL write-offs; and (iv) develop a market for NPLs involving specialist asset management companies (see also Box 1.2).[23]

[22] See IMF (2015a).
[23] See also Laryea (2010).

Debt sustainability and the composition of debt from an international perspective

Rising debt levels, both globally and within the region where the EBRD invests, are also partly a reflection of the policy choices made in the post-crisis environment, which have encouraged consumption at the expense of savings. If investment were to be increased significantly and financed by fresh credit, this could cause an even faster accumulation of debt. Given that debt was to blame for the severity of the 2008-09 crisis, a growth strategy relying on rapid increases in debt could lay the foundations for another major crisis. The seriousness of this concern depends, in part, on the extent to which the region already holds excessive debt today.

Determinants of debt levels

The question of whether a certain level of debt is sustainable is commonly asked with respect to public debt or external debt.[24] In the case of public debt, the concern is whether a government's future tax receipts (and any revenues from privatisation) are sufficient to service its obligations. Likewise, a country's future goods and services export and interest payment receipts may or may not be sufficient to service its liabilities in relation to external creditors. A similar question can be asked more broadly with respect to an economy's entire stock of debt – that is to say, whether the future income streams of firms and households are likely to be sufficient to service their obligations. In particular, high levels of aggregate debt make firms and households more vulnerable to changes in asset prices. Indeed, when leverage is high, even small fluctuations in asset prices can result in negative equity (that is to say, situations where gross liabilities to creditors exceed the value of assets held by firms and households).

The assessment of the overall level of debt depends on various country-level characteristics that make it easier – or more difficult – for households, companies and the government to service their debts. For instance, debt-to-GDP ratios tend to be higher over the longer term in countries with higher per capita income and superior economic institutions.[25] In this regard, the *Transition Report 2006* noted that levels of private-sector debt in the region were significantly lower than the region's income levels would imply.[26]

With this in mind, this section looks at levels and determinants of public debt, corporate debt (domestic and external) and household debt across a sample of more than 70 developed and developing countries over the period 2005-14.[27] In each case, the ratio of debt to GDP is explained by a number of economic variables, including the level of income, the quality of economic institutions, the flexibility of labour markets, openness to trade, the average rate of inflation and an index of creditor rights. The analysis focuses on each country's macroeconomic and demographic characteristics but does not cover elements of the structure of each country's banking system that may affect access to credit (which are discussed in Chapter 2).

The results confirm that richer countries tend to have higher debt-to-GDP ratios. Macroeconomic instability, which is reflected in higher average inflation rates, is associated with significantly lower levels of domestic corporate debt.[28] Long-term debt levels tend to be higher where creditors' rights are better protected;[29] this effect appears to be particularly strong in the case of household debt. Superior institutions – resulting in reduced incidence of corruption as captured by the World Bank's Worldwide Governance Indicators – are associated with higher levels of domestic corporate and household debt but lower levels of government debt. A higher labour-to-national-income ratio is associated with higher levels of household credit, as households are in a better position to service debt. It is also associated with higher levels of corporate debt, as firms' retained earnings (an alternative source of financing) are lower. Corporate debt also tends to be lower where labour markets are less rigid, as firms enjoy greater flexibility when it comes to investment and hiring decisions and need to borrow less during downturns.[30] More favourable demographic conditions – such as a larger working population as a percentage of the total population – are associated with lower levels of government debt, as are abundant natural resources. In addition, firms in countries with greater openness to trade tend to have higher levels of credit – both domestic and external.

Debt before the crisis

Once all of these factors have been taken into account, the residuals in the regressions provide estimates of economies' over-indebtedness or under-indebtedness, controlling for various macroeconomic and societal characteristics explaining economies' ability to service debt. Chart 1.13 plots an average measure of over-indebtedness in the region (as a percentage of GDP), showing the contribution made by each component of the total stock of debt. Negative values denote under-indebtedness. As the *Transition Report 2006* showed, prior to the onset of the financial crisis most economies in the region had aggregate debt levels that were below what would be expected on the basis of the experience of other emerging markets (particularly in the case of household debt, but also in the case of domestic corporate debt).

In this regard, the severity of the crisis in the region and the subsequent increase in NPLs reflects not so much the overall levels of debt as the very strong credit growth in the mid-2000s, which was accompanied by the relaxation of underwriting standards, heavy reliance on parent bank funding and large amounts of debt denominated in foreign currency.

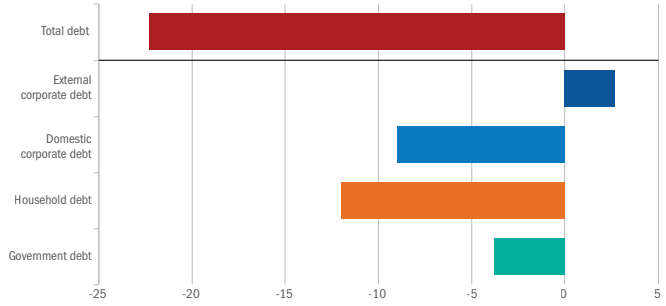
That said, a number of countries appear to have been significantly overleveraged relative to their economic fundamentals in 2007, including Bulgaria, Moldova, Mongolia and Kazakhstan. All of these countries saw major banks fail in subsequent years.

Relative over-indebtedness today varies greatly across countries

Despite significant increases in debt-to-GDP ratios since 2007, debt levels in the region were still lower, on average, than those of other emerging market economies with similar characteristics in 2014 (see Chart 1.14). Those differences were explained almost entirely by the significantly lower levels of household debt and domestic corporate debt; levels of public debt were broadly in

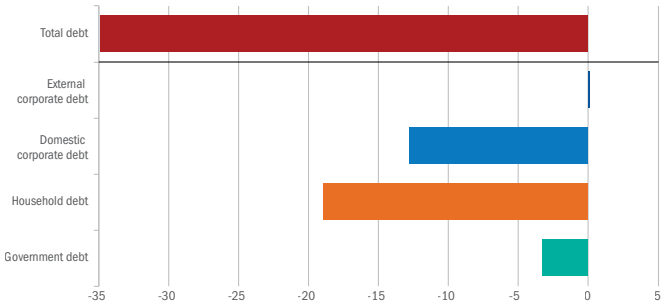
[24] See Brown and Lane (2011) for a discussion with respect to the transition region.
[25] See Djankov et al. (2007).
[26] EBRD (2006).
[27] This is based on available data for these four components of debt. To the best of our knowledge, this is the broadest dataset that has ever been used to study the separate determinants of household and corporate debt.
[28] See Dehesa et al. (2007) for a discussion of this issue.
[29] See, for instance, Aghion and Bolton (1992).
[30] In the presence of inflexible labour markets, firms may be forced, for instance, to hoard labour and disproportionately cut investment during downturns (see Sharpe, 1994). Labour market flexibility is captured by the Fraser Institute's index of labour market regulations.

CHART 1.13. Estimated regional under-indebtedness in 2007 as a percentage of GDP



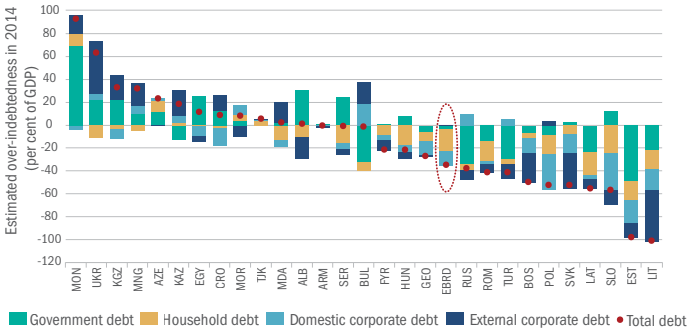
Source: IMF, national authorities via CEIC Data, BIS and authors' calculations.
Note: A negative sign reflects under-indebtedness relative to global comparators. Weighted averages across the region where the EBRD invests, based on coefficients for dummy variables for the region. The model is estimated as a system of seemingly unrelated regression equations.

CHART 1.14. Estimated regional under-indebtedness in 2014 as a percentage of GDP



Source: IMF, national authorities via CEIC Data, BIS and authors' calculations.
Note: A negative sign reflects under-indebtedness relative to global comparators. Weighted averages across the region where the EBRD invests based on coefficients for dummy variables for the region. The model is estimated as a system of seemingly unrelated regression equations.

CHART 1.15. Relative over-indebtedness in 2014



Source: IMF, national authorities via CEIC Data, BIS and authors' calculations.

line with those observed elsewhere. As in 2007, levels of external corporate debt were, if anything, somewhat higher than countries' economic characteristics would suggest, mirroring the weaker than expected supply of domestic credit to companies.

On balance, analysis suggests that in a number of countries there appears to be substantial scope for increasing domestic corporate debt (Chart 1.15). There is also some room to increase household debt, although evidence strongly suggests that domestic credit to firms has a much greater bearing on economies' growth prospects than credit to households.[31] The countries that appear to have the greatest scope to increase domestic corporate debt are Slovenia, Poland, Estonia, Lithuania, the Slovak Republic, Croatia, Bosnia and Herzegovina, Georgia and Egypt. In other countries, the estimated scope for growth in domestic corporate debt-to-GDP ratios is smaller or even negative. Here, credit growth would be dependent on improvements in fundamental factors determining countries' ability to sustain debt (such as the quality of institutions), as well as structural shifts in the financial sector (as discussed in Chapter 2), including those related to cross-border deleveraging by parent banks with subsidiaries in the region.

Equity finance: an alternative to growing indebtedness

This analysis suggests that debt can play a role in financing the region's investment needs but only up to a point, as a continued rise in the total level of debt will raise concerns about its sustainability. Both the quantity and the quality of debt matter for its sustainability. The successful resolution of the overhang of NPLs could free up space for additional debt financing; shifts

[31] See Beck et al. (2012). Mian et al. (2015) find that increasing household debt may actually have a negative effect on growth, at least in advanced economies.

towards local currency financing could make debt less risky; and in some countries there is additional scope to increase domestic corporate debt. On balance, however, the region also needs to look beyond debt financing and make better use of equity instruments if it is to increase investment.

Equity enables investors and financiers to share the upside and downside risks associated with investment projects more evenly. It plays a particularly important role in industries where firms cannot easily provide collateral against loans.[32] In addition to financing, equity may also result in non-financial benefits such as higher standards of corporate governance and transparency (see Chapter 3).

A number of policies can help both to boost domestic savings and accelerate the development of domestic equity markets. Pension reform can strengthen individuals' incentives to save for retirement and catalyse the development of pension funds – institutional investors with a long-term approach. Policies supporting the development of capital markets from the supply side (such as simplified listing procedures for SMEs) and the demand side (such as favourable tax treatment for investment income) can also play an important role. And rationalising government spending can boost public savings – the difference between tax receipts and current expenditure such as public-sector wages.[33] Increasing domestic savings is the only way of meeting an economy's rising investment needs without exacerbating external imbalances.

Besides increases in domestic savings, additional equity investment can also come from abroad in the form of private equity, allocations by international institutional investors or FDI. Private equity can bring in managerial expertise, help to strengthen corporate governance and play a particular role in supporting change in firms (aspects that are discussed in more detail in the last two chapters of this report). FDI, meanwhile, can also support the transfer of skills and technologies, help companies gain access to foreign markets and facilitate development of cross-border economic linkages.[34]

FDI: diversifying sources of finance

Chart 1.1 showed that FDI played a particularly important role in financing overall investment in the region prior to the crisis. However, flows of inward FDI have declined substantially since 2008, particularly in the CEB and SEE regions, reflecting the depth of the crisis in the advanced European economies that have been historically the main providers of FDI to the region. With this in mind, the next section examines whether FDI in the region has been too low after the crisis. It also looks at the various sources of FDI in the region and their potential for diversification. Inward FDI in the region where the EBRD invests totalled on average 20 to 25 per cent of the value of economies' gross capital formation in recent years. At first glance, sources of FDI in the region where the EBRD invests appear to remain strongly concentrated. Even in the post-crisis environment, the EU-15 economies account for around 60 per cent of total FDI inflows in the EBRD's countries of operations, according to UNCTAD data.[35] Other advanced economies, including the United States, Canada and Japan, account for a further 15 per cent.

TABLE 1.2. Determinants of global bilateral investment flows, 2008-12

	Bilateral FDI (log)		
Dependent variable	**(1)**	**(2)**	**(3)**
Distance (log)	-0.130***	-0.119***	-0.133***
	(0.0445)	(0.0442)	(0.0446)
Common border	1.068***	0.946***	1.088***
	(0.164)	(0.169)	(0.164)
GDP per capita at destination (log)	0.135**	0.178***	0.183***
	(0.0678)	(0.0582)	(0.0571)
GDP per capita at origin (log)	0.169***	0.173**	0.187***
	(0.0584)	(0.0675)	(0.0671)
Population at destination (log)	0.401***	0.336***	0.343***
	(0.0804)	(0.0720)	(0.0710)
Population at origin (log)	0.322***	0.455***	0.461***
	(0.0727)	(0.0800)	(0.0797)
Common language	0.651***	0.648***	0.640***
	(0.134)	(0.135)	(0.134)
Colonial ties	0.328**	0.316**	0.390**
	(0.159)	(0.158)	(0.155)
Control of corruption at destination	0.541***	0.151***	0.0948
	(0.0392)	(0.0582)	(0.0580)
Control of corruption at origin	0.335***	0.481***	0.370***
	(0.0372)	(0.0398)	(0.0431)
Control of corruption, origin*destination		0.170***	0.211***
		(0.0367)	(0.0366)
From the entire world	-0.459***	-0.461***	
	(0.102)	(0.101)	
From EU-15			0.00808
			(0.124)
From other advanced economies			-0.391*
			(0.202)
Within the EBRD region			-1.375***
			(0.156)
From China			-0.207
			(0.412)
From other emerging markets			-0.929***
			(0.330)
Observations	7,291	7,291	7,291
R^2	0.256	0.261	0.271

Source: UNCTAD and authors' calculations.
Note: Estimated using pooled ordinary least squares with clustered standard errors. All regressions include a constant and fixed time effects. Robust standard errors are provided in parentheses. ***, ** and * denote values significant at the 10, 5 and 1 per cent levels respectively.

[32] See Berger and Udell (1998).
[33] See Loayza et al. (2000) for a discussion of this issue.
[34] See Moran (2007) for details of examples.
[35] Systematic cross-country data on bilateral investment flows are limited, largely owing to the difficulty of identifying and consistently reporting the country of origin. Substantial discrepancies exist between key datasets, such as those compiled by Eurostat, the Organisation for Economic Co-operation and Development and the United Nations Conference on Trade and Development (UNCTAD), as reported in the Investment Map database. Unlike the other datasets, UNCTAD covers all countries.

TABLE 1.3. Coefficients for bilateral FDI dummy variables

Origin \ Destination	EBRD	CEB	SEE	EEC	Turkey	Russia	Central Asia	SEMED
World	-0.46	-0.64	-0.64	-1.17	0.39	1.05	-0.26	-0.32
EU-15	0.01	-0.20	-0.06	-0.93	1.47	2.06	0.12	0.09
Other advanced economies	-0.39	-0.40	-0.76	-1.31	0.33	1.74	-1.31	-0.38
EBRD region	-1.38	-1.56	-1.38	-1.57	-1.37	-0.48	-1.28	-1.13
China	-0.21	-1.42	-1.43	-0.19	0.50	2.59	0.91	-1.19
Other emerging economies	-0.93	-1.56	-0.35	-1.79	0.79	0.22	-1.84	-0.15

Source: UNCTAD and authors' calculations.
Note: The reported values are the estimated surpluses/shortfalls of average bilateral FDI, as a share of the total, compared with investment in countries outside the region where the EBRD invests. Coefficients that are statistically significant at the 10 per cent level are shaded blue or pink. Negative coefficients (blue) mean that FDI inflows are below the level predicted by the model; positive coefficients (pink) mean that FDI flows are higher than the predicted level.

FDI flows from elsewhere in the region account for around 20 per cent of total inward investment and around 5 per cent of FDI comes from other emerging markets, including China, India and Brazil ("south-south flows").

Have FDI flows to the EBRD region been low by international standards during the post-crisis period? And should we expect sources of FDI to become more diverse? To see how the current cross-border investment and its composition compare with what could be expected on the basis of the economic sizes and other characteristics of the respective regions, we can use a standard gravity model of FDI. In a gravity setting, aggregate investment from a given source country to a given destination is explained by the size of the two economies (in terms of population), their level of development (in terms of income per capita), the distance between the two countries and a number of other variables. Table 1.2 summarises the results of a simple gravity model of investment estimated for a large sample of developed and developing countries using UNCTAD data for the period 2008-12.

These results confirm that bilateral investment flows are strongly dependent on the size and income levels of both the source economy and the destination economy. Bilateral investment flows increase by an average of more than 90 per cent if countries share a border. Other measures of proximity also matter: a common language increases investment by around 65 per cent, while a common colonial history adds 30 to 40 per cent to investment flows (even after a common language has been taken into account).

Predicted versus actual bilateral FDI flows

Once various factors that typically explain the size of cross-border investment flows have been taken into account, the coefficient for the dummy variable for bilateral investment flows into the region where the EBRD invests is estimated to be negative and statistically significant. It suggests that, after the crisis, the region has received about 45 per cent less in inward FDI than could be expected, based on the characteristics of its economies.

What could account for this shortfall? The analysis reveals that the current large share of investment from the EU-15 countries is actually in line with what we might expect when it comes to investment from large, high-income neighbouring economies (see Table 1.3, column "EBRD"). In contrast, the coefficient for FDI from other advanced economies is negative and significant, suggesting that such investment is weaker than one would expect on the basis of countries' economic characteristics. Investment from other emerging markets has been growing rapidly, albeit from a low base, and remains below the estimated potential. There are some exceptions – notably, in parts of the region, investment from China is already in line with the levels expected.

These trends hold for various regions, with some nuances. The overall "shortfalls" of FDI are highest in the EEC, CEB and SEE regions, mirroring the shortfalls in terms of fixed capital investment estimated earlier. In terms of specific sources of FDI, investment from the EU-15 countries appears to be significantly above the expected level in Russia and Turkey, but significantly below it in the EEC region. China invests more than the model predicts in Central Asia, Russia and Turkey. Investment from other emerging markets is particularly scarce in the CEB and EEC regions but in Turkey it is above the expected levels. Almost without exception, intra-regional investment from other transition countries remains below the levels that would be expected for investment flows between neighbouring countries.

The analysis reveals that there is scope to diversify FDI inflows, which could alleviate the current external financing constraints. Investment from non-EU advanced economies, which is currently below the expected level, could be leveraged further. Growth in south-south investment flows may slow in the future as convergence with the "natural" level of investment begins to play less of a role. This may already have happened in the case of investment from China. However, growth in FDI from emerging markets is still likely to outpace growth in other FDI flows, driven by stronger growth in the size and income levels of these economies (relative to advanced economies) and, in some instances, a greater propensity to save.

Importance of economic institutions

The quality of institutions – in both source and destination countries – is also important for both the size and the composition of FDI flows. Here, this is proxied by the World Bank's Worldwide Governance Indicator on control of corruption. This index ranges from -2.5 to 2.5 (with higher values corresponding to stronger institutions) and is available annually for a large number of countries. Control of corruption in the destination country has

a significant impact on bilateral investment, as does control of corruption in the investment's country of origin (see column 2 of Table 1.2).

The marginal impact that improving institutions has on bilateral investment flows may also depend on the quality of institutions in the partner country.[36] To investigate this possibility, regressions in column 3 of Table 1.2 include an interaction term between control of corruption in the country of origin and control of corruption in the country of destination.

The results suggest that the quality of institutions in the country of origin does indeed matter. If a country of origin has relatively strong institutions (for example, a score of 0.5, as in the case of Poland or South Korea), a 1-standard-deviation improvement in the destination country's control of corruption leads to an increase of around 30 per cent in bilateral investment flows. If a source country's control of corruption is relatively weak (for example, a score of -0.5, as in the case of China or Russia), a 1-standard-deviation improvement in the destination country's control of corruption leads to an increase of only around 15 per cent.

In other words, institutional improvements help attract more investment from countries with better institutions, while investment from countries with weak institutions may be unaffected or increase only slightly. This rebalancing of investment relationships may, in turn, help improve business practices, corporate governance and the quality of management, eventually leading to positive feedback regarding the quality of domestic institutions. This could give rise to a virtuous circle of institution building. The opposite scenario (that is to say, a vicious circle of deteriorating institutions) is also a possibility.

Conclusion

The financing landscape in the transition region has evolved substantially since the 2008-09 crisis. Prior to the crisis, the booming – and in some cases, overheating – financial sector was a key driving force behind the high levels of investment and growth. However, this also led to large and widening external imbalances. The crisis resulted in a swift external adjustment, bringing domestic investment into line with the (predominantly low) levels of domestic savings. The withdrawal of funds by cross-border banks followed and banking systems gradually started relying more on domestic sources of finance.

Despite the decline in investment levels, the region's overall indebtedness has continued growing at approximately the same rate as before the crisis. This reflects several factors: (i) the much weaker growth in nominal GDP since the crisis; (ii) the revaluation of the large proportion of debt that is denominated in foreign

BOX 1.1. BOOSTING INVESTMENT IN INFRASTRUCTURE

Despite the importance of infrastructure for economic growth,[37] data are not systematically collected for either private or public investment in infrastructure. However, the snapshots that are provided by available data suggest that the countries where the EBRD invests have underspent on infrastructure over the last two decades. Annual investment in economic infrastructure (including roads, railways, ports, airports, power, water and telecommunications) averaged 3.3 per cent of GDP in the period 1992-2011.[38] While this exceeds the 2.6 per cent of GDP that was recorded in advanced EU countries and the United States during that period, it is substantially lower than the investment levels observed in emerging markets such as China (8.5 per cent of GDP) and India (4.7 per cent of GDP).

Cross-country comparisons are further complicated by differences in cost-effectiveness and the targeting of infrastructure across countries. Infrastructure projects with poor economic justification may inflate headline infrastructure spending figures, without making a sizeable contribution to economic growth. Furthermore, estimates of infrastructure spending often exclude social infrastructure relating to health care and education. When such social infrastructure is taken into account, total infrastructure spending in the new EU member states averaged 4.3 per cent of GDP in the period 2003-14 according to Eurostat estimates – still a modest figure.

Information about the stock of infrastructure is also scarce. The World Economic Forum estimates the quality of infrastructure on a scale of 1 to 7. Estimates for the EBRD region vary greatly, from 5.2 in Cyprus (which is ranked 30th in the world) to 2.9 in Egypt (which is ranked 125th).

Increasing investment in infrastructure presents significant challenges. Currently, the majority of infrastructure investment in the region comes from public budgets. The limited data available suggest that in many transition countries 60 to 70 per cent of infrastructure is government-financed, compared with between 15 and 60 per cent in the EU-15 economies. Indeed, in some transition countries the government's share exceeds 90 per cent.[39] Given the tight fiscal constraints in many countries and the rapidly rising public debt levels, public resources may, in many cases, be insufficient to pay for additional infrastructure.

Consequently, substantial funding needs to come from private sources and be delivered through mechanisms that involve the private sector, such as public-private partnerships. In addition, capital markets can be used to channel the large and growing pool of global savings into debt and equity financing for infrastructure, which offers stable returns in the long term.[40] This may improve the exit prospects of dedicated infrastructure equity funds, thereby catalysing the development of this type of infrastructure financing.

Lastly, the key policy challenge is to build an institutional environment that helps to deliver infrastructure at a lower cost and sustain efficiency gains over time. Improvements in the overall quality of governance that reduce corruption and strengthen the rule of law can help to reduce the cost of infrastructure. Improvements in technical skills as regards the evaluation, preparation and implementation of infrastructure projects can help to improve the prioritisation of projects and help to design better maintenance contracts for existing infrastructure.

[36] See Belgibayeva and Plekhanov (2015) for a detailed discussion.
[37] See IMF (2014).
[38] See McKinsey Global Institute (2013).
[39] See Wagenvoort et al. (2010) and Kravets (2013).
[40] See Bhattacharya et al. (2012).

BOX 1.2. FRESH MOMENTUM IN THE RESOLUTION OF THE NPL PROBLEM

Following the end of the credit boom in central and south-eastern Europe, banking systems have become burdened with a large overhang of NPLs. Rising NPLs can strangle credit supply and trap collateral in firms where excessive leverage and dysfunctional relationships with creditors prevent effective restructuring. As the economy stagnates, the NPL problem then perpetuates itself. Within banks, the prevalence of NPLs raises funding costs and reduces operational efficiency. This pattern is often observed when a financial sector contracts and economic growth stagnates. Indeed, a large number of countries in the region experienced sharp increases in NPLs in the early years of the transition process and in the aftermath of the Russian crisis of 1998.

And yet, in 2010 the region's laws and institutions were still largely incapable of effectively dealing with the problem of NPLs. Legal frameworks governing restructuring and insolvency suffered from uncertainty, which was exacerbated by capacity constraints in the judiciary. Private creditors lacked experience of restructuring viable but overleveraged companies. Standards governing the classification of loan quality differed widely and supervisors were initially reluctant to enforce requirements of broader provisioning.

Since then, some economies in the region have taken steps to address the NPL problem. The Baltic states, for example, have seen a sizeable reduction in NPLs over the last four years, following the very sharp increases observed between 2008 and 2010. Slovenia reformed its legal framework governing restructuring in 2013 and has established an asset management company, into which banks (primarily state-owned banks) have transferred distressed assets. Meanwhile, Hungary has made efforts to reduce NPLs arising from foreign currency-denominated household lending by requiring that such loans be converted to domestic currency (albeit levels of corporate NPLs remain high).

Progress with the reduction of NPLs may be accelerating. The European Central Bank's (ECB's) asset quality review and stress tests for the largest banks in the eurozone (the results of which were published in October 2014) have resulted in a substantial upward correction of loan provisions, which have increased by €136 billion. This correction stems largely from the application of the new common methodology for loan classification, forbearance and provisioning developed by the European Banking Authority. Now that the ECB has taken on its new supervisory role within the eurozone, it will increasingly encourage the enforcement of stricter standards for loan classification and provisioning. This will directly affect all banks with a balance sheet in excess of €30 billion, which includes most banking groups that operate in the transition region.

EU regulators in the host countries of bank subsidiaries will apply this methodology for regulatory reporting, and regulators with close links to the EU may increasingly do so as well. Over time, this may be reflected in banks' own financial reporting. Banks, in turn, are likely to become more proactive when it comes to provisioning and portfolio sales. In Romania, for example, such transactions considerably reduced NPL levels in 2014. This may mark the beginning of a broader trend.

There has also been encouraging progress (in Serbia and Slovenia, for instance) with the reform of frameworks governing private restructuring. However, this will only succeed if there is greater certainty surrounding the court-led restructuring and insolvency process, as well as sufficient capacity within the judiciary and among insolvency professionals to handle the substantial caseload.

Specialist state-owned asset management companies (such as the one established in Slovenia) can accelerate corporate restructuring, although ownership transfers for distressed assets will be subject to constraints safeguarding competition within the banking sector. There is generally a need for governments to coordinate the resolution of systemic NPL problems, bringing together the financial sector, banking supervisors and tax authorities. While measures to reduce NPLs may be associated with certain fiscal costs in the short term, in the longer term reviving financial intermediation and corporate investment will support growth and fiscal revenues.

currency; (iii) the significant increase in public debt that has accompanied private-sector deleveraging; and (iv) the fact that NPLs have weighed heavily on banks' balance sheets. Despite those increases in the total level of debt, in some economies (particularly in the CEB and SEE regions) the ratio of domestic corporate debt to GDP remains below the level that would be expected on the basis of those countries' per capita income, economic institutions and other relevant characteristics. In other countries, scope for increasing debt appears to be much more limited.

Thus, providing funding for investment presents a major challenge. Indeed, the region has significant investment financing needs, estimated at an extra US$ 75 billion or so per year. In order to effectively meet these needs, financing must be rebalanced. Rebalancing finance is not just about making banks safer – an area where significant progress has been made since the crisis (see Box 1.3). It is also about ensuring that investment needs are met in full, thereby allowing growth and income convergence to continue.

The rest of this report looks in greater detail at how this challenge can be met through the use of both debt and equity financing. The next chapter looks at the challenges of meeting SMEs' demand for credit in the post-crisis environment. At the same time, an important element of the overall strategy is the increased use of equity products and the diversification of sources of FDI. The last two chapters look in greater detail at the role of equity and equity markets as sources of financing. They examine a particular type of equity financing – private equity – and the non-financial benefits that it may provide. More broadly, measures to encourage domestic savings would help to support a sustainable increase in levels of investment.

BOX 1.3. EUROPE'S BANKING UNION AND THE BANKING NETWORKS IN CENTRAL AND SOUTH-EASTERN EUROPE

The global financial crisis underlined the risks of poorly coordinated banking supervision and highlighted the potential vicious circle of banking sector problems and sovereign debt distress. This led to the establishment of Europe's banking union, which represents a fundamental change in the governance of Europe's banking sector. This change will profoundly affect the networks of bank subsidiaries in central and south-eastern Europe, both within and outside the EU.[41]

As a first step, the Single Supervisory Mechanism (SSM) was established by the ECB in November 2014. In principle, the SSM's powers of supervision cover all credit institutions in participating countries, although initially they are limited to those deemed systemically important. The SSM will be able to draw on the comprehensive asset quality reviews and EU-wide stress tests conducted earlier.

For the SSM to support banking sector stability in the transition region, it will be necessary to facilitate the sharing of early and accurate information with the supervisors of bank subsidiaries in the transition region. In practice, however, complications may arise. In order to access the assessments of supervisors responsible for major EU banking groups, non-EU supervisors will need to conclude confidentiality agreements with the European Banking Authority. A number of these agreements have recently been concluded. The incentives for information sharing may be weak unless the subsidiary is systemically important within the host market and that market is significant from the perspective of the banking group as a whole.

Effective information sharing may be even more problematic in the case of a cross-border bank in distress, as burden-sharing arrangements have traditionally been unclear. In this respect, the EU's new Bank Resolution and Recovery Directive requires national authorities to adopt resolution plans for all banks as of 2016 and establishes resolution tools for the purposes of early intervention. In particular, by the time of resolution, minimum bail-in funds need to be in place in each country where a cross-border banking group operates.

Within the eurozone, the Single Resolution Mechanism (SRM) will complement the shared supervision arrangements, ensure the consistency of resolution plans and eventually organise the shared funding of resolutions where banks are subject to SSM supervision.

The centralisation of resolution powers may have certain benefits for non-EU countries where cross-border banking groups operate. As the SRM becomes the sole counterpart establishing crisis management and resolution strategies for key eurozone banks, the transaction costs of supervision for non-EU host countries should decline. The new SRM will internalise potential externalities that could previously have been overlooked – for instance, those resulting from aggressive deleveraging by a subsidiary of a parent bank operating in a different country. Host country supervisors outside the eurozone have thus largely welcomed the stronger and more uniform supervisory procedures. EU countries outside the eurozone can, in principle, opt in to both the SSM and the SRM, although none have yet done so.

The EU's new member states and its neighbouring countries have benefited from financial integration through international banking networks. The challenge for the new institutions and regulators across emerging Europe will be to preserve these gains.

[41] See Lehmann and Nyberg (2014) for a detailed discussion.

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SMALL BUSINESSES AND THE CREDIT CRUNCH

THE AVERAGE RATIO OF TOTAL BANK LOANS TO CUSTOMER DEPOSITS DECLINED FROM

120%

IN 2008 TO 97% IN 2013

THE PERCENTAGE OF CREDIT-CONSTRAINED FIRMS RANGES FROM JUST 13% IN TURKEY TO

85%

IN EGYPT

Credit conditions for small businesses have tightened significantly in recent years, both during and after the global financial crisis. Structural adjustments in banking systems – particularly reduced reliance on cross-border and wholesale funding – explain a large part of this tightening. The composition of local banking markets also plays a role since small businesses are more likely to borrow from banks that have less hierarchical lending procedures, a greater focus on building relationships with clients and more confidence in local courts. Access to credit may therefore benefit from both stronger legal enforcement and more effective and efficient bank lending techniques.

Introduction

The global financial crisis of 2008-09 marked the end of a long period of rapid credit expansion, with annual nominal credit growth of between 20 and 40 per cent across much of the transition region. Nominal credit growth has since stabilised at a far lower level (see Chart 2.1). As Chapter 1 explained, this has even occurred in some countries that – perhaps somewhat paradoxically – have seen increases in their aggregate debt-to-GDP ratios.

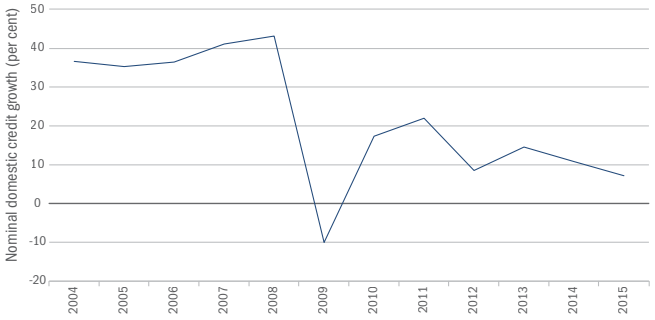
Should policy-makers worry about this sharp contraction in credit growth? Perhaps not. The reduction in bank lending may predominantly be a demand-driven phenomenon that reflects the lacklustre growth currently observed in the region. After all, when economic uncertainty makes households consume less and firms invest less, there is little reason to apply for additional credit. To the extent that the reduction in bank lending does indeed reflect a lack of demand, there is no need to worry that the inability or unwillingness of banks to lend is smothering the long-awaited economic recovery.

However, the emerging academic consensus is that supply-side factors can – and in many countries *do* – play a decisive role in causing reductions in output (rather than merely reflecting such declines).[1] In other words, credit shortages may be partly to blame for the underwhelming growth performance of many countries. If that is the case, policy-makers are right to worry about reduced bank lending, particularly if certain borrowers turn out to be disproportionately affected by a squeeze on credit.

This chapter of the *Transition Report* revisits this debate through the lens of the transition region. Using a combination of macroeconomic, firm-level and bank-level data, it gauges whether firms have become more credit-constrained in the seven years since the start of the global financial crisis. This analysis explicitly distinguishes between demand-side and supply-side drivers of the reduction in bank lending. The second half of the chapter then looks more closely at individual towns and cities across the transition region to see how variation in local banking landscapes can help or hinder access to credit. The chapter concludes with a number of policy recommendations.

Throughout this chapter, the focus is on credit to small and medium-sized enterprises (SMEs), which are defined as firms that employ no more than 250 people. Evidence suggests that there is a strong positive correlation between a firm's size and its ability to access bank credit. As a result, SMEs, which make up the vast majority of firms in most emerging markets and advanced economies, have a greater tendency to be credit-constrained. Smaller firms tend to be less transparent to lenders and typically have less collateral to post. Moreover, SMEs tend to be younger and therefore less experienced than larger firms. For all of these reasons, the supply of SME finance – both credit and equity – continues to fall short of the total estimated demand in many countries.[2]

CHART 2.1. Slowing credit growth across the transition region



Source: IMF, national authorities via CEIC Data, BIS and authors' calculations.
Note: This chart shows the annual growth rate of nominal domestic credit to the private sector for the transition region as a whole. Credit growth is adjusted for foreign exchange effects and weighted by the GDP of the individual countries. The figure for 2015 is forecast.

Credit constraints: what firms and banks say

Credit constraints: firms' view

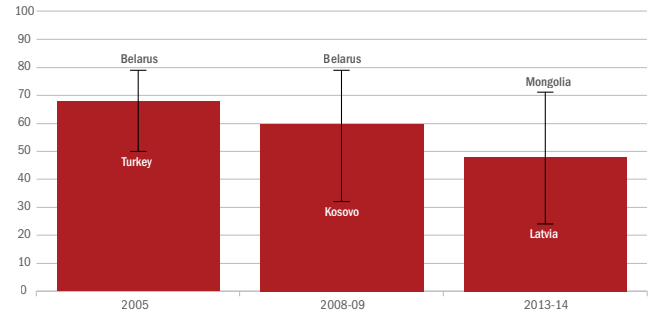
To gauge the extent to which firms in the transition region have experienced a decline in their ability to access new bank credit, this chapter draws on the Business Environment and Enterprise Performance Survey (BEEPS) conducted by the EBRD and the World Bank. The BEEPS survey involves face-to-face interviews with the owners or main managers of a representative sample of firms and seeks to determine the extent to which various features of the business environment (including access to finance) represent obstacles to firms' operations. The survey also elicits information on a large number of other firm-level characteristics. This chapter uses three rounds of the BEEPS survey – BEEPS III, which was conducted in 2005 during the credit boom that preceded the global financial crisis (involving 7,053 firms); BEEPS IV, which was carried out in 2008-09 at the time of the crisis (involving 7,047 firms); and BEEPS V, which was conducted in 2013-14 in the aftermath of the crisis (involving 20,321 firms).[3]

In order to gain an understanding of SMEs' ability to access bank loans, it is important to properly disentangle the demand for and the supply of bank credit. Both can cause bank lending to fall, so a decline in lending does not necessarily mean that a lack of bank credit is hindering firms' growth. By combining answers to various survey questions, we can distinguish between firms with and without demand for credit, before dividing the first group into firms that are credit-constrained and those that are not. Credit-constrained firms are those that are in need of (additional) credit, but are either discouraged from applying for a bank loan or are rejected when they do.[4] Aggregating individual firms' responses to these questions can yield useful insights into whether a decline in lending in a given country at a particular point in time mainly reflects reduced demand for credit or a fall in the supply of new lending.

Chart 2.2 shows that demand for bank credit has waned among SMEs over the last 10 years. The percentage of interviewed firms that needed additional bank credit declined

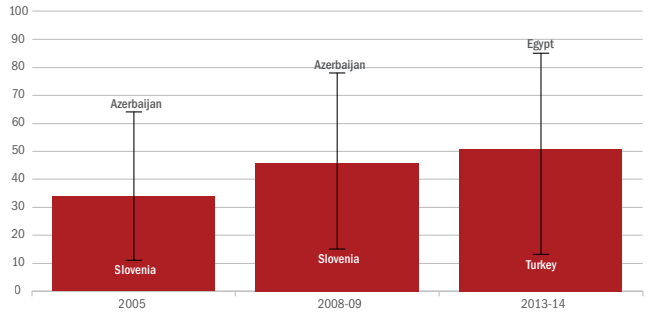
[1] See, for instance, Duchin et al. (2010) and Chodorow-Reich (2014). Kahle and Stulz (2013) provide a dissenting voice.
[2] See Lopez de Silanes et al. (2015).
[3] Field work for the latest BEEPS survey – which included the four countries in the southern and eastern Mediterranean (SEMED) for the first time and surveyed a larger sample of Russian firms – took place in 2011-12 in Russia and 2013-14 in all other countries. Over 95 percent of all BEEPS firms have fewer than 250 employees and can therefore be classified as SMEs.
[4] See, for instance, Cox and Jappelli (1993). BEEPS question K16 asks: "*Did the establishment apply for any loans or lines of credit in the last fiscal year?*" For firms that answer "*No*", question K17 asks: "*What*

CHART 2.2. Percentage of firms that need a loan



Source: BEEPS III, IV and V.
Note: BEEPS III values are based on simple intra-country means while values for BEEPS IV and V are weighted averages.

CHART 2.3. Credit-constrained firms as a percentage of firms that need a loan



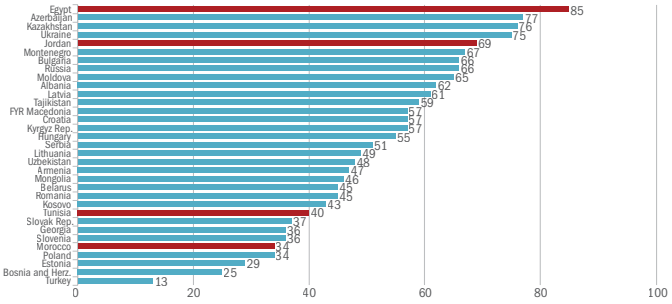
Source: BEEPS III, IV and V.
Note: BEEPS III values are based on simple intra-country means while values for BEEPS IV and V are weighted averages.

from 68 per cent in 2005 to 60 per cent in 2008-09 and to just 48 per cent in 2013-14.[5] This decline reflects the fact that, in the presence of slow economic growth, fewer firms need loans to expand their production capacity. This reduced demand has been only partially and temporarily offset by increased demand for working capital and other bridge financing on the part of firms whose cash flows have been negatively affected by the financial crisis. In the most recent survey round, demand for credit was lowest among firms in Latvia and highest among Mongolian firms. Chart 2.2 also shows that cross-country variation in firms' average demand for credit has increased over time, reflecting the fact that countries differ greatly in terms of the extent to which they have been affected by the global financial crisis and the subsequent eurozone debt crisis.

Chart 2.3 shows that there has also been a marked increase in the percentage of credit-constrained firms – that is to say, firms that need additional credit but are either rejected when they apply for a bank loan or feel discouraged from applying for such a loan. In the most recent survey, 51 per cent of all firms that needed credit reported that they had trouble accessing it. This figure was significantly lower in 2005 (34 per cent) and 2008-09 (46 per cent), indicating that credit conditions for SMEs have tightened further in the wake of the global financial crisis. This probably reflects the more or less seamless transition from the global financial crisis to the eurozone debt crisis, which had a further negative impact on the balance sheets of many European banks operating affiliate networks across the EBRD region.

There is substantial cross-country variation in firms' ability to access bank loans and, as with credit demand, this variation has increased over time. Chart 2.3 shows that Slovenian firms experienced the easiest access to credit in both the 2005 and the 2008-09 surveys, but Turkey holds this distinction in the most recent survey. Slovenian banks have become much more restrictive owing to the recent turmoil in the country's banking sector and the increasing level of non-performing loans. As a result, the percentage of credit-constrained firms in Slovenia more than doubled between the last two surveys, rising from

CHART 2.4. Percentage of credit-constrained firms in 2013-14



Source: BEEPS V.
Note: Values are weighted averages.

15 per cent in 2008-09 to 36 per cent in 2013-14. In Turkey, on the other hand, continued accommodating monetary conditions resulted in the percentage of credit-constrained firms declining further in that period, falling from 28 per cent to a record low of just 13 per cent.[6] Other countries with relatively loose credit conditions include Bosnia and Herzegovina (where only 25 per cent of firms that need a loan are credit-constrained), Estonia (29 per cent) and Morocco and Poland (both 34 per cent).

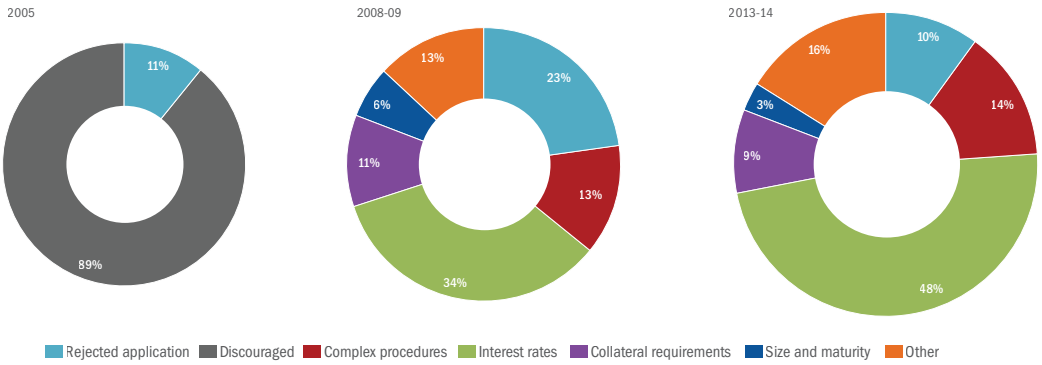
At the other end of the spectrum, there are countries like Azerbaijan and Egypt where the large majority of firms that need a loan are credit-constrained. In the latest survey round, which also included the four SEMED countries, this percentage was as high as 77 and 85 per cent in Azerbaijan and Egypt respectively. As Chart 2.4 shows, Kazakhstan (76 per cent) and Ukraine (75 per

was the main reason the establishment did not apply for any line of credit or loan in the last fiscal year?" For firms that answer "*Yes*" to K16, question K18a asks: "*In the last fiscal year, did this establishment apply for any new loans or new credit lines that were rejected?*" Firms that answer "*Yes*" to K16 and "*No*" to K18a are considered to be unconstrained, as they were approved for a loan, while firms are credit-constrained if they answer "*Yes*" to K18a (that is to say, they were rejected) or they answer "*Interest rates are not favourable*", "*Collateral requirements are too high*", "*Size of loan and maturity are insufficient*" or "*Did not think it would be approved*" to K17.

[5] A very similar trend is observed when the sample of countries is kept constant across the three survey rounds.

[6] The annual growth rate of nominal credit has averaged almost 30 per cent in Turkey over the last decade.

CHART 2.5. Reasons why SMEs are credit-constrained



Source: BEEPS III, IV and V, and authors' calculations.
Note: BEEPS III values are simple intra-country means. Other values are weighted averages. The size of each circle is proportionate to the percentage of credit-constrained firms in the relevant survey round.

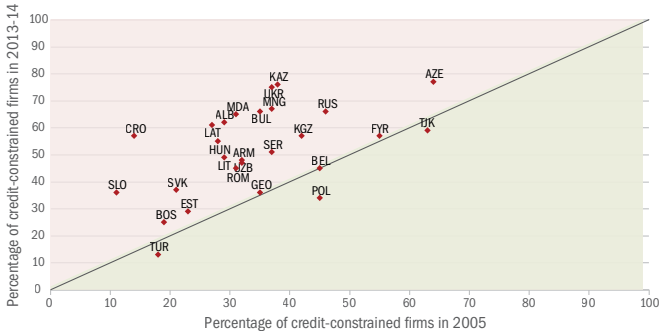
cent) also had relatively high percentages of credit-constrained firms. Banks in both of these countries have been hit hard by the global financial crisis and a rapid decline in the availability of external bank funding.

Chart 2.5 provides more information about *why* firms are credit-constrained (with the increases in the size of the circles reflecting the growing percentage of credit-constrained firms). The light blue segment shows that both before and after the financial crisis around 10 per cent of all credit-constrained firms had been rejected by a bank. In contrast, at the height of the crisis this percentage was more than twice as high (standing at 23 per cent). A further breakdown available in the last two survey rounds shows various different reasons why firms are discouraged from applying for bank credit. This breakdown shows that in 2013-14 around half of credit-constrained firms indicated that the interest rates charged by banks were prohibitively high. In addition, 14 per cent were discouraged from applying because they thought the application procedures were too complex, while 9 per cent did not apply because they thought the collateral requirements were too stringent.

While firms in the region have, on average, become more credit-constrained over the last 10 years, there is considerable cross-country heterogeneity. As Chart 2.6 shows, only three countries – Poland, Tajikistan and Turkey – have seen an improvement in firms' ability to access credit over the last decade (and even that improvement has been only slight). In another small group of countries – a group including Belarus, FYR Macedonia and Georgia – there has been virtually no change (these are the countries on the 45-degree line). The chart also shows that there is substantial cross-country variation in the tightening of credit constraints, even among countries that displayed very similar levels in 2005. Look, for example, at Georgia (35 per cent of firms constrained in 2005), Bulgaria (also 35 per cent) and Kazakhstan (38 per cent). In 2013-14 the situation in Georgia was unchanged, the percentage of credit-constrained firms had increased to 66 per cent in Bulgaria, and it had more than doubled to 76 per cent in Kazakhstan. This chapter will look at how these large differences in the tightening of credit constraints can be explained by the extent to which banking systems had to rebalance in the wake of the global financial crisis.

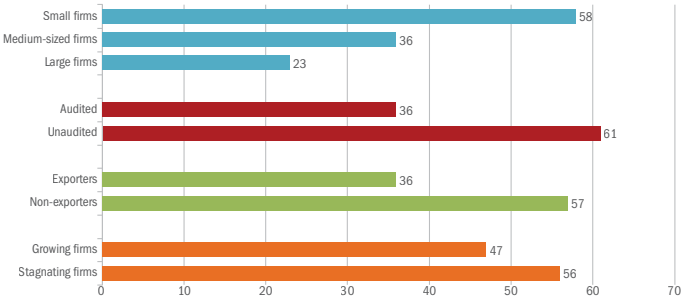
Are there also differences *within* countries in firms' ability to access credit? To answer this question, a regression analysis has been carried out in order to systematically relate firm-level characteristics to the probability of being credit-constrained (while keeping all country-level characteristics constant). This shows that a number of firm-level characteristics are robust predictors of credit constraints across all three survey rounds. In particular, Chart 2.7 shows – using the most recent survey data (that is to say, data for 2013-14) – that small firms, non-exporting firms and firms without audited financial statements are all more likely to be credit-constrained. This suggests that less transparent firms have more difficulty accessing credit. Reassuringly, growing firms (that is to say, those that have recorded positive growth in the number of employees over the last three years) have a higher probability of accessing credit than stagnating firms. Interestingly, various other firm-level characteristics – including foreign ownership and female ownership – are *not* significantly correlated with the probability of being credit-constrained.

CHART 2.6. Changes in the percentage of credit-constrained firms: pre-crisis versus post-crisis



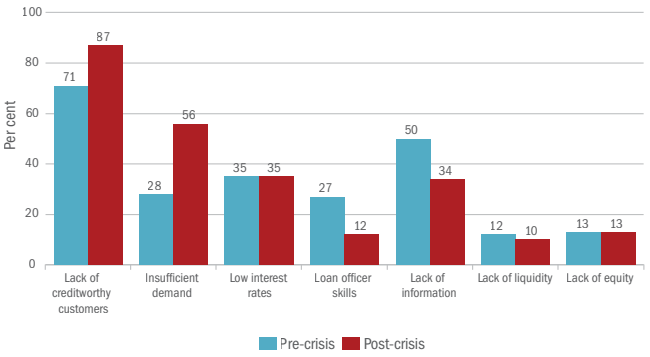
Source: BEEPS III and V.
Note: BEEPS III values are based on simple intra-country means while BEEPS V values are weighted averages.

CHART 2.7. Credit constraints: variation across different types of firm



Source: BEEPS V, excluding SEMED countries.
Note: Small firms have 2-49 employees, medium-sized firms 50-250 employees and large firms over 250 employees. Growing firms have seen growth in the number of employees in the last three years. The chart shows the percentage of firms in each category that are credit-constrained.

CHART 2.8. Main constraints on banks' ability to increase lending to SMEs



Source: BEPS II.
Note: The bars show the percentage of banks indicating that the factor on the x-axis is one of the three main constraints preventing increases in credit to SMEs.

Credit constraints: banks' view

The firm-level surveys used thus far show that more and more firms are feeling constrained in their ability to access bank credit, not just because they are rejected when they apply for loans, but also – primarily, in fact – because they are discouraged from applying in the first place. This suggests that supply-side considerations have played an important role in the reduction of bank credit since 2008. Do banks in the region agree with this reading of the evidence? To assess this question, this chapter uses another survey: the EBRD's second Banking Environment and Performance Survey (BEPS II). As part of BEPS II, structured face-to-face interviews were held with the CEOs of banks across the transition region. Among other things, those CEOs were asked a series of questions about their banks' lending activities before and after the global financial crisis.

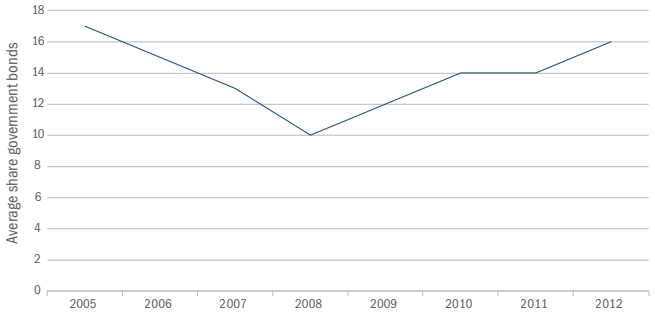
Chart 2.8 shows the percentages of banks that mentioned a particular reason as a key constraint (that is to say, one of the top three) preventing them from lending more to SMEs. Interestingly, banks seem to pin the blame squarely on firms. In their view, the main reason for not lending more at the moment is the lack of demand for loans in general and the lack of creditworthy customers in particular. This is especially true in the post-crisis period. Moreover, very few banks indicate that their own liquidity or solvency position is a relevant factor in their ability to lend. In fact, balance sheet constraints have even become somewhat less important in the wake of the crisis.

In short, the BEEPS surveys suggest that while fewer firms need credit in the post-crisis environment, those firms that do are finding it much more difficult to obtain a bank loan. Banks, on the other hand, argue that there is simply not enough demand for credit. Moreover, those firms that do apply for a loan are not deemed sufficiently creditworthy. Accordingly, banks have increased the percentage of assets that are held in the form of

87%

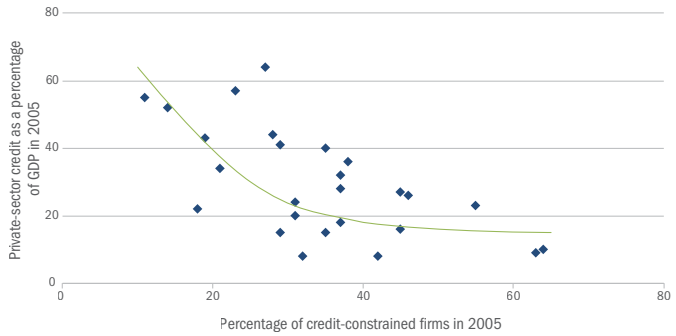
OF INTERVIEWED BANK CEOS INDICATED THAT A LACK OF CREDITWORTHY CUSTOMERS IS A KEY CONSTRAINT ON THEIR LENDING TO SMES

CHART 2.9. Banks' holdings of government bonds (as a percentage of government bonds plus total loans)



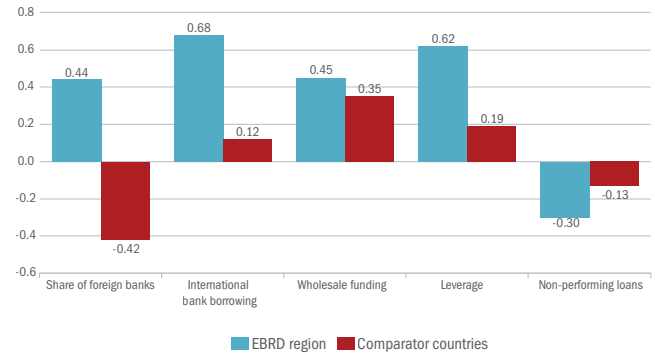
Source: Bankscope.
Note: Average government bond holdings as a percentage of government bonds plus total loans for a sample of 108 banks that are active in the EBRD region. The sample only comprises banks that have information available on their holdings of government bonds and total loans for each year between 2005 and 2012.

CHART 2.10. Size of banking sector and percentage of credit-constrained firms



Source: BEEPS III and World Development Indicators.
Note: BEEPS III values are based on simple intra-country means.

CHART 2.11. Banking integration, bank funding and the size of the banking system



Source: Claessens and Van Horen (2015), Bankscope, BIS Consolidated Banking Statistics, World Development Indicators, CEIC Data and authors' calculations.
Note: This chart shows the correlation between the size of the banking sector (measured as the ratio of private-sector credit to GDP) and the respective variables. "Share of foreign banks" means assets held by foreign banks as a percentage of total bank assets; "international bank borrowing" means the ratio of cross-border borrowing to private-sector credit; "wholesale funding" means the ratio of total loans to total deposits held by banks; "leverage" is the ratio of total assets to total equity held by banks. Non-performing loans are measured as a percentage of total loans (albeit national definitions of non-performing loans may vary). Data for all variables relate to 2005. "EBRD region" means all countries in which the EBRD invests, while the "comparator countries" are a group of 65 countries that have banking sectors between the minimum and maximum sizes observed in the EBRD region.

government bonds, at the expense of loans to the private sector (see Chart 2.9). And very few banks consider their own balance sheet structure to be a constraint on the supply of fresh credit to private-sector borrowers. Who is right? The remainder of this chapter seeks to answer this question by analysing the impact that the rebalancing of banking systems across various countries has had on the ability and/or willingness of banks to lend in recent years.

Financial rebalancing and SMEs' access to credit

It is useful to begin our discussion of the relationship between banking-sector rebalancing and changes in the percentage of credit-constrained firms by assessing the cross-sectional relationship between the size of the banking system (as measured by total private-sector credit as a percentage of GDP) and firms' ability to access credit. As expected, Chart 2.10 shows, for a sample of transition countries, that before the global financial crisis there was a strong negative correlation between the size of a country's banking system and the percentage of firms reporting that they were credit-constrained. More credit is available in larger banking systems, so fewer firms complain of limited access to credit.[7]

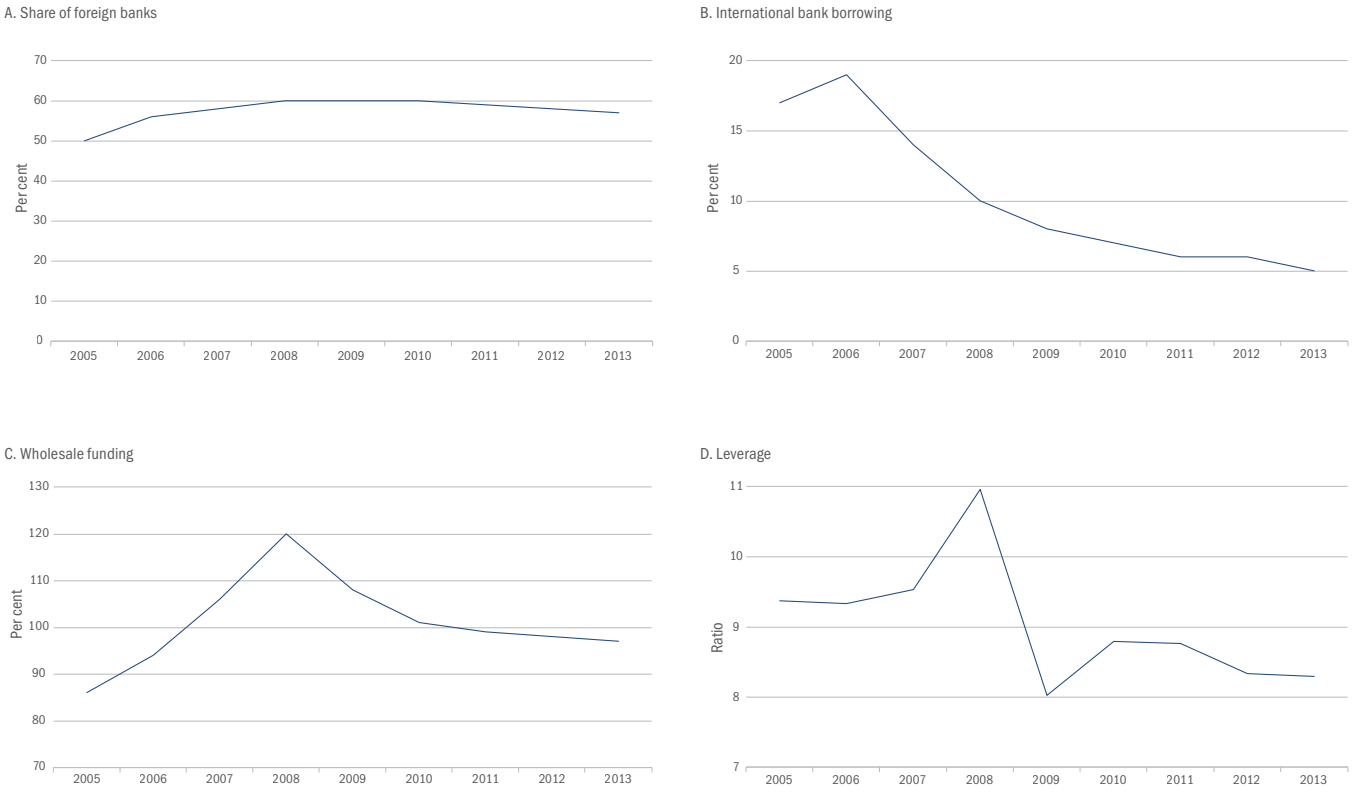
If larger banking systems reduce the probability of firms being credit-constrained, a logical next question is: which transition countries have managed to develop such large banking sectors? Chart 2.11 shows a set of correlation coefficients (see blue bars) indicating the strength of the relationship between, on the one hand, various characteristics of banking systems and, on the other hand, the size of such banking systems across the EBRD region. It shows that before the crisis, countries with a higher percentage of foreign banks, greater dependence on cross-border bank funding (excluding funding from parent banks), greater use of wholesale funding (as opposed to deposit funding) and fewer non-performing loans had the largest banking sectors.

Together, these characteristics describe the economic model that emerging Europe used prior to the financial crisis to rapidly develop its banking sectors. But was this model unique to emerging Europe? Chart 2.11 also shows the same correlations (see red bars) for a group of comparator countries with banking systems of a similar size. In these comparator countries, the link between banking-sector development on the one hand and international financial integration and wholesale funding on the other is less strong. The correlation with bank leverage is also much weaker. Thus, the growth model employed in emerging Europe's banking sectors appears to have been fairly distinctive. Much more than in other regions, transition countries managed to reduce the percentage of credit-constrained firms through cross-border banking integration, greater reliance on wholesale funding and by increasing leverage. These were, unfortunately, the very areas in which the banking systems were forced to make changes during the recent financial and eurozone debt crises (see Chart 2.12).

The first panel of Chart 2.12 indicates that, in terms of foreign bank ownership, adjustments during the recent crisis period have

[7] Post-crisis data paint a very similar picture.

CHART 2.12. Banking-sector adjustment across the transition region



Source: Bankscope, Claessens and Van Horen (2015), BIS Consolidated Banking Statistics, World Development Indicators, CEIC Data and authors' calculations.
Note: Panel A shows assets held by foreign banks as a percentage of total bank assets in each country, averaged over the countries of the EBRD region. Panel B shows cross-border borrowing by banks as a percentage of private-sector credit in each country, averaged over the countries of the EBRD region. Panel C shows total loans as a percentage of total deposits held by banks in each country, averaged over the countries of the EBRD region. Panel D shows the ratio between total assets and total equity held by banks in each country, averaged over the countries of the EBRD region. Please note Panel D has been corrected since publication of the printed version of this *Transition Report* to show 'ratio' rather than 'per cent' in the vertical axis.

been relatively limited. This is in line with evidence in Chapter 1 showing that foreign direct investment is a relatively stable source of cross-border investment. Foreign bank ownership peaked in 2010, after which a gradual decline set in as some foreign banks exited specific countries by selling to domestic investors (see also Box 2.2). Prominent examples include UniCredit's sale of its Kazakh subsidiary ATF Bank to a local businessman in 2013, German bank Commerzbank's sale of its Ukrainian subsidiary Bank Forum to a domestic investor in 2012 and the sale of Swedish bank Swedbank's Ukrainian subsidiary to a Ukrainian businessman in 2013.

The second panel of Chart 2.12 shows a very rapid decline in cross-border lending by BIS-reporting banks to banks in the transition region. This cross-border deleveraging began as early as 2006 in countries such as Bulgaria, Croatia, Hungary and the Baltic states, accelerated after the collapse of Lehman Brothers

48%

OF CREDIT-CONSTRAINED FIRMS ARE DISCOURAGED FROM APPLYING FOR LOANS BECAUSE INTEREST RATES ARE TOO HIGH

and continues today in the wake of the eurozone debt crisis.

The third panel shows that, after peaking in 2008, banks' reliance on wholesale funding (as opposed to deposit funding) has fallen significantly. The average ratio of total loans to customer deposits declined from 120 per cent in 2008 to 97 per cent in 2013. In particular, banks that had rapidly expanded their loan portfolios on the basis of very small deposit bases had to reduce their lending quickly, thereby contributing to the increase in the percentage of credit-constrained firms.

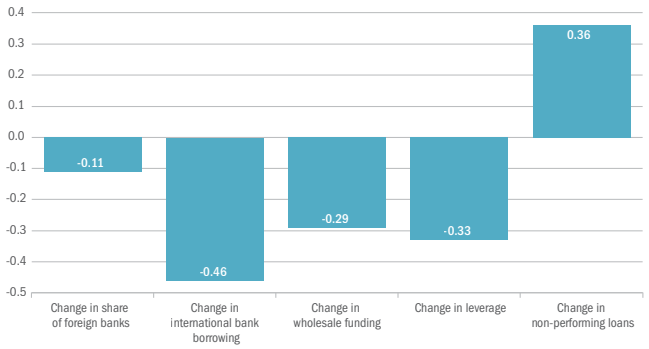
The fourth panel shows that banks have also been adjusting their leverage. Before the crisis many banks operated with high asset-to-equity ratios (termed "leverage multiples"). The panel shows the procyclical behaviour of this leverage multiple across the transition region. It peaked just before the collapse of Lehman Brothers and has been declining ever since as banks have strengthened their equity bases while shedding or writing off non-performing assets.

Chart 2.13 shows that the increase in credit constraints across countries is strongly correlated with the various ways in which the region's banking systems have had to adjust. The increase in credit constraints – aggregated at the country level – has been most pronounced in countries that have experienced a decline in cross-border borrowing by banks, a decline in banks' use of wholesale funding (as opposed to deposit funding), a decline in bank leverage and an increase in the percentage of non-performing loans on banks' balance sheets.

Table 2.1 analyses the impact that such rebalancing has on credit constraints at the firm level. In the reported regression estimates, the dependent variable is the probability that a firm was credit-constrained in 2013-14. The explanatory variables are the country-level variables shown in Chart 2.12, plus the percentage of credit-constrained firms in 2005 (which is calculated at the country level). That last variable absorbs unobserved cross-country variation affecting firms' ability to access credit. The regression framework also controls for a battery of (unreported) firm-level characteristics.

The results in columns 2 to 5 of Table 2.1 indicate that the probability of a firm being credit-constrained in 2013-14 was substantially higher in countries where, in the previous five years, banks had to adjust their international and wholesale borrowing more, where they had to deleverage more, and where non-performing loans increased the most. A direct comparison of these variables indicates that changes in cross-border and wholesale funding are particularly strongly associated with increases in credit constraints (see column 6). These results, which have plenty of support in academic literature,[8] can help to explain why Chart 2.6 shows such strong cross-country variation in the tightening of credit conditions for SMEs. For example, while in 2005 the percentage of credit-constrained firms was about 35 per cent in Georgia, Bulgaria and Kazakhstan, it remained unchanged in Georgia but increased sharply in the other two countries. In line with the results in Table 2.1, cross-border bank lending to Georgia declined by only 15 per cent while cross-border lending to Bulgaria and Kazakhstan fell by 70 and 80 per cent respectively.

CHART 2.13. Banking-sector adjustment and aggregate credit constraints



Source: BEEPS III, IV and V, Claessens and Van Horen (2015), Bankscope, BIS Consolidated Banking Statistics, World Development Indicators, CEIC Data and authors' calculations.
Note: The chart shows the correlation coefficients between changes in the percentage of firms that are credit-constrained and changes in the respective variables. "Share of foreign banks" means assets held by foreign banks as a percentage of total bank assets; "international bank borrowing" means the ratio of cross-border borrowing to private-sector credit; "wholesale funding" means the ratio of total loans to total deposits held by banks; "leverage" is the ratio of total assets to total equity held by banks. Non-performing loans are measured as a percentage of total loans (albeit national definitions of non-performing loans may vary). Changes are calculated over the period from 2005 to 2013.

SMEs' access to credit: a local view

The analysis thus far indicates that financial adjustment in banking systems across the transition region goes a long way towards explaining why SMEs in some countries have seen their funding conditions deteriorate much more than their counterparts in other countries. However, there are three reasons why it is unlikely that the rebalancing of banking systems can explain all of the variation in credit constraints across and within countries.

First, the BEEPS surveys indicate that a significant percentage of firms complain about cumbersome loan application procedures and collateral requirements. These are structural issues that are largely unrelated to bank funding. Second, almost all bank CEOs who were interviewed as part of the BEPS II survey voiced serious concerns about the creditworthiness of SMEs applying for loans. This, too, suggests that banks' own funding problems, while important, do not tell the full story. Third, BEEPS data reveal persistent large differences between opaque and relatively transparent firms in terms of the probability of being credit-constrained. All three of these observations suggest that structural causes, over and beyond adjustments in banking systems, continue to prevent the efficient matching of firms to banks in many transition countries.

[8] See Popov and Udell (2012), De Haas and Van Lelyveld (2014) and Ongena et al. (2015).

TABLE 2.1. Banking-sector adjustment and firm-level constraints in 2013-14

Dependent variable: credit-constrained dummy (2013-14)	(1)	(2)	(3)	(4)	(5)	(6)
Change in share of foreign banks (2007-12)	0.038					0.018
	(0.300)					(0.599)
Change in international bank borrowing (2007-12)		-0.255*				-0.313**
		(0.090)				(0.029)
Change in wholesale funding (2007-12)			-0.475***			-0.439*
			(0.003)			(0.063)
Change in leverage (2007-12)				-0.549**		-0.125
				(0.049)		(0.714)
Change in non-performing loans (2007-12)					0.031**	0.004
					(0.050)	(0.884)
Percentage of credit-constrained firms in 2005	1.806**	1.816***	1.533***	2.271***	1.662***	1.992***
	(0.020)	(0.000)	(0.003)	(0.003)	(0.004)	(0.001)
Number of observations	6,285	6,285	6,285	6,285	6,296	6,177
Firm-level covariates	Yes	Yes	Yes	Yes	Yes	Yes
Locality-level covariates	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.076	0.080	0.083	0.080	0.076	0.088

Source: BEEPS, BIS, Claessens and Van Horen (2015), Bankscope and EBRD (data on non-performing loans).
Note: This table reports the results of probit regressions explaining the probability of a firm surveyed as part of the 2013-14 BEEPS survey indicating that it was credit-constrained. Observations are weighted on the basis of the number of firms in the country that participated in the survey. Standard errors are clustered by country. P-values are reported in parentheses: * = p<0.10; ** = p<0.05; *** = p<0.01.

Indeed, it is likely that such structural causes – while already present prior to the crisis – have only gained in importance in the last couple of years. In the wake of the crisis, firms' default risk has increased considerably, with the result that collecting reliable information on loan applicants has become both more important and more difficult. For instance, a recent report by the Institute of International Finance (IIF)[9] suggests that screening loan applicants has become more challenging following the shift in the global credit cycle. One reason for this is that banks cannot now rely as much on collateral and hard information and need to look more closely at firms' prospects. This requires more subtle judgements, including judgements about the ability and commitment of firms' owners and management.[10] Some banks may be better equipped to produce such judgements during downturns than others.

In order to analyse which factors determine successful "matches" (that is to say, new lending relationships) between firms that are in need of a loan and banks that are able and willing to lend to them, this section uses detailed micro data on individual firms and surrounding bank branches. When a firm needs a loan, it usually has various banks to choose from in the locality where it is based. What factors contribute to the choice of a particular bank?

This assessment of the matching of banks and firms uses data from the 2013-14 BEEPS survey. For each borrowing firm, this survey round provides information on the identity of the most recent lender. Moreover, the BEPS II survey provides detailed information on the various branches that are present in the town or city where each interviewed firm is located. This produces a dataset in which each firm can be linked to all potential lenders in its immediate vicinity. The question is then why a firm borrows from bank A, rather than from bank B, C or D?

Table 2.2 shows the results of regression analysis exploring this question. The first column of the table shows that, given a certain population of bank branches in a locality, a firm is more likely to borrow from a foreign bank and less likely to borrow from a small bank (defined here as a bank with assets totalling less than €1 billion). This indicates that, all else being equal, firms prefer to borrow from foreign banks rather than domestic banks where both types of bank are available. Likewise, larger banks appear to be preferred to smaller ones.

Second, the regression framework assesses the role of bank-lending techniques, particularly the difference between "relationship lenders" and "transaction lenders", as well as the efficiency of banks' lending procedures. On the basis of BEPS II interview data, it is possible to classify banks in the

[9] See Institute of International Finance (2013).
[10] See Beck et al. (2014).

transition region as either relationship or transaction lenders. Relationship lenders usually provide several consecutive loans to the same borrower, thereby building up extensive proprietary information about that borrower. This in-depth knowledge may help relationship lenders to continue to lend to firms (particularly smaller and more opaque firms) when economic uncertainty increases – for example, during a crisis or a recession. In contrast, transaction lenders usually only lend once or twice to a borrower, doing so mainly on the basis of publicly available information on that borrower (which is often processed automatically using a credit-scoring model) or simply relying on collateral. This can be effective during boom periods but may become problematic when screening loan applicants becomes more difficult during a cyclical downturn, as the aforementioned IIF report suggests.

The results in column 2 show that SMEs are more likely to match with a relationship lender rather than a transaction lender. This suggests that relationship lenders have a competitive advantage in a difficult lending environment as they are better able to screen new borrowers and distinguish between good and bad risks.[11] The results in column 2 also show that SMEs are more likely to borrow from banks with fewer layers of decision-making in their loan application procedures. This means that a firm will prefer to borrow from a bank where a loan decision only involves one or two decision-making stages rather than a competitor where each loan application has to be approved by, say, three or four departments or managers. The importance of such efficiency as a determinant of the matching of firms to banks is in line with the earlier evidence from the BEEPS survey showing that a large number of firms needing credit complain about cumbersome loan application procedures.

Column 3 looks at the impact of the perceived quality of the legal system, particularly the ability of courts to enforce legislation on pledges. Indeed, evidence suggests that banks which perceive pledge and mortgage legislation to be of a high quality focus more on mortgage lending and lending to private-sector clients more generally, rather than lending to state-owned enterprises.[12] The results in Table 2.2 show that firms are more likely to end up borrowing from banks that are more confident in the ability of local courts to enforce pledge legislation. This is in line with recent cross-country evidence showing that effective collateral legislation for movable assets can have a significant impact on the volume and sectoral allocation of bank lending.[13]

Lastly, as expected, the data show that firms are less likely to end up borrowing from a bank that indicated during the BEPS II survey that limited liquidity was one of the top three obstacles preventing it from lending (see column 4). This makes sense, as banks that are financially sound will compete more aggressively for market share.

TABLE 2.2. Determinants of the matching of firms and banks

Dependent variable: match dummy (0/1)	(1)	(2)	(3)	(4)	(5)
Foreign bank	0.013***				0.010*
	(0.000)				(0.050)
Small bank	-0.078***				-0.088***
	(0.000)				(0.000)
Relationship bank		0.014***			0.010**
		(0.001)			(0.031)
No. of hierarchical layers		-0.015***			-0.007***
		(0.000)			(0.001)
Court enforcement			0.012**		0.009*
			(0.017)		(0.082)
Liquidity is constraint				-0.024***	-0.032***
				(0.009)	(0.003)
Firm-level fixed effects	Yes	Yes	Yes	Yes	Yes
No. of observations	38,385	29,693	30,768	29,595	26,541
R^2	0.061	0.052	0.049	0.052	0.079

Source: BEEPS V, BEPS II, Claessens and Van Horen (2015) and Bankscope.
Note: This table reports the results of probit regressions explaining the probability of a firm surveyed as part of the 2013-14 BEEPS survey borrowing from a particular bank in its locality. P-values are reported in parentheses: * = p<0.10; ** = p<0.05; *** = p<0.01.

[11] In line with this, Beck et al. (2014) show that while relationship lending does not affect credit constraints during a credit boom, it alleviates such constraints considerably during a credit crunch. This accommodative effect of local relationship lending is especially strong for relatively opaque borrowers such as small firms and firms without audited financial statements.
[12] See De Haas et al. (2010).
[13] See Calomiris et al. (2015).

Conclusion

Credit conditions for small businesses have tightened significantly in recent years, both during and after the global financial crisis. Structural adjustments in banking systems – particularly reduced reliance on cross-border and wholesale funding – explain a large percentage of this tightening. The composition of national banking markets also plays an important role. Indeed, this chapter has shown that when SMEs choose between various banks in their local town or city, they tend to borrow from financially sound banks that have less hierarchical lending procedures, greater faith in the courts and a focus on longer-term lending relationships. This suggests that financial, organisational and institutional issues all have a key role to play in determining firms' ability to access credit.

The first important implication of the findings in this chapter is that it matters how banks reach out to prospective SME borrowers. Surveys of firms reveal that many small businesses that are in need of a loan are discouraged from applying for credit by cumbersome and lengthy application procedures. This happens relatively often in countries such as Armenia, Egypt, Kazakhstan and Tajikistan. Moreover, banks that have lengthy loan application procedures involving many hierarchical layers tend to be less successful at competing for business. Countries where loan application procedures for SMEs tend to be relatively hierarchical (and further streamlining may be useful) include Albania, Croatia and Tajikistan. Importantly, the streamlining of loan application procedures is within the remit of banks themselves and does not require changes to the institutional or legal environment.

Second, the results in this chapter (and a growing body of academic literature) suggest that relationship banks have a special role to play as a source of finance for SMEs. This is particularly true during periods of economic uncertainty when loan officers cannot rely as much on collateral and hard information and need to look more closely at firms' prospects. The results in this chapter are therefore a warning to banks and their shareholders against adopting an excessively short-termist approach and reducing costs by laying off loan officers and other frontline staff who deal directly with borrowers. In the medium term, such cuts may negatively affect banks' ability to determine whether SMEs have adequate growth prospects.

Third, effective and efficient lending to SMEs can also be stimulated by institutional improvements at the country level. Well-functioning credit registries – through which banks and other lenders are required to share information about the quality of borrowers – have been shown to improve SMEs' access to credit over time. Banks that can easily access trustworthy "hard" data on borrowers will also be incentivised to invest more in building up proprietary "inside" information about borrowers.[14] Thus, the introduction of credit registries and the use of relationship lending need not be mutually exclusive and may instead complement each other.

Fourth, high levels of non-performing loans continue to weigh on the balance sheets of many banks (see Macroeconomic Overview). Not only have authorities in various countries been slow to act, recapitalisations of banks have in some cases also been too limited in scope. Poorly designed recapitalisations may prevent banks from fully tackling their non-performing loan problems, such that they keep "evergreening" bad loans instead.[15] In such cases, lending to SMEs will fail to recover.

WELL-FUNCTIONING
CREDIT REGISTRIES
HAVE BEEN SHOWN TO IMPROVE
SME ACCESS TO CREDIT

[14] See, for instance, Karapetyan and Stacescu (2014).
[15] See Giannetti and Simonov (2013) for evidence from Japan.

BOX 2.1. BEYOND BANKS: ALTERNATIVE SOURCES OF CREDIT IN THE TRANSITION REGION

Non-bank financial intermediation can help companies to access finance when traditional bank lending is not available, either because a firm has limited collateral or because there is a general tightening of lending conditions in the aftermath of a financial crisis. Financial intermediation outside of the regular (and regulated) banking system is sometimes referred to as "shadow banking", a catch-all term that often covers securitisation, as well as lending by unregulated finance companies, money market funds, hedge funds and securities lenders.

While the increasing importance of shadow banking has been identified as a financial stability issue in the United States and Europe, its scale and impact have been relatively limited thus far in emerging markets (with the exception of China). In Bulgaria, Croatia and Romania such intermediaries are estimated to account for between 18 and 20 per cent of financial sector assets while in Turkey and Russia they hold 10 and 3 per cent of financial sector assets respectively.[16] The bank-dominated transition region could therefore benefit from the further diversification and rebalancing of its financial sector, provided that such alternative funding sources are embedded in a proper legal and institutional framework (see Annex 2.1). Leasing and factoring, in particular, are two promising alternative sources of credit for SMEs in the region.

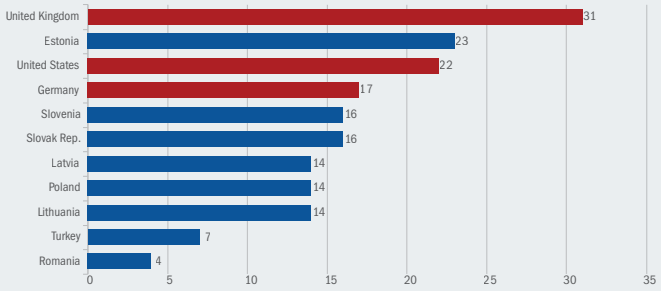
Leasing

Leasing is an important source of alternative finance, especially for firms that need to finance new equipment. Leasing services are provided by banks and their subsidiaries, independent companies and "captive" firms linked to manufacturing companies. While the leasing sector is not directly regulated in some countries, it often falls under the purview of banking supervisors (which look at consolidated bank balance sheets) to the extent that leasing companies are linked to banks. In the EU, the CRD IV banking directive allows individual member states to decide how leasing and factoring companies should be supervised.

Leasing's penetration (that is to say, the extent to which it is used to finance fixed investment in plant and equipment) tends to be lower across central Europe and the Baltic states (CEB) than it is in more mature leasing markets such as the United States, Germany and the United Kingdom, although there is a considerable degree of variation (see Chart 2.1.1). In most other EBRD countries of operations, leasing markets remain even shallower.

The central European leasing sector is characterised by a high degree of concentration, foreign ownership and a strong focus on the leasing of cars and other road transport vehicles. Machinery and industrial equipment account for only around a quarter of leased assets. SMEs that prefer leasing to traditional bank funding tend to do so not only because it allows them to access finance without additional collateral over and above the financed asset but also because they appreciate the favourable tax treatment that it enjoys in many countries, as well as the speed with which leasing contracts are typically approved.

CHART 2.1.1. Percentage of investment in plants and equipment that is financed through leasing



Source: White Clarke Group Global Leasing Report 2014 (based on Leaseurope and national leasing associations).
Note: Data are for 2013.

Factoring

Factoring – the sale of accounts receivable – remains a relatively modest part of the financial sector in the EBRD region when compared with most advanced economies. It can nevertheless play an important role in providing short-term liquidity for SMEs supplying goods and services. One advantage of factoring is that it is feasible even in challenging institutional environments where the enforcement of contracts leaves something to be desired and claims on security are not always upheld. Even in such environments, however, effective factoring still requires reliable credit bureau information so that the factor can adequately assess the creditworthiness of buyers.[17] Reverse factoring, whereby a factor only purchases accounts receivable that are linked to high-quality buyers, can reduce the cost of assessing the creditworthiness of large numbers of buyers, especially where credit information is limited.

The development of the factoring sector in the EBRD region hinges on further legal measures to increase the efficiency and reduce the legal uncertainty of factoring transactions, as is outlined in more detail in Annex 2.1. Turkey is a good example of how better legislation can boost the factoring sector, with factoring assets there increasing by around 20 per cent per year since 2006 (albeit from a very low base). This development has been supported by the fact that factoring companies have been regulated by the country's Banking Regulatory and Supervisory Agency since 2006. In 2012 new legislation brought further credibility and transparency to the sector. Another recent example is the adoption of a new law in Croatia in 2014 which established a well-calibrated legal framework to increase the efficiency and legal certainty of factoring.

[16] See Ghosh et al. (2012) and Financial Stability Board (2014).

[17] See Klapper (2006).

BOX 2.2. FOREIGN BANKS: "EAST-EAST" BANKING ON THE RISE

The decade preceding the 2008-09 global financial crisis saw a steady increase in the number of banks with affiliates – either subsidiaries or branches – in other countries. The EBRD region was a particularly attractive area to invest in, especially for banks in western Europe. As a result of this trend, a large percentage of total bank assets (36 per cent across the EBRD region as a whole) were in the hands of foreign-owned banks by the end of 2007.[18] Has the global financial crisis reversed this trend as multinational banks have gone back to focusing on their core markets? The answer is "yes", but with some important caveats.

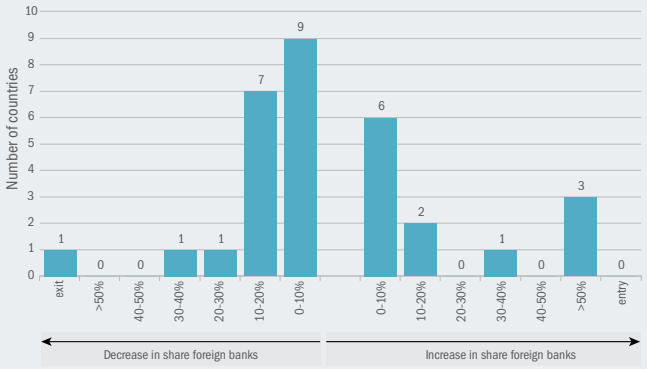
The percentage of total assets held by foreign banks has declined substantially, standing at just 26 per cent – 10 percentage points lower – in 2013. This decline in foreign bank activity has been much stronger than that observed in other parts of the world. Indeed, the global share of bank assets controlled by foreign banks declined only slightly between 2007 and 2013, falling from 13 per cent to 11 per cent. This difference reflects the fact that western European parent banks have had a particular need to strengthen their balance sheets, restore profitability and comply with more stringent capital requirements in the wake of the crisis. One way of doing that has been to reduce their international operations.

Interestingly, Chart 2.2.1 shows that this rebalancing of multinational banks' foreign and domestic operations has not affected all destination countries equally. In 19 countries in the EBRD region, the market share of foreign banks has decreased over the last five years. Ukraine, where a number of foreign banks have left the country altogether, has experienced the sharpest declines. These developments are driven partly by changes in the perceived attractiveness of the banking markets in the relevant countries and partly by the desire of crisis-affected parent banks to consolidate their foreign operations by selling smaller, more recent and more distant acquisitions.[19] Meanwhile, Chart 2.2.1 also shows that foreign banks have actually increased their presence in 12 countries, with the strongest increases being observed in Azerbaijan and Belarus.

Foreign bank ownership in the EBRD region has, to some extent, also shifted from western European parent banks to strategic owners from the region. When a number of western European parent banks were weakened by the global financial crisis, well-capitalised banks from the region were willing and able to seize these investment opportunities. As Chart 2.2.2 shows, the number of foreign banks from OECD countries increased steadily until 2008, before declining sharply. At the same time, the number of foreign banks based in non-OECD countries has continued to grow. Perhaps the most notable example of this trend was the sale of Austrian bank Volksbank's central and eastern European subsidiary network to Russia's Sberbank. Other examples include the sale of Turkey's Denizbank to (again) Sberbank and Optima Bank (formerly ATF Bank) in Kyrgyzstan (which was Italian-owned but became Kazakh-owned). This trend of increased banking regionalisation is by no means unique to the EBRD region, being prevalent in other parts of the world as well. For instance, Chile's Corpbanca recently bought Santander's Colombian operations, while British bank HSBC has sold its operations in Costa Rica, El Salvador and Honduras to Banco Davivienda of Colombia.

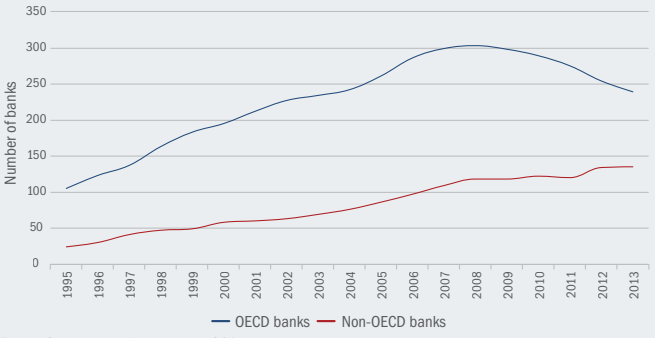
What are the possible consequences of this change in the pattern of ownership? Academic literature suggests that the benefits and risks presented by foreign banks can differ substantially depending on where the parent bank is based and what business model it employs. On the one hand, strategic investors from nearby countries may bring with them techniques that are better suited to the specific needs of the countries in which they invest. They may also be better placed to collect and process "soft" information and thus in a better position to lend to more opaque borrowers. On the other hand, there may be less scope for the transfer of state-of-the art lending and risk-management techniques and know-how. How these effects will play out overall remains unclear. What is evident, however, is that the increased prominence of "east-east" banking is probably here to stay, as it reflects the growing role of emerging markets in the global economy.

CHART 2.2.1. Cross-country variation in banking disintegration



Source: Claessens and Van Horen (2015).
Note: This chart shows percentage point changes in the market share of foreign banks (the percentage of a country's total bank assets that are held by foreign banks) between 2007 and 2013 for all EBRD countries of operations. Each bar shows the number of countries that experienced a given percentage point change. For instance, seven countries saw declines of between 10 and 20 percentage points in the market shares of foreign banks. Calculations are based on banks that have asset information available for both years.

CHART 2.2.2. Changes in bank ownership across the EBRD region (1995-2013)



Source: Claessens and Van Horen (2015).
Note: "OECD banks" are foreign banks owned by parent banks registered in countries that became an OECD member in the year 2000 or earlier. "Non-OECD banks" are foreign banks owned by parent banks registered in countries that are not an OECD member or that only became an OECD member after 2000. Note that the Czech Republic, Hungary, Poland, the Slovak Republic, Slovenia and South Korea are included in the non-OECD group.

[18] "Foreign banks" refers only to subsidiaries. Branches of foreign banks are not taken into account in this analysis.
[19] See Claessens and Van Horen (2015).

A participant in the Mongolian field experiment

BOX 2.3. MICRO CREDIT: NEITHER MIRACLE NOR MIRAGE

There has been an intense debate in recent years between the proponents and opponents of microfinance on whether micro credit can lift people out of poverty. However, what this heated debate has lacked is solid evidence. To fill this gap, a number of research teams around the world have conducted randomised evaluations (in the form of large field experiments) aimed at rigorously measuring the impact that access to micro credit has on borrowers and their households. Studies have been conducted in Bosnia and Herzegovina, Ethiopia, India, Mexico, Mongolia, Morocco and the Philippines. Research has taken place in both urban and rural areas and evaluated both individual-liability and joint-liability (group) loans.

Four main lessons

Together, these studies have produced a rigorous body of evidence on the impact that micro credit has in a wide variety of settings.[20] They paint a remarkably consistent picture and contain four main lessons:

1. In all seven studies, micro credit failed to produce substantial increases in borrowers' income, so it did little to help poor households escape poverty. This is true both in the short term (over an 18-month period) and in the longer term (over a three to six-year period). One possible explanation for this finding is the fact that while micro credit clients overwhelmingly report using loans at least partially for business purposes, many of them also report having used part of their loans for consumption.

   Another possible explanation is that not all borrowers are natural entrepreneurs. Net business ownership increased in only two of those countries (see Chart 2.3.1). Of those that used micro credit to establish or expand a small business, some borrowers were more successful than others. Although business investment and expenses increased in several countries, researchers did not find any overall impact on borrowers' profits in Bosnia and Herzegovina, Ethiopia,

[20] See Banerjee et al. (2015) for an overview and a discussion of this issue.

India, Mexico or Mongolia. In some countries, however, increased profits were observed for small subsectors of borrowers.

2. Moreover, access to micro credit did not appear to have a tangible impact on borrowers' well-being or the well-being of others in their households. For instance, in three of the four studies looking at this issue, there was no impact on women's decision-making power or independence. In Mexico, where the microfinance institution focused on empowerment, women did enjoy a small but significant increase in decision-making power. In six of the studies, access to micro credit did not increase children's schooling.
3. On the upside, the data collected by the research teams showed that households with access to micro credit enjoyed greater freedom in terms of deciding how they earned and spent money. In Bosnia and Herzegovina and Morocco micro credit allowed people to change the mix of employment activities by reducing earnings from wage labour and increasing income from self-employment activities. In the Philippines it also helped households to insure themselves against income shocks and manage risk. In Mexico households with access to micro credit did not need to sell off assets when they were hit by an income shock.
4. Importantly, there is also no evidence that access to micro credit is systematically harmful. For instance, overall stress levels among borrowers were no different from those of the control group in Bosnia and Herzegovina and the Philippines (albeit male borrowers experienced significantly higher levels of stress in the Philippines).

Implications for the microfinance industry

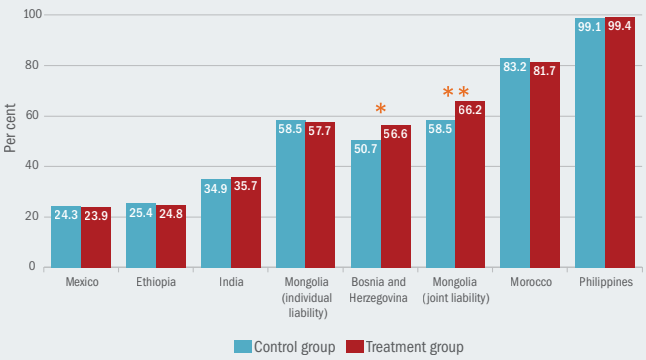
Small changes to product design may have a big influence on how people use and benefit from micro credit. For instance, repayment typically begins two weeks after the loan has been disbursed and usually follows an inflexible weekly schedule. This can be an effective way of limiting defaults but it may also limit borrowers' income growth. In India, granting some borrowers a grace period – allowing them to build their businesses up before starting to repay loans – increased business investment in the short term and profits in the long term, but also increased default rates.[21] In addition, monthly or seasonal repayment schedules that better reflect borrowers' income flows can help borrowers to make better use of their loans. Further research is needed to evaluate the impact of such flexible loan products in terms of repayment rates and poverty levels.

Accordingly, both microfinance institutions and borrowers could benefit from improved segmentation of the market and the offering of larger, more flexible products to clients who are more likely to perform well and smaller, less flexible loans to less promising borrowers. However, improving this initial differentiation is not straightforward and will require better screening methods.

In addition, financial institutions could pilot better ways of helping high-performing micro entrepreneurs to become eligible for SME lending. At the moment, there is a risk of successful and growing clients that need more funding becoming stuck – that is to say, reaching a point where they are too large for microfinance but not yet a viable client in the eyes of traditional lenders. Microfinance institutions could establish arrangements with local banks whereby they transfer such successful clients to those banks (for a fee) so that they can continue on their growth trajectories. Likewise, banks with both microfinance and SME departments should ensure that fast-growing micro clients can easily graduate to SME status.

Lastly, the strong increase seen in competition among lenders may result in some clients being tempted to borrow from various lenders ("double dipping"), which may result in over-borrowing and repayment problems.[22] One possible way of preventing such problems is to allow lenders to share information on borrowers via a credit registry. This issue is particularly pressing for countries (such as Tunisia) that are currently opening up their microfinance sector to increased competition.

CHART 2.3.1. Micro credit and business ownership



Source: Banerjee et al. (2015).
Note: This chart shows, for eight randomised field experiments across seven countries, the percentage of households that operate a small-scale business at the end of the study, comparing the treatment group (which received access to micro credit) with the control group (which had no access to micro credit). ** and * denote statistical significance at the 5 and 10 per cent levels respectively. In Ethiopia, ownership is measured for non-farm businesses. The Indian results are from the first endline survey (after 18 months), and there is no statistically significant difference after 3.5 years.

[21] See Field et al. (2013).

[22] See Bos et al. (2015) for evidence from Bosnia and Herzegovina.

BOX 2.4. FINANCIAL INCLUSION OF REMITTANCE RECIPIENTS

In many low-income countries, remittances from abroad are a major source of household income. In Tajikistan, for instance, annual remittances (which are mostly from Russia) total US$ 3 billion, accounting for almost 50 per cent of the country's GDP. Approximately one in four Tajik families has at least one family member working abroad and most of them regularly send money home to support their families.

Most countries that rely heavily on remittances are unfortunately also characterised by limited use of formal banking services (see Chart 2.4.1). In Tajikistan, only 12 per cent of the adult population had a current account at a bank in 2014, according to World Bank estimates. Even fewer Tajiks keep their savings in a bank or another type of financial institution. As a result, annual remittance inflows are larger than the deposit base of Tajikistan's entire banking system.

The fact that so little remittance income is channelled through the banking system is a missed opportunity not only for the recipients of remittances themselves but also for local banks and the wider economy. For individuals, access to formal banking services can reduce the cost of financial transactions and make savings easier and safer. This can help people to smooth out consumption, particularly when faced with adverse economic shocks. Moreover, recent evidence suggests that when households have access to a trustworthy savings product, this can help them to save larger amounts of money and eventually use those sums to invest in a small-scale business.[23] For the economy as a whole, having a larger percentage of remittances channelled through the banking sector would make it easier to channel those unused savings to other firms and individuals that need finance for their projects.

Increasing financial inclusion of recipients of remittances

In order to increase the percentage of remittances that are placed in safe savings accounts, a regional initiative supported by the EBRD aims to introduce recipients of remittances to banking services and provide them with financial literacy training. The initiative has been rolled out across Armenia, Azerbaijan, Georgia, the Kyrgyz Republic, Moldova and Tajikistan. This financial inclusion project, which is financed by the EBRD's multi-donor Early Transition Countries Fund, helps to encourage saving via the formal banking system and teaches potential bank customers how to plan their budgets.

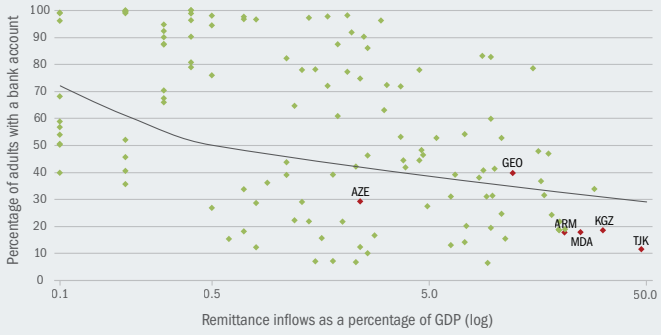
One of the participants in the financial inclusion project is Oyniso Kholikova, a new customer of Eskhata Bank in Tajikistan. She admits that she did not trust banks much in the past. Consequently, when she received her monthly payment from her husband, who works in Russia, she used to keep it at home. A lack of awareness about banking products and financial management is one of the main reasons for people keeping their savings under the mattress. What convinced Oyniso that she and her family could benefit from opening a bank account was the one-on-one training session that she had with a financial adviser who approached her as she was collecting her monthly payment.

"After the consultation, I decided to open a deposit account," Oyniso explains. She is one of 2,700 Tajik participants in the training project who opened an account right after the training session. "I want to save 100 somoni (around US$ 20) a week to buy furniture for our house," she says. Others told the advisers that they wanted to start saving in order to pay for their children's university education, to finally buy a car or to renovate their flat.

Staff of participating banks have also been made aware of the importance of providing financial education to recipients of remittances. They have been advised on how to make their banks' products more attractive. As a result, banks have managed to attract new customers. "The main benefit is that ordinary people can make informed decisions about their savings and gain access to modern, high-quality banking services," says Nasim Abduloev, a financial adviser at Eskhata Bank in Khujand.

Thanks to targeted efforts to promote financial inclusion among recipients of remittances, over US$ 5 million has been deposited in new bank accounts in Tajikistan alone (with an average deposit size of approximately US$ 1,800) and many more participants have indicated that they plan to open a bank account in the near future. Across the six countries covered by the initiative, a total of 160,000 recipients of remittances have participated in training sessions and a total of US$ 25 million has been deposited in their newly opened accounts.

CHART 2.4.1. Remittances and bank account penetration



Source: Global Findex database and World Development Indicators.
Note: Labelled countries are those participating in the financial inclusion project.

[23] See, for instance, Dupas and Robinson (2013).

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ANNEX 2.1. ENHANCING LEGAL FRAMEWORKS TO FACILITATE ACCESS TO FINANCE

Introduction

Access to finance is directly influenced by the efficiency of laws on the creation and implementation of financial instruments.[1] Whether it is a supplier who needs working capital to overcome liquidity problems and make a payment, a farmer who needs to finance a forthcoming harvest or the owners of a power plant who need to finance a major new project, inefficiencies in the legal system that increase the perceived riskiness of lending may discourage potential providers of credit.

Financial instruments which reduce the riskiness of lending can increase the availability of credit and improve the terms on which it is offered. The EBRD's Secured Transactions Project, which was established in 1992 to encourage countries to modernise their legislation on collateral, offers assistance at all stages of the reform process. In 1992 most countries in which the EBRD operated either had no rules on secured transactions or had outdated or inadequate rules which failed to give creditors sufficient protection.

In 2014, as part of its regular assessment of transition challenges, the EBRD's Legal Transition Team undertook an extensive assessment of the relevant legal framework, examining the nature and effectiveness of the collateralisation process in the EBRD's countries of operations.

This assessment sought to gauge two things: first, the extent to which these legal regimes allowed the collateralisation of various types of asset with a view to giving secured creditors preferential rights in respect of that collateral which could be enforced in the event of default; and second, whether the solutions adopted were simple, fast and inexpensive, provided certainty to the various parties and were well suited to the economic, social and legal context of the relevant countries.

The assessment examined the potential for collateralising various types of asset. In addition to standard security interests (such as pledges and mortgages), the assessment also covered typical forms of quasi-security, including sale-and-lease-back transactions (financial leasing), as well as the assignment of receivables and financial collateral. It also covered related issues such as enforcement and syndicated lending.

The results of this assessment, which were published on the EBRD's website, show the remarkable progress that transition countries have made with the establishment of secured transaction infrastructure over the last 25 years. Demanding reforms have been implemented, involving both local and international businesses and legal communities. Effective tools, such as central collateral registries, more accurate land registries, and clearer and more reliable contractual rules, have been put in place to increase the legal certainty surrounding financial activities.

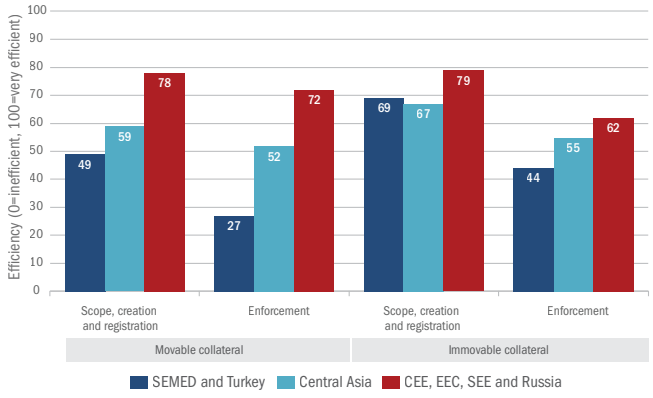
However, it is also clear that some solutions have proved to be more efficient and/or better implemented than others and even the best performing systems could benefit from further improvements. These could involve, for example, the facilitation of modern financing methods such as security over bank accounts, syndication or pre/post-harvest agricultural finance.

Most transition countries are now in the second phase of the legal development process which involves a focus on granular improvements, filling in the gaps in their legal systems.

Current situation

Countries can be divided into three main regional groups in terms of the development of such legal infrastructure. Fairly sophisticated levels of development (with modern secured transaction systems in practice) can be found in central Europe and the Baltic states (CEB), eastern Europe and the Caucasus (EEC), south-eastern Europe (SEE) and Russia. The second group of countries (which includes countries in Central Asia) have implemented reforms but their systems have not lived up to expectations (especially as regards security over movable assets) on account of a lack of proper implementation, poorly drafted or incomplete legal provisions, or a lack of economic activity (which has limited the development of established practices). The third group are countries where collateralisation systems for movable property are based on variations of the French *fonds de commerce* – that is to say, they involve the pledging of business assets. This group includes countries in the southern and eastern

CHART A.2.1.1. Efficiency of secured transaction regimes



Source: EBRD Secured Transactions Assessment 2014.

[1] See, for instance, Armour et al. (2015).

Mediterranean (SEMED) and Turkey. Chart A.2.1.1 shows how these groups of countries compare in terms of the legal efficiency of their secured transaction regimes.

In contrast with the other countries examined, legal frameworks governing collateralisation have been in place in SEMED countries and Turkey since the beginning of the 20th century without interruption. However, these systems have not changed with the shifting business and economic landscape and are currently perceived to be highly inefficient. Land and buildings are often not registered or the relevant property rights are unclear or subject to complex and overlapping sets of rules, and none of the SEMED countries or Turkey has a modern all-encompassing law governing the provision of non-possessory security over movable property. Such a system would allow parties to establish security interests in respect of any type of movable property by simply registering a collateral agreement or adding a note in a central online register. Since certain frameworks have historic significance, it seems that decision-makers in these countries are faced with a choice between undertaking a general overhaul of the system and amending or fine-tuning the existing frameworks. These decisions will have to be made on a case-by-case basis. In this context, it is worth mentioning that Morocco has decided to carry out a general overhaul of its secured transaction system. Reviewing secured transaction systems and supporting other financing instruments (such as factoring) should be considered a priority for this group of countries.

Most of the countries in the first group now have modern central mortgage and pledge registries operating at a satisfactory level from a user's perspective. This means that financial institutions and investors have a public data source to rely on when making business decisions. By way of example, 16 of the 23 countries in this group offer direct or indirect online access to their land registries, with 14 countries doing so for pledge registries. The areas where countries differ most – and where major efforts should be made in the future – concern specific sophisticated products or transactions. These include the ability to use collateral managers in syndicated lending, the pledging of bank accounts, the provision of security in respect of accounts receivable (in particular, the requirement that all accounts receivable be specifically identified at the time of the creation of the security, which makes it impractical) and the extension of mortgage rights to cover developments in construction projects.

Second phase of the legal development process

In contrast with the first stage of the legal transition process, where the legal landscape for secured credit and other financial instruments was relatively uncharted territory, markets now require the improvement of existing systems, taking account of lessons learned from the financial crisis and general drafting or implementation flaws that have come to light through the use of existing instruments. There is also a need for the introduction and/or development of sophisticated legal instruments meeting various financial needs (as regards working capital, investment and capital expenditure, for example) or specific sectoral needs (in the case of agribusiness, for instance). This is true of all three groups of countries, whether it involves supporting the development of pre-harvest financing instruments in Russia, revising the post-harvest financing system (that is to say, grain warehouse financing) in Turkey or improving conditions for leasing services in Georgia or Mongolia.

The next few paragraphs look at local legislative initiatives aimed at facilitating the financing of particular sectors or introducing innovative instruments spanning the entire financial system.

Innovations in agricultural finance

Farmers in transition countries often have difficulty obtaining financing owing to their inability to provide creditors with acceptable collateral. Most common types of collateral, such as land or machinery, cannot normally be used for short-term finance. At the pre-harvest stage, this makes it difficult for farmers to secure affordable financing, exposing them to expensive and usually uncompetitive financing schemes offered by input suppliers or forcing them to make difficult choices as to what investment they can afford. Thus, insufficient liquidity causes under-investment in the agricultural sector, leading to lower levels of productivity and profit (as a result, for example, of a lack of high-quality inputs fostering productivity). At the post-harvest stage, only a robust public warehousing system for harvested crops would allow farmers to use stored crops as collateral.

Various countries have been exploring ways of overcoming these problems. One such initiative involves an innovative pre-harvest instrument colloquially called "crop receipts", which originated in Brazil and encourages the commercial financing of agricultural activities by the private sector. It currently supports financing operations with a total value of approximately US$ 20 billion a year.

A crop receipt system, which is structured around a dedicated law, establishes a standardised obligation to supply agricultural products or make future payments (to the holder of the receipt) in return for pre-harvest finance (either monetary or a payment in kind). This obligation cannot be altered or revoked under any circumstances (including *force majeure*) and can be incorporated in a tradeable paper, further increasing its market value. The obligation is also secured by collateral, particularly in the form of future agricultural products.

Serbia and Ukraine have recently been working on introducing crop receipt systems. A fully functional national system has been introduced in Serbia and a regional system has been developed in the Poltava region of Ukraine as a pilot for a national system. Under this pilot programme, crop receipts with a total value of around UAH 19 million were issued in the Poltava region in the first half of 2015. The two countries' authorities needed to ensure that the relevant legislation was drafted in a way that reflected international best practices but also corresponded well to the idiosyncrasies of the local legal systems. All major stakeholders (that is to say, banks, insurance companies and

agribusiness firms) provided input during the drafting of the legislation, which served as a starting point for the development of certain solutions. This legislation governs agricultural pre-harvest financing contracts, as well as the registration of such agreements, the settlement of creditors' claims (using future agricultural products as a form of non-possessory security) and special rights and obligations of the contracting parties (for example, rights and obligations relating to specific financing and enforcement mechanisms tailored to the Serbian and Ukrainian markets).

Warehouse receipts are another useful instrument, particularly for hedging against volatility in agricultural commodity prices after the harvest. Warehouse receipt financing requires a specific legal framework establishing the instrument and providing for quick and easy enforcement (typically out of court) for the crops. It should also clearly set out the rights and obligations of all parties and provide for the issuance and registration of the warehouse receipts, as well as adequate licensing, inspection and insurance for the warehouses. The licensed warehouses must meet certain minimum standards and need to be properly inspected on a regular basis, which enables participants to treat all warehouse receipts equally, regardless of which warehouse issued them. There also needs to be a performance guarantee system (in the form of an indemnity fund, for instance) to cover any losses, fraud or negligent behaviour by licensed warehouses. Since 2010 Bulgaria, Kazakhstan, Lithuania, Moldova, Poland, Romania and the Slovak Republic – and, more recently, Russia and Serbia – have all moved towards the implementation of warehouse receipt systems.

However, more still needs to be done to improve farmers' access to finance in the region. The passing of effective laws and regulations and the implementation of the required technology needs to be complemented by policy dialogue aimed at raising awareness of key issues among major stakeholders. This should help to reduce the risk of arbitrary interventions and policy changes, which could undermine trust in crop and warehouse receipt systems.

Financing working capital by selling receivables

Cash is vital for businesses, being used to pay staff wages, purchase stock and raw materials, fulfil tax obligations and pay other operating costs. Securing the working capital needed to finance regular business cycles is one of the most pressing issues facing businesses around the world. Recent banking crises and the resulting regulatory responses (which have made capital requirements more stringent) have severely limited the availability of working capital via bank credit. This has, in turn, exacerbated the late payment of accounts receivable, creating a vicious circle in the supply chain. Banks now require substantial guarantees as they have to comply with a number of new regulations, such as the capital and liquidity provisions in Basel III.

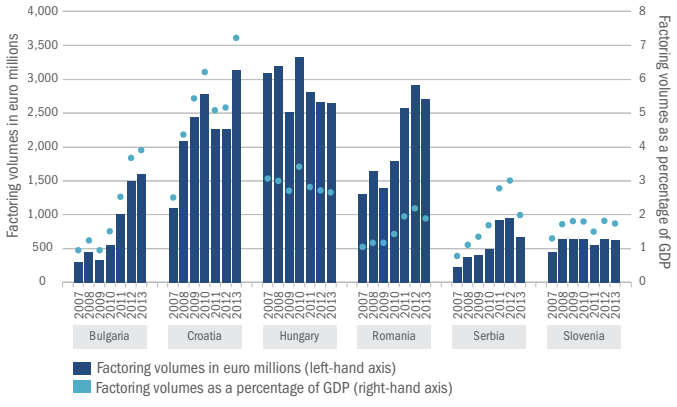
Small and medium-sized enterprises (SMEs) find it difficult to provide the required guarantees as they rarely have assets available for collateralisation (with long-term assets often being procured via leasing arrangements or already being used to secure existing bank loans). All of this has increased the need for alternative financing methods (such as factoring, which has steadily been increasing in transition countries; see Chart A.2.1.2).

Factoring – a financial service based on the sale of accounts receivable – is a useful financing tool giving SMEs (off-balance sheet) access to working capital. Its pricing is usually based on the creditworthiness (that is to say, the riskiness) of the relevant SME's major customers and is thus insulated from the usual problems associated with SME finance (namely, the asymmetry of information and the lack of appropriate security). As the use of factoring has increased in the EBRD's countries of operations, certain legal issues have become more prominent. These require special legislative attention in order to increase the efficiency and reduce the legal uncertainty of factoring transactions.

Exploration of the legal structures underpinning the factoring industry has intensified in the last couple of years. Several transition projects have been conducted in this area, including projects on the regulation of factoring in Croatia, Montenegro, Serbia and Tunisia (with projects being announced in other transition countries as well). Work on legal frameworks involves introducing clear and reliable rules to encourage the development of factoring services by increasing the legal certainty surrounding factoring transactions and improving regulation. Such work needs to ensure the stability and legitimacy of the industry but also avoid over-regulation, reflecting the low levels of systemic risk associated with factoring operations.

Typical legal issues include the treatment of recourse factoring in the event of the insolvency of the assigner, the impact on factoring of a ban on assignment clauses, the possibility of assigning future receivables and the effectiveness of electronic assignment. There are also a number of additional tax and regulatory challenges that are worth addressing. The lack of appropriate solutions to these issues has the potential to impair the development of factoring as it could make factoring technically impossible (for example, if the assignment

CHART A.2.1.2. Factoring volumes in selected countries



Source: Factors Chain International Annual Review 2014 and Eurostat.

TABLE A.2.1.1. Loans versus leasing

Bank loan	Financial leasing
Customer chooses asset	Customer chooses asset
Customer repays asset cost plus interest	Customer repays asset cost plus interest
Loan may be repaid early	Lease may be repaid early
Collateral recovered in event of default	Asset repossessed in event of default
Complicated process	Simple process
Extensive contract	Simple contract
Slower decision on risk	Faster decision on risk
Customer has ownership rights	Customer has usage rights

Source: EBRD.

of a future claim is not allowed), prevent the development of factoring companies (for example, if there is a lack of institutional support) or raise the cost of factoring transactions on account of the increased legal risks (for example, because courts have recategorised transactions owing to a lack of clear legal definitions).

Revisiting and fine-tuning established instruments

In addition to the exploration of innovative new legal instruments, the second phase of the legal transition process is also characterised by the revisiting and examination of legal solutions introduced in the past. Recent examples of such initiatives include a review of leasing legislation in Mongolia and the refinement of mortgage legislation in Serbia.

Leasing is a key source of investment finance for SMEs. The advantages of leasing for SMEs include:

- the opportunity to conserve cash for other purposes while increasing revenues (by acquiring assets without cash expenditure)
- potential tax benefits (owing to the depreciation of assets in line with outgoing payments)
- a reduction in – or absence of – collateral requirements (as existing company assets do not need to be encumbered)
- the technical support that accompanies leasing services, such as access to maintenance services, spare parts and technical advice (see also Table A.2.1.1).

The concept of financial leasing was introduced into the Mongolian legal system in 2006. However, by 2013, after seven years of practice, certain technical issues had emerged, with providers of financial leasing services in Mongolia taking the view that the law did not allow the full benefits of leasing to be reaped. The efficiency and legal certainty of leasing transactions were being undermined by ambiguous and incomplete drafting (which did not, for example, facilitate standard sale-and-lease-back transactions and made the repossession process fairly onerous for lessors). The legislation also lacked clear provisions regulating the transfer of risk. Following objections raised by market participants, with the support of international organisations, the Mongolian government launched a legislative reform in 2015 in cooperation with market participants with the aim of amending the legislation and resolving these issues.

A similar project – albeit in a slightly different area – has recently been concluded in Serbia. The country's Law on Mortgages, which was adopted in 2005, sought to establish a legal framework for mortgages on the basis of international best practices. The law introduced several new features, including an increase in the number of different types of object that could be mortgaged, the creation of a fast-track out-of-court enforcement procedure and the establishment of a central mortgage registry. However, by 2013, after eight years of practice, the law had proved to have a number of weaknesses. These ambiguities made it possible for mortgage debtors to obstruct the enforcement of their creditors' rights, which reduced lenders' confidence in the system and increased transaction costs. The Association of Serbian Banks had been arguing for a reform of that mortgage legislation since 2009 but without any success. Thanks to vocal support from international financial institutions, local banks eventually managed, in 2014, to get the authorities to reform the legislation with a view to tackling the problems which had arisen in the implementation of the law. Following extensive negotiations and dialogue with stakeholders, the Serbian parliament adopted amendments to the Law on Mortgages in June 2015. These amendments will increase the legal certainty surrounding mortgages and improve the efficiency of out-of-court enforcement mechanisms.

Conclusion

Legal transition is a continuously evolving process – changing and developing (and sometimes even regressing) in line with the shifting landscape in local markets. In many transition countries, markets and legislators are now ready to build on the systems that have been introduced in the past and focus on more sophisticated financial products. It seems that following the initial top-down transposition of basic internationally accepted lending techniques, a more organic bottom-up approach responding to the specific needs of particular countries will characterise legal technical assistance in the transition region in the coming years.

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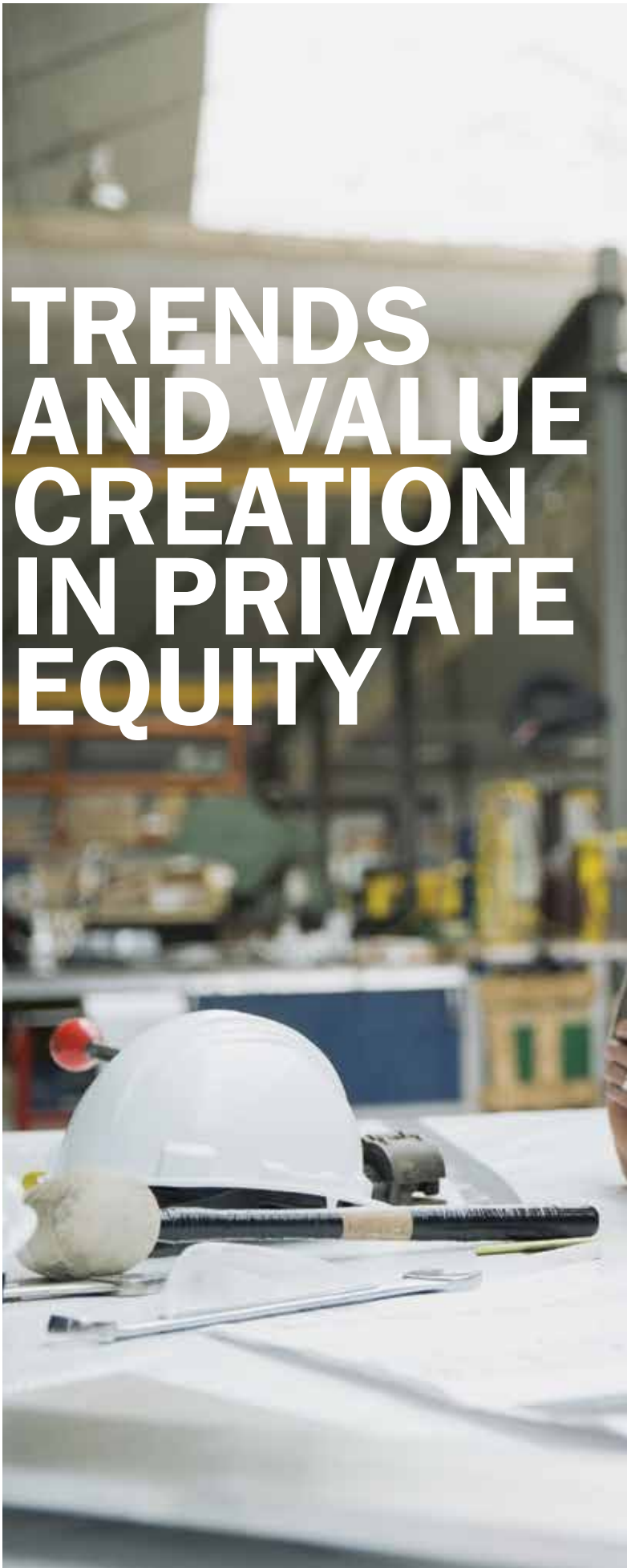


TRENDS AND VALUE CREATION IN PRIVATE EQUITY

Private equity can generate both financial value for investors and economic value for the companies involved. Despite the strong growth of private equity globally, the transition region receives only a small share of these global flows. Compared with advanced economies, private equity funds in the transition region rely less on debt financing and more on selecting high-growth companies and implementing operational improvements to create value.

Introduction

The transition region has benefited significantly from the rise of equity financing as an alternative and a complement to bank finance over the past 15 years. Public equity markets in the region have grown in size and liquidity, enabling companies to attract not only domestic savings but also capital from foreign investors.[1] In addition, increasing flows of foreign direct investment (FDI) have transformed economies into more efficient providers of goods and services, creating jobs and economic growth along the way.[2] However, a third source of equity finance – private equity – remains a relatively untapped source of funding. In theory, it has the potential to combine the appeal that public equity markets have for financial investors with the positive impact that FDI has on local economies. This chapter and the next one look at how private equity can achieve these objectives and how successful it has been so far.

"Equity financing" generally refers to financial instruments that result in investors sharing in the profits and losses of a business. Equity's risk-sharing function sets it apart from debt financing

[1] See Baele et al. (2015). The largest stock markets in the region, namely Poland, Russia and Turkey, each have a market capitalisation of well over US$ 200 billion. See also Box 4.1.
[2] See Estrin et al. (2009) and Javorcik (2015).

1%
OF GLOBAL PRIVATE EQUITY IS INVESTED IN THE EBRD REGION

SHARE OF GROWTH AND VENTURE CAPITAL IN THE EBRD REGION BY NUMBER OF DEALS BETWEEN 2009 AND 2014 INVESTED IN PRIVATE EQUITY

BETWEEN 2008 AND 2014 PRIVATE EQUITY CAPITAL INVESTED IN THE EBRD REGION TOTALLED
US$21.4 BILLION

and makes it attractive for certain types of investors and companies. From an investor's perspective, an equity investment in a company has the potential for significant capital gains if that company is successful. From the company's perspective, it provides an additional and longer-term source of capital to grow the business.

Private equity sits between public equity and outright ownership (for instance, as a result of FDI) in terms of the investment horizon and the degree of corporate control. It is a medium-term investment which does not have the liquidity or the short-term horizon associated with investing in publicly traded equities. In contrast with public equity, it ties the investor closely to the company through the acquisition of a significant equity stake that entails some control rights and membership of the board. This allows private equity investors to adopt a more hands-on approach when managing their investment and implementing operational changes at a company. It is similar to FDI in this regard but the investment is for a shorter period of time.

The objective of private equity investors is predominantly to generate capital gains and increase shareholder value. Private equity funds do this by identifying promising businesses, actively managing those businesses to improve efficiency, and selling them or floating them on public markets to realise financial returns. The fact that private equity funds aim to generate financial returns primarily through better management and efficiency – as demonstrated later in this chapter – means that they also generate economic value for the companies they invest in. While increasing shareholder value, private equity investment can also stimulate company growth, employment and productivity. Thus, private equity can, in principle, be an attractive source of capital for economic growth and transition. The next chapter documents these effects on individual companies and local economies in more detail.

This chapter assesses the role and performance of private equity in the transition region. Two stylised facts should be noted in this regard. First, the region attracts only a small share of all private equity capital that is invested globally. That share is, for instance, smaller than the region's shares of world output, FDI and portfolio investment. Second, the region's share of total private equity investment in emerging markets has been declining recently. Thus, it appears that private equity remains underutilised as a source of finance in the transition region. Moreover, the limited use of debt in private equity transactions in the transition region restricts returns to what can be achieved via revenue growth, so returns are lower than those seen in more developed economies.

What is private equity?

Private equity financing aims to fill the gap between internally generated financing and conventional market sources such as bank loans and public equity. It is risk capital provided outside public markets to companies with high levels of growth potential, start-ups, young companies at an early stage of development and, in some cases, companies that require a financial turnaround. Unlike most stock market investors, private equity investors typically acquire significant equity stakes that entail control rights and the right to nominate directors. As a result, they adopt a more hands-on approach when managing their investments.

A private equity fund is a collective investment scheme that typically attracts capital commitments from a variety of institutional investors (such as pension funds, endowment funds, banks and family offices), as well as the fund managers themselves. Private equity funds typically operate as a limited partnership, which is controlled by a private equity firm referred to as the "general partner". Investors that participate in the fund are called "limited partners" and they usually commit their capital for several "rounds" (or "closings"). The limited partnership is often set up for a fixed term of 10 years. The general partner typically makes investments in non-listed companies. Besides capital, the general partner provides investee (or "portfolio") companies with strategic and managerial support.

In addition to private equity investment, portfolio companies may also raise financing from banks. When a private equity fund finances its investment in a company with more debt than equity or cash, it is referred to as a "leveraged buyout".[3] Each portfolio company is managed by the fund for four to six years on behalf of the fund's investors and an exit is achieved when the fund is able to realise its investment. This takes place once the investee company has grown sufficiently or become financially sound and the fund is able to sell the company to a strategic investor (usually a company in the same industry), another private equity fund or a current shareholder in the company, or float it on the stock market via an initial public offering (IPO). Because each investment is highly risky, a private equity fund typically invests in 10 to 20 companies over the lifetime of the fund and seeks to achieve large returns on some exits to compensate for losses on others.

At a conceptual level, private equity addresses the market failure created by the "principal-agent problem" which can be observed in many companies. The motivations of public company managers and those of shareholders may not always be perfectly aligned. Instead, managers may act in their own best interests while shareholders fail to fully hold them to account. This is because shareholders are not as well-informed about the company as managers are. In addition, the dispersal of ownership makes it harder for shareholders to coordinate their actions and monitor the management.

In publicly traded companies, investors can simply sell their shares and move on if they believe that managers are not maximising the value of the company. In private equity, the problem is addressed by closely aligning the interests of managers and shareholders to achieve economic efficiencies.[4] A later section in this chapter looks at how private equity funds align these interests through close monitoring of companies, positions on the board and financial incentives given to company managers. In the transition region, supervisory boards play a crucial role in aligning the incentives of shareholders and management (see Box 3.1).

[3] In the United States, for instance, more than 60 per cent of a buyout is typically financed using debt. See Kaplan and Strömberg (2009).
[4] See Gilligan and Wright (2014).

BOX 3.1. A SURVEY OF BOARD MEMBERS IN THE TRANSITION REGION

The board of directors forms an integral part of a firm's governance mechanisms. Board members are appointed by shareholders to promote their interests and to supervise and advise the chief executive and other executive directors. In order to gain a better understanding of how boards operate in practice in transition countries, an electronic survey was recently sent to a large number of current and past EBRD board nominees (that is to say, board members nominated by the EBRD on account of its substantial equity stake in the relevant firm).

The aim of the survey was to collect information about how board members in various countries perceive their own role, the role of their board and the role of the legal and institutional environment. A total of 246 surveys were sent out and 131 complete responses were received. Around 25 per cent of respondents were female, about 55 per cent had prior board experience and around 45 per cent had prior experience in the relevant industry.

Board conduct

How do boards operate in practice? The survey indicated that members spent an average of 2.7 days a month on their duties, with the average board convening around five times a year and the average meeting lasting five hours.

More than 80 per cent of boards were perceived to set clear targets; 29 per cent of boards met without management and 20 per cent of boards held independent strategy "away days"; while 35 per cent of respondents felt that the board did not have a good understanding of the second level of management. In 16 per cent of companies the roles of chairman of the board and chief executive were combined. In the remaining 84 per cent of cases these roles were clearly separated, as one would expect in a well-governed firm. Taken together, these results suggest that interactions between the board and senior management vary across companies.

Distribution of power within the board

Who, in practice, has the power on companies' boards? The survey indicates that in 40 per cent of companies the board's agenda is set by the chairman of the board and in 12 per cent it is determined by non-executive directors. In the remaining 48 per cent of companies the board's agenda is actually wholly or partially set by management.

In 51 per cent of cases the board takes the final decision on strategic issues, in 42 per cent of companies it is the majority shareholder and in the remaining 7 per cent it is the management. New board members are typically proposed by shareholders and, to a lesser extent, by the chairman of the board or current board members.

The survey also asked whether the respondent had ever voted against board proposals. Around a third reported that they had never voted against a proposal. This is not necessarily a bad thing, as it is quite possible for disagreements to be discussed and cleared up in the boardroom without a formal vote taking place. Almost 70 per cent of the surveyed board members indicated that they voted against board proposals either rarely or sometimes, suggesting that voting is resorted to where necessary.

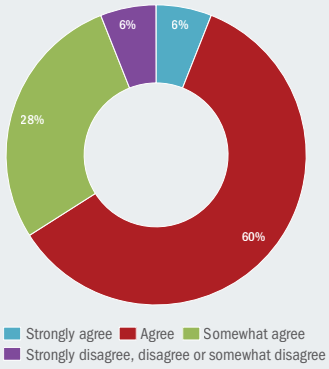
Institutional quality

Does local legislation across the transition region sufficiently empower board members to fulfil their roles? Just under 6 per cent disagreed with this statement, 28 per cent somewhat agreed and 66 per cent agreed or agreed strongly (see Chart 3.1.1). Interestingly, regression analysis points to a strongly significant negative correlation between the likelihood of voting against board proposals and board members' judgement on whether local legislation gives them enough power to fulfil their role (while controlling for other director and industry-level characteristics). Thus, the greater the perceived strength of local legislation, the less a board member feels the need to vote against board proposals. This suggests that board members can function in a less confrontational manner when formal legal institutions provide them with sufficient backing.

Lastly, the survey also presented board members with a case study about a hypothetical conflict between shareholders and the board.[5] Respondents were then asked whether they thought that the courts in their respective countries would rule fairly and objectively in this case. The opinions were divided: around half of all board members said they did not think that this would happen.

Overall, the results of this survey suggest that in order to further empower board members, it may be useful in some cases to distinguish more clearly between the responsibilities of executive management and the supervisory board, and in some countries there is a need to strengthen the legal framework governing boards of directors.

CHART 3.1.1. Does local legislation sufficiently empower you to fulfil your role as a board member?



Source: EBRD survey.

[5] There have been a number of high-profile disputes involving disagreements between shareholders (and their representatives on the board) and the company's chief executive (who may potentially represent one particular shareholder). Examples include TNK vs BP in TNK-BP in 2008, Altima/Alfa vs Telenor in Vympelkom and Interros vs RUSAL in Norilsk Nickel.

Recent trends in private equity

Private equity has grown steadily as a global asset class over the last two decades. In mid-2014 the total value of assets under management by private equity funds stood at more than US$ 2.5 trillion, while an estimated US$ 1 trillion of "dry powder" remains available to invest in companies.[6]

The transition region saw the first signs of private equity activity in the early 1990s, with funds supported by government agencies (such as the early enterprise funds led by the United States) as well as funds supported by international financial institutions such as the EBRD (which helped to set up regional venture funds in Russia and post-privatisation funds in central Europe). Since then, many new players have entered the market and some of them have successfully raised follow-on funds.

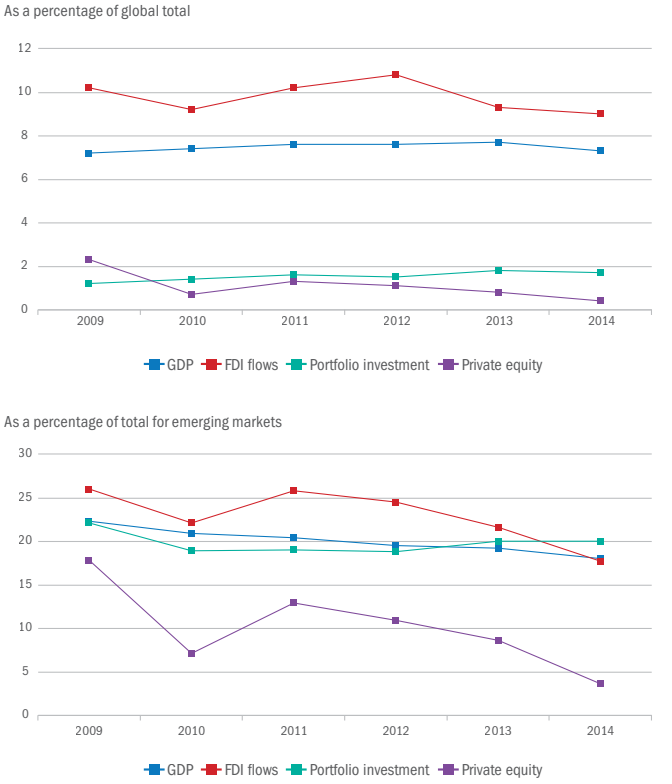
The rise of private equity activity in the region reflects the rapid economic growth seen in the early 2000s, which was accompanied by rising consumer wealth and the EU accession of countries in central and south-eastern Europe. However, it has failed to match the (even stronger) increase seen in FDI inflows or the growth of private equity investment in emerging markets globally. Indeed, total investment by private equity firms in emerging markets worldwide stood at US$ 35 billion in 2014, a five-fold increase on the US$ 7 billion that was recorded in 2004.[7]

These disparities have become more pronounced since 2009. During this period, the EBRD's countries of operations have only attracted around 1 per cent of global private equity investment (see upper panel of Chart 3.1). This is a relatively small share for a region that accounts for around 7 per cent of world output and receives around 10 per cent of global FDI inflows. The region's share of global portfolio inflows (which include cross-border purchases of public equities and sovereign and corporate bonds) is much smaller, at around 2 per cent, but still larger than its share of private equity. Thus, the region has been much more successful at attracting FDI and investment in traded securities than it has at attracting private equity.

In fact, the region's share of global private equity flows has been declining in recent years. Prior to the global financial crisis, the region accounted for close to a fifth of all capital invested by private equity funds in emerging markets. By 2014, however, this share had dropped below 10 per cent (see lower panel of Chart 3.1). This decline has been mirrored by a similar decline in the region's share of FDI flows to emerging markets. These trends suggest that international investors are currently reluctant to commit long-term funds to the region, despite the fact that the region has become more successful at attracting shorter-term portfolio investment flows.

As a result, levels of private equity investment in the EBRD region remain very low indeed as a percentage of economic activity (see Chart 3.2). While private equity investment totals more than 1 per cent of GDP in the United States, the United Kingdom and many other large developed economies (and even more in smaller developed economies such as Israel), in Poland, Russia and Turkey (the main destinations for private equity investment in the transition region) private equity capital totals less than 0.1 per cent of GDP. This is significantly lower than the corresponding ratios in emerging markets such as Brazil

CHART 3.1. Private equity activity and capital flows into the EBRD region, 2009-14



Source: GDP figures from Euromonitor International (data derived from national statistics, Eurostat, OECD, UN, IMF and UNCTAD); FDI data from International Financial Statistics; portfolio investment figures from IMF Coordinated Portfolio Investment Surveys; private equity data from Asia Private Equity Review, EMPEA, EVCA and PitchBook.

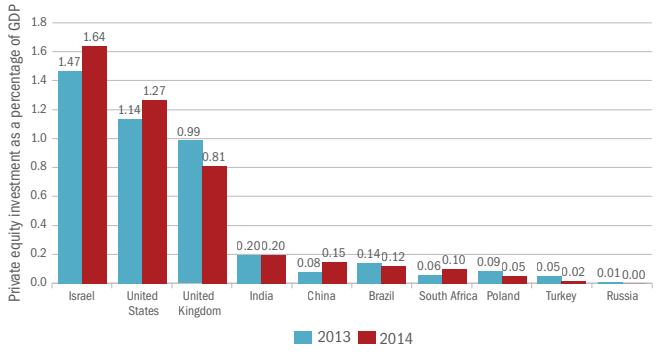
BETWEEN 2009 AND 2014 GROWTH CAPITAL AND VENTURE CAPITAL MADE UP

47%

OF PRIVATE EQUITY INVESTMENT IN THE EBRD REGION IN VALUE TERMS

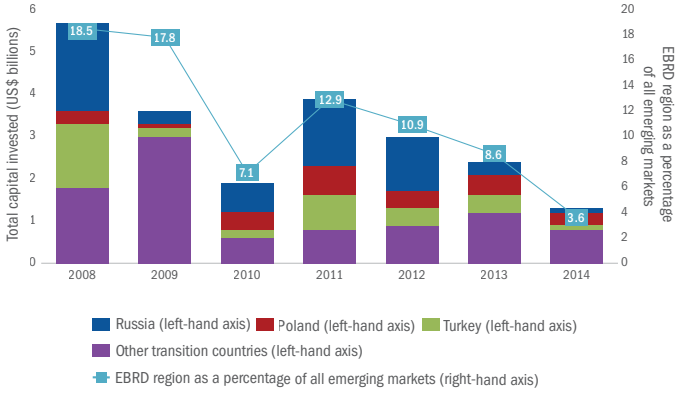
[6] See Preqin (2015).
[7] Emerging Markets Private Equity Association (EMPEA) industry statistics, 2015.

CHART 3.2. Global private equity penetration, 2013-14



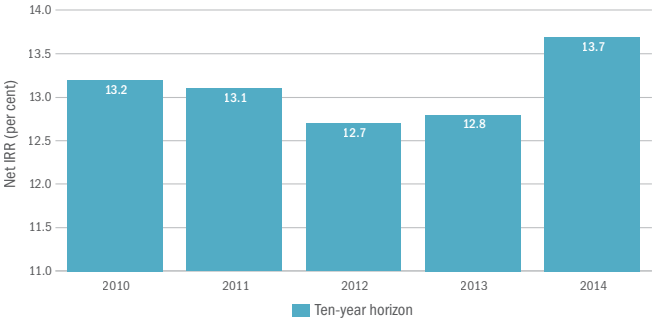
Source: EMPEA, Centre for Management Buy-Out Research, PitchBook, Israel Venture Capital Research Center and IMF.

CHART 3.3. Private equity inflows across the EBRD region, 2009-14



Source: EMPEA.

CHART 3.4. Annual private equity returns in the EBRD region



Source: EBRD.
Note: Ten-year horizon returns reflect the return from selling a portfolio of funds that are purchased ten years prior to the indicated year, and are reported in US$ as at year-end. Figures reflect pooled end-to-end returns, net of fees, expenses and carried interest.

and India. This suggests that there is significant potential for further leveraging the economic value created by private equity funds in terms of employment and output growth (as discussed in the next chapter).

Private equity investment in the region initially bounced back after the crisis but it has been declining since 2011. This decline, relating to private equity flows to other emerging markets, largely reflects weaker private equity activity in Russia (see Chart 3.3), changes to the pension system in Poland (see Chapter 4) and a slowdown in economic growth across the region as a whole, as economies have been affected by falling energy prices, the political turmoil surrounding Ukraine, the sluggish growth in the rest of Europe and cross-border deleveraging, resulting in low or negative rates of credit growth (see also Chapter 2 and the Macroeconomic Overview).

This may explain why private equity returns in the region have fallen short of investors' targets. In developed economies, investors typically seek annual returns in excess of 15 per cent (net of fees) to compensate for the long-term nature of investments.[8] Net horizon returns in emerging Europe, however, have been around 13 per cent in recent years (see Chart 3.4). Moreover, net returns had been on a downward trajectory for several years before they started to recover.

In addition to these cyclical factors, structural factors also help to explain the generally low levels of private equity activity in the EBRD region. For instance, concerns regarding the quality of institutions, weak legal protection of minority shareholders and poor corporate governance in some countries may discourage private equity investors, while poor contract enforcement could limit private equity funds' ability to assert control over the management of investee companies (see Chapter 4). Such institutional weaknesses may affect the ability of private equity funds to improve companies' performance and generate financial returns.

[8] See Gompers et al. (2015). Private equity funds typically charge their investors (that is to say, limited partners) a 2 per cent management fee on capital deployed and retain 20 per cent of capital gains over a certain return threshold promised to their investors, which is usually set at 8 per cent. Taking this into account, the targeted return in gross IRR terms is around 20-25 per cent.

How do private equity funds create value for investors?

Financial, governance and operational engineering

Private equity funds typically generate returns in three ways: through financial engineering, governance engineering and operational engineering.[9] Private equity funds differ from each other in the way that they finance their investee companies. Some funds (referred to as "buyout funds") predominantly acquire controlling stakes in established companies and actively use debt to finance parts of these acquisitions. Such *financial engineering* – the active use of debt financing in buyout transactions – tends to increase financial discipline in investee companies, which face pressure to make repayments on time. Thus, it improves the efficiency of cash flow management. Leverage can also add to firms' value, as interest payments on loans are tax deductible in many countries.[10,11]

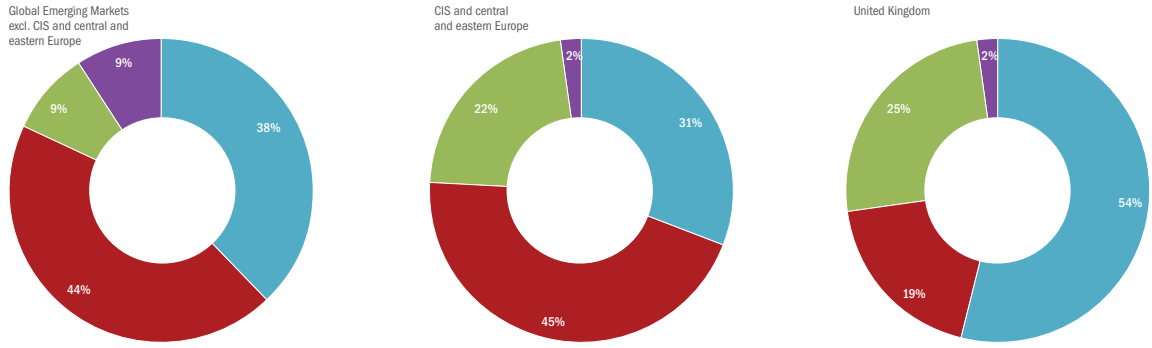
Other forms of private equity – such as growth capital funds and venture capital funds – typically use only equity or cash to fund their investment in companies. Growth capital funds often acquire minority shares in relatively mature companies that are seeking to expand or restructure their operations or enter new markets. Venture capital funds, on the other hand, typically acquire minority stakes in young companies. They may also provide seed capital for research and development (R&D) or start-up capital for product development and the commercialisation of research output. These types of fund tend to focus on governance and operational engineering.

In *governance engineering*, private equity funds maintain a tight grip on the boards of the companies they invest in and make changes to the management of these firms. They closely monitor the performance of companies' managers, possibly giving them strong financial incentives in the form of stock options in the company.[12] Holding stock options – which can only be cashed in when the controlling fund withdraws – helps to focus managers' attention on longer-term objectives. On the other hand, poorly performing executives may also be replaced.[13]

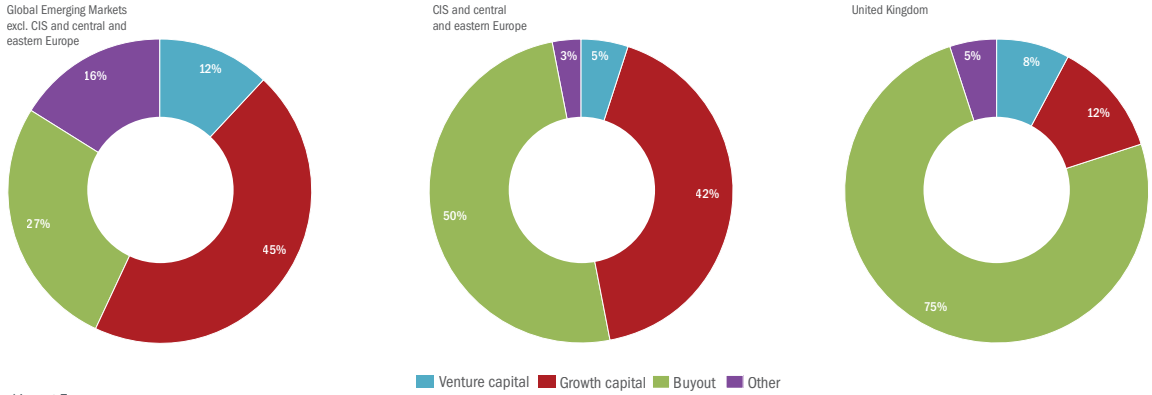
In *operational engineering*, private equity funds engage in active cost cutting and market repositioning at investee companies or scale up capital investments and sales. They may also grow their investee companies through the acquisition of other companies. Other measures include the improvement of both inventory management and relations with customers and suppliers to reduce working capital requirements. This strategy is dependent not only on the ability of funds to successfully implement operational changes, but also on their ability to identify

CHART 3.5. Percentage breakdown of private equity deals by type of fund, 2009-14

Panel A: Number of deals



Panel B: Total capital invested



Source: EMPEA and Invest Europe.
Note: Growth capital funds include mezzanine transactions. Venture capital funds include seed, early-stage and late-stage transactions. "Other" includes private investment in public equities, rescue/turnaround capital and replacement capital.

[9] This classification is taken from Kaplan and Strömberg (2009).
[10] "Leverage" refers to the idea that returns or losses on an investment can be amplified when borrowed money is used alongside an investor's equity to invest in a company.
[11] See Kaplan and Strömberg (2009). Beyond a certain point, higher levels of leverage can also increase the risk of financial distress and weigh on company valuations.
[12] A recent survey of private equity funds based in the United States has found that funds prefer small boards of directors (typically between five and seven members) and a mixture of existing company management and outsiders who are not affiliated with the fund. They also allocate an average of 17 per cent of company equity to management and employees. See Gompers et al. (2015).
[13] See Cornelli et al. (2013).

companies where such improvements will generate large returns.

Private equity funds tend to view operational and governance engineering as their main strategies, although they also use financial engineering.[14] In fact, most top private equity firms now focus on particular industries and they often hire professionals with specific industry expertise.[15] While financial engineering strategies are easier for competitors to imitate, management expertise and sector-specific know-how are scarce and unique. This gives the private equity firms that have them an important competitive edge.

WHEN IT WAS FLOATED ON THE NASDAQ IN 2011 THE MARKET VALUATION OF YANDEX WAS

US$8 BILLION

How do equity funds create value in the transition region?

Private equity investment in emerging markets tends to make less use of leverage. This largely reflects the fact that financial leverage tends to be favoured in buyout deals, which focus on mature and older companies that are in need of restructuring, and these are more commonly found in advanced economies. In emerging Europe and Central Asia, buyout deals accounted for around 20 per cent of deals and around half of all capital invested over the period 2009-14. This was higher than in other emerging markets but slightly lower than in developed economies such as the United Kingdom (see Chart 3.5).

Most of the private equity investment in the region involved growth capital and venture capital (which accounted for 76 per cent of deals and 47 per cent of all capital invested). This was slightly lower than in other emerging markets but higher than in the United Kingdom. Instead of focusing on a single investment type, most private equity funds in the region invest in a combination of buyout, growth and venture capital deals.

The differences partly reflect the fact that the number of suitable targets for buyout funds – mature companies with good restructuring potential – is smaller in the region where the EBRD invests. In addition, the higher cost of debt, the less developed credit markets and the immaturity of secondary markets in the region all combine to make buyout deals less feasible.

The resulting focus on operational and governance engineering may in fact be beneficial for economic development. Operational engineering leads to more efficient use of scarce resources – both within companies and across economies as a whole. Meanwhile, governance engineering ensures that economic returns are passed on to shareholders rather than being appropriated by managers – a major problem faced by many transition economies in their early privatisation programmes (see also Box 3.2).[16]

However, the focus on operational and governance strategies may also make it more difficult to achieve targeted returns on investment. For instance, strategies that rely on sales growth naturally favour certain industries (such as consumer services) and countries with large domestic markets such as Brazil, China, India, Russia and Turkey. In smaller countries, increasing sales growth will often entail breaking through into export markets. This is the case for most countries in the transition region.

Strategies focusing on governance engineering may be hindered by the poor quality of economic institutions. For instance, private equity investors in countries with civil law or socialist legal backgrounds – which includes most of the EBRD region – or countries where legal enforcement is difficult are more reliant on obtaining majority control (which typically also requires greater use of debt to finance acquisitions) as well as stronger representation on the board of the company.[17] In this way, investors use ownership to overcome problems relating to the lack of enforcement of contracts. However, if managers of investee companies are forced to give up ownership rights and control, their incentives may become misaligned with those of the private equity funds, limiting the success of governance engineering strategies.[18]

What explains financial returns on private equity?

Private equity funds tend to outperform public equity markets.[19] This suggests that these funds succeed in translating their operational and governance engineering strategies into financial returns for investors. However, critics of the private equity industry point out that private equity funds may simply time their investments well (for instance, taking advantage of low borrowing costs to increase leverage) and have access to superior information that allows them to select firms with good prospects while contributing little or nothing to the firms' operational performance.

This section looks at whether private equity investment in the transition region has delivered returns in excess of market benchmarks and, if so, whether these "excess" returns are explained by financial leverage, the timing of investment or improvements in the way that firms are managed. This analysis uses data on 291 investments carried out by 99 private equity funds that the EBRD participated in between 1992 and 2013. The data cover a variety of funds, including buyout, growth capital and venture capital funds, and correspond to a small subset of the EBRD's investments in private equity funds in the region.

The contribution that operational improvements make to overall returns (referred to as "private equity alpha") is measured using a three-stage approach (as pioneered by Acharya et al. [2013], see Box 3.3). First, an IRR is calculated for each investment on the basis of gross cash flows (that is to say, cash flows before fees).[20] Second, the analysis identifies the component of this return which is due to the use of debt, which has the additional advantage of being tax deductible. Third, the remaining component (referred to as the "unlevered return")

[14] See Gompers et al. (2015).
[15] See Kaplan and Strömberg (2009).
[16] See Estrin et al. (2009).
[17] See Lerner and Schoar (2005).
[18] See Lerner and Schoar (2005).
[19] See Harris et al. (2014) and Gompers et al. (2015).
[20] See Box 3.3 for a technical description of the methodology employed. The IRR is defined as the discount rate that would make the present value of all cash flows equal to zero; it takes account of the timing of cash flows.

BOX 3.2. HOW DOES EQUITY INVESTMENT CONTRIBUTE TO ECONOMIC DEVELOPMENT?

Equity investment enables shareholders to adopt a long-term and hands-on approach in their investee companies, fostering sound corporate governance and transparency, making appropriate contributions to business strategy and optimising management. This is the primary effect of equity investment. Crucially, however, it also contributes to the transfer of skills and has positive demonstration effects in terms of the development of local capital markets and competitive market-oriented behaviour. For instance, equity investment typically aims to use growth capital injections, IPOs and private placements, privatisation and restructuring efforts, and sectoral consolidation as entry and exit strategies for target assets.

Earlier experience in Russia and more recent transactions in Turkey demonstrate the transformative potential of equity investment for individual companies and domestic capital markets. The Baring Vostok Private Equity Fund, which closed in 2001 and focused primarily on medium-sized companies in Russia and other parts of the former Soviet Union, is a prime example of this. The fund's investment strategy revolved around the acquisition of majority or substantial minority stakes in companies in a wide range of sectors, with the primary goal of achieving value creation through growth and improvements in corporate governance.

One of the fund's earliest investee companies, a leading Russian IT firm, underwent a transformational expansion during the fund's holding period. Indeed, the fund successfully floated its principal asset, Yandex, on the NASDAQ in 2011 with a valuation of US$ 8 billion. In 2003 the fund invested in Europlan, an automobile and truck leasing company that has since grown into a strong player in the highly competitive Russian market. Under the fund's tutelage, the company launched new products and diversified its funding base through the issuance of bonds, fuelling growth in its market share and allowing it to serve small and medium-sized enterprises (SMEs) across the country.

At the same time, the fund managed to retain and expand its best-in-class investment team at a time when increased competition levels were being observed in the region. The follow-on fund attracted capital from institutional investors around the world and it is now in the top quartile of the best-performing funds in the Commonwealth of Independent States. From the perspective of private-sector development, the successful financial performance of both the fund and its investee companies has created positive demonstration effects for both entrepreneurs and investors focusing on the region. Just as importantly, the dissemination of best practices in terms of value creation and corporate governance to a wider range of industries and market players has helped to strengthen the region's business climate and competitive environment.

In 2011 the EBRD invested in Turkasset (formerly LBT), an asset management company in Turkey that focuses on acquiring and working out distressed and non-performing loans (NPLs) from banks and other financial institutions in the country. The firm was one of six asset management companies that were licensed by the Turkish banking regulator in the country's nascent market and it was majority owned by Actera Group, a leading private equity firm in Turkey. The EBRD's investment rationale spanned considerations at three levels: firms and SMEs across the country, the banking sector and the company itself.

SMEs and other firms with outstanding debt burdens often find it difficult to obtain working capital or effectively redeploy their productive assets. Asset management companies are more constructive than banks when it comes to reaching agreements with borrowers, which allows companies to reopen banking relationships. Banks vary in terms of their expertise in dealing with NPLs and their willingness to effectively address this problem, with moral hazard being their main concern. In addition to being relieved of this burden through the sale of NPLs – since most NPLs acquired by asset management companies in Turkey have already been fully provisioned or written off by the originating lenders – the banks are able to take the proceeds from the sale of the NPLs and the equity that is freed up and leverage it for more lending to the real economy.

Backed by the EBRD's investment, the company was able to embark on a growth strategy, consolidating its market position and creating value for its shareholders by differentiating its services from those of its competitors, putting strong corporate governance and collection practices in place and optimising its operational know-how and infrastructure.

The transaction has had a positive impact in a number of areas. The company played a major role in the establishment of an industry association for asset management companies in Turkey, creating a platform fostering dialogue between market players and communication with regulators, policy-makers and the public. In addition, the firm continues to use sound and ethically acceptable collection methods, as exemplified by the fact that physical collections are avoided and physical meetings with clients are held only at the company's offices, with recording for training and quality control purposes. In 2013 and 2014 the company was the subject of hardly any complaints by customers/borrowers and there were no material complaints or penalties from the regulator.

The company continues to purchase portfolios from a widening range of Turkish banks to increase its coverage and diversify its exposure, thereby helping to expand the NPL acquisition market and encourage more banks to sell their portfolios. In 2014 Turkasset spent TRY 182 million on purchasing the unpaid balances of NPL portfolios, up 53 per cent from 2013. In addition, since 2012 (when the Capital Markets Board of Turkey authorised Turkasset to issue corporate bonds to finance its NPL portfolio purchases) the company has issued a total of TRY 376 million of bonds with varying maturities and contributed to the deepening of the Turkish corporate bond market (particularly for non-bank issuers).

is compared with the performance of a public stock market index (which is similarly stripped of the effect of leverage).[21] The performance of the equity market benchmark captures the effect that the timing of the investment has on the realised return. The remaining component, "private equity alpha",[22] captures the extent to which the investment outperforms the stock market index after the effects of financial leverage have been removed. It shows the value of operational improvements that can be attributed to private equity activity and the ability of private equity funds to identify firms with good prospects.

What drives financial returns: leverage, timing or efficiency gains?

Private equity investments included in the analysis have averaged a gross IRR of 17.7 per cent over the last two decades – although just over 10 per cent of investments have been written off, having delivered no returns at all. In fact, the percentage of write-offs is slightly higher than the average figure observed in developed economies, but so is the average return.[23]

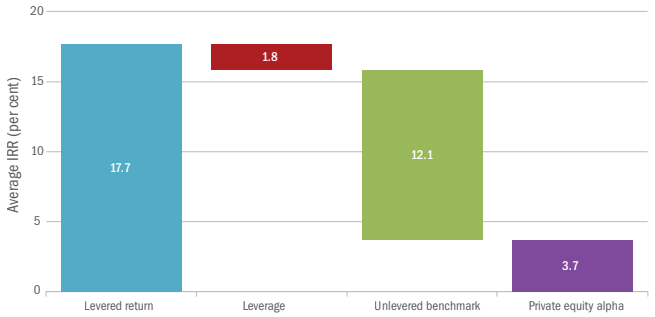
What drives this profile, with its greater risks and higher returns? The breakdown of returns reveals that, on average, around 1.8 percentage points (out of the total return of 17.7 per cent) can be attributed to the use of financial leverage (see Chart 3.6). This is lower than in the United States and western Europe where financial leverage accounts for around half of all returns.[24] Thus, financial leverage plays a relatively small role in generating returns in the EBRD region.

A large share of the return (12.1 percentage points) is due to increases in market valuations during the period of investment – in other words, due to the timing of the investment. Lastly, the remaining portion of the return (3.7 percentage points) is due to actual operational improvements. This is slightly smaller than the figure observed in developed economies where operational improvements produce sizeable returns for private equity funds.[25]

These results suggest that private equity funds operating in the transition region achieve similar results in terms of operational improvements in investee companies to their peers in advanced economies. However, their overall returns are lower than those of US-based funds owing to their modest use of financial leverage.[26]

Within the transition region, leverage plays a relatively more important role in central Europe and the Baltic states (CEB), accounting for close to a fifth of average returns while in Russia and south-eastern Europe (SEE) it plays a minimal role. This reflects the more highly developed financial systems in the CEB region. Indeed, buyout funds – which are more reliant on external financing – are becoming increasingly common in these countries. At the same time, operational improvements make a greater contribution to overall returns in Russia and the SEE region, possibly reflecting the greater risks involved in investing in these regions.

CHART 3.6. Decomposition of private equity returns in the EBRD region



Source: EBRD.
Note: Gross returns reported. The IRR is defined as the discount rate that would make the present value of all cash flows equal to zero; it takes account of the timing of cash flows and represents the return on an investor's investment in a private equity fund. The estimates are based on a subset of investments by private equity funds that the EBRD participated in between 1992 and 2013.

Timing also plays a prominent role in creating financial value in the CEB region, explaining more than half of returns. This reflects the more developed capital markets in the CEB region that facilitate exits from private equity investments (see Box 4.1). For instance, Poland had the largest number of IPOs in Europe every year from 2009 to 2012. On average, however, exiting investments via IPOs is still more difficult in the CEB region than it is in advanced economies. The most common exit route in both the EBRD region and advanced economies is the strategic sale, in which a private company (possibly in a similar industry) purchases the investee company in order to expand its own business or exploit the complementarity of products.[27] The greater presence of European multinationals also makes this exit route easier in the CEB region.

1,057

PRIVATE EQUITY DEALS WERE CONDUCTED IN THE EBRD REGION BETWEEN 2008 AND 2014

[21] The benchmark return is the annualised buy-and-hold return for the MSCI Emerging Markets Total Return Index during the holding period of each investment. It is unlevered using the debt positions of listed companies from similar sectors in the region (see Box 3.3). In order to unlever the benchmark return, the sector's average debt-to-equity ratio is calculated for the three-year period starting at the time of the deal.
[22] This terminology is taken from Acharya et al. (2013).
[23] See Lopez de Silanes et al. (2013).
[24] See Acharya et al. (2013) and Puche et al. (2015).
[25] See Acharya et al. (2013).
[26] See Puche et al. (2015) for evidence from emerging Europe and emerging Asia.
[27] See Kaplan and Strömberg (2009).

Operational improvements contribute the least to returns in financial services (see Chart 3.7). However, absolute returns have been lowest in manufacturing across different industries as leverage and market timing play a limited role, whereas leverage and market timing are relatively more instrumental in driving returns in other industries.

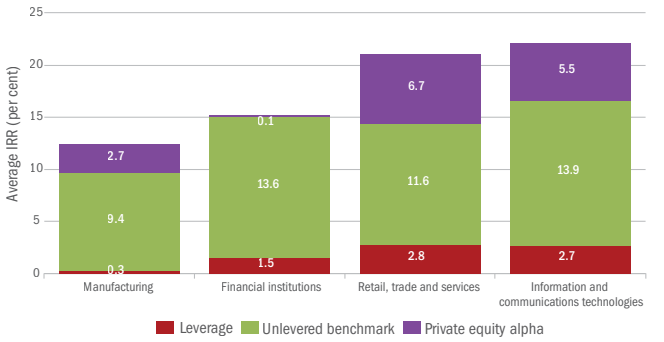
Further analysis suggests that timing seems to matter more for smaller deals than large-cap deals. Even so, a considerable share of value creation comes from operational improvements, regardless of the size of the deal.

Returns by deal type and investment strategy

As indicated earlier in this chapter, growth capital and venture capital funds are more prevalent than buyout funds in the EBRD region. However, analysis reveals that buyout deals have delivered by far the highest levels of absolute returns. This is consistent with global trends as buyout funds have generally delivered better returns than venture capital funds since the bursting of the dot-com bubble of 1999-2001.[28] The difference is largely explained by the use of financial leverage, which accounts for 45 per cent of buyout investment returns in the transition region (see Chart 3.8) while returns on growth capital investment have been driven primarily by the timing of the investment.

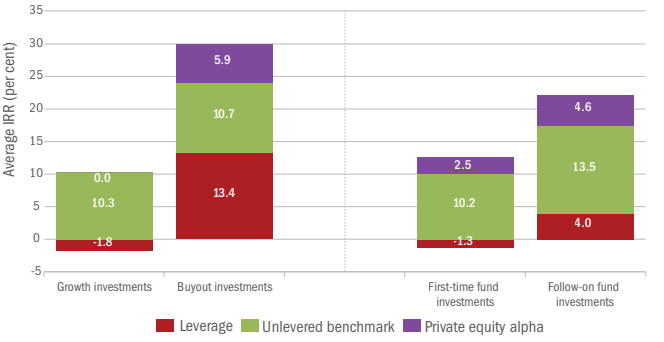
The equity funds in the sample are at different stages of their lives and investment cycles. Successful private equity firms often raise follow-on funds with larger capital commitments from their investors. Applying the breakdown to investments made by first-time and follow-on funds separately reveals that investments made by follow-on funds deliver higher absolute returns (see Chart 3.8). This is partly due to the fact that many follow-on funds were raised and disbursed during the period of abundant global liquidity prior to 2009 – leverage contributed to returns during that period and public equity markets in the region performed remarkably well. Furthermore, investments made by larger funds have tended, on average, to deliver higher absolute returns, mostly due to the greater impact of operational improvements (see Chart 3.9).

CHART 3.7. Private equity returns by sector



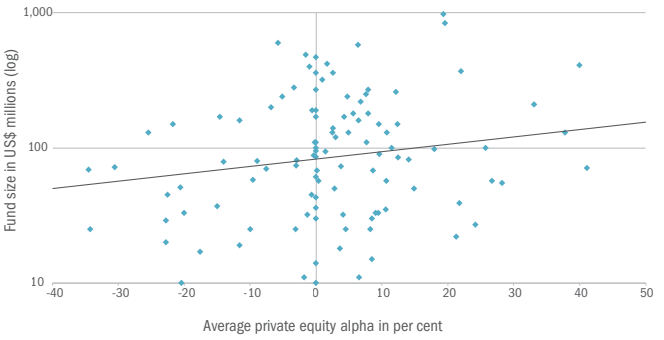
Source: EBRD.
Note: Gross returns reported. The estimates are based on a subset of investments by private equity funds that the EBRD participated in between 1992 and 2013.

CHART 3.8. Private equity returns by type of deal



Source: EBRD.
Note: Gross returns reported. The estimates are based on a subset of investments by private equity funds that the EBRD participated in between 1992 and 2013.

CHART 3.9. Operational improvements and fund size



Source: EBRD.
Note: Each data point denotes an individual private equity fund.

[28] See Harris et al. (2014).

TABLE 3.1. Sources of operational improvements

Dependent variable	(1) Private equity alpha	(2) IRR	(3) PME
Change in sales	0.1111*	0.1391*	0.6580***
	(0.0602)	(0.0754)	(0.2401)
Change in EBIT margin	-0.0406	0.0382	0.2707
	(0.0873)	(0.1128)	(0.3943)
Change in EV/EBIT multiple	0.0015	0.0036	0.0084
	(0.0019)	(0.0022)	(0.0072)
Deal value *(log)*	0.0036	0.0253	0.0356
	(0.0146)	(0.0189)	(0.0674)
Duration	-0.0265***	-0.0520***	-0.1057***
	(0.0082)	(0.0124)	(0.0309)
Constant	0.2804***	0.3633*	1.5254***
	(0.0713)	(0.1949)	(0.3428)
Entry period dummies	Yes	Yes	Yes
R^2	0.2777	0.4247	0.2571
Number of deals in the regression	180	180	180

Source: EBRD, Orbis and authors' calculations.
Note: The values indicate how a percentage change in each variable affects a percentage change in the dependent variable. Standard errors are reported in parentheses. *, ** and *** denote values that are statistically significant at the 10, 5 and 1 per cent levels respectively. "PME" means "public market equivalent"; "EV" means "enterprise value". For unlisted investments in the sample, a matched sample of five listed companies from the region is used to calculate an average multiple, which is then multiplied by EBIT to reach EV. Changes in sales, EBIT margin and EV/EBIT multiple are adjusted by subtracting the average change in these measures in similar companies listed in the EBRD region over the same time period. In particular, each private equity investment is matched with five listed companies from the region which are similar in terms of sector, total assets and investment year; the average change in operating measures for these companies is subtracted from the investments for which the private equity alpha is measured.

Drivers of operational improvements

There are three basic channels through which operational engineering carried out by private equity funds increases returns: revenue growth, improvements in sales margins and increases in the value of companies. Revenue growth is a strategy that is especially popular in emerging markets.[29] Funds can, for instance, help investee companies increase their sales by providing advice on product positioning and market knowledge. Private equity funds also rely on improving sales margins in investee companies, essentially aiming to generate a higher percentage of earnings for each dollar of sales.[30] This strategy typically focuses on cost cutting and efficiency improvements. Lastly, private equity funds can add financial value to their investments by exiting at a time when potential buyers value the company highly – for instance, owing to the attractiveness of the relevant industry ("multiple expansion").[31] Returns can also reflect the bargaining power of the private equity fund in relation to its investee company at the time it made the investment, since it will have tried to secure a share of the company's assets for as low a price as possible.

Regression analysis is employed in order to understand how each of these strategies affects private equity alpha (see Table 3.1). The analysis takes into account the year in which investments were made, the duration of each investment, the size of the investment and the performance of similar companies that are publicly listed. The results confirm that growth in sales is the primary driver of private equity returns (column 2) and the component of returns relating to operational improvements (column 1). This highlights the value of private equity funds providing investee companies with guidance in order to reach larger numbers of customers. In other words, this additional revenue growth enables private equity funds to deliver returns in excess of what can be achieved by simply investing in stock market indices in the relevant emerging markets.[32] Moreover, further analysis (not reported) shows that revenue growth remains the key driver of returns regardless of whether a private equity fund is experienced, large or focused on a single country.

ON AVERAGE 11%
OF PRIVATE EQUITY RETURNS IN THE EBRD REGION CAN BE ATTRIBUTED TO THE USE OF LEVERAGE

[29] See Gompers et al. (2015).
[30] Sales margins are typically measured as a ratio of EBIT (earnings before interest and taxes) or EBITDA (earnings before interest, taxes, depreciation and amortisation) to revenues.
[31] Valuation multiples are typically measured as a ratio of company value to EBIT or EBITDA.
[32] Column 3 in Table 3.1 shows that revenue growth is positively correlated with a higher PME. The PME benchmarks the return on a private equity investment against a hypothetical investment in the MSCI Emerging Markets Total Return Index over the same period of time.

Conclusion

Private equity funds can contribute towards a more diverse financial infrastructure, which can have a positive impact on economic growth and efficiency. They can provide their investee companies with both long-term risk capital and industry expertise. The evidence in this chapter suggests that they may be able to create economic and financial value by improving the operations, corporate governance and debt capacity of the companies they invest in.

Private equity remains an underutilised source of external funding for companies in the EBRD region. Despite the rise in private equity activity globally, the EBRD region has received only a small share of total private equity investment. The region has also seen its share of investment in emerging markets decline in recent years. Some of this can be traced back to the sluggish growth rates observed recently in the region. The weak recovery, combined with adverse credit market conditions, has resulted in lower returns for private equity funds in the region, which rely mainly on revenue growth to generate returns.

There are several ways that policy-makers can increase the presence of private equity funds in the region. First, helping companies to access foreign markets can help them to move beyond the confines of their typically small local economies. Greater cross-border integration of markets, especially in sectors such as the retail, consumer goods and ICT industries (which is where private equity funds are most active), can help these companies sell to more markets and thus better exploit economies of scale. Second, academic studies point to complementarity between government R&D spending and venture capital, while government-funded mentoring for start-ups can add value to companies.[33] A thriving venture capital industry supported by such government programmes can help the region to move towards a competitive knowledge-based economy.

Third, policy-makers should aim to improve the functioning of credit markets by promoting the supply of long-term bank loans and remedying information asymmetries between banks and companies that would be eligible for private equity investment. Some of the value created by private equity funds stems from information about companies that is revealed during due diligence, which is costly to acquire when it comes to smaller and more opaque companies. Greater information sharing between banks and private equity funds for such companies can improve the pricing of the risk of lending and enable greater access to credit. This can, in turn, enable companies to undertake more capital expenditure – as the next chapter shows – and deliver higher financial returns to private equity investors through the use of leverage. Thus, a more sophisticated credit market is crucial not only in order to help companies to grow but also in order to help private equity become more attractive in the region as an asset class.

BOX 3.3. METHODOLOGY

Internal rates of return (IRRs) are calculated using the entire time series of gross cash flows (that is to say, cash flows before fees) from and to the fund, as reported by the private equity firm.[34] These IRRs are then unlevered and benchmarked against returns from a public stock market index (the MSCI Emerging Markets Total Return Index) which are unlevered in the same way. The difference between the two is called "private equity alpha". The following formula is used to unlever the return generated at the company level:

(1) $$R_{U,i} = \frac{R_{L,i} + R_{D,i}(1-t)(D/E_i)}{(1 + D/E_i)}$$

Since private equity firms do not report the average cost of debt, $R_{D,i}$, the average lending rate during the holding period in the country in which the portfolio company's headquarters are located is used for this calculation. The leverage ratio D/E_i is the average of the debt-to-equity ratios at the beginning and end of the holding period. The tax rate t is the average corporate tax rate during the holding period in the country in which the portfolio company's headquarters are located.

Formula 1 is also used to derive the unlevered benchmark return, $R_{BU,i}$, from the levered benchmark return, $R_{BL,i}$. In this case, the benchmark return is the annualised buy-and-hold return for the MSCI Emerging Markets Total Return Index during the holding period. The unlevered return $R_{BU,i}$, is calculated using the average D/E ratio for the sector over a three-year period starting at the time of the deal. The calculations assume that the same tax rate and cost of debt apply to each deal in a given country and sector.

Once the unlevered return (which is stripped of the effects of financial leverage) has been obtained for both the deal and the benchmark, the private equity return that is brought about via genuine operational improvement is calculated. Private equity alpha is defined as:

(2) $$\alpha_{U,i} = R_{U,i} - R_{BU,i}$$

Applying formulae 1 and 2 derives the following from each deal's IRR: (i) deal-level private equity alpha α_i; (ii) the unlevered benchmark return $R_{BU,i}$; and (iii) the total leverage effect $R_{U,i} - R_{BU,i}$. These three components of the total IRR for each deal are reported in the text.

[33] See Da Rin et al. (2011) and Gonzalez-Uribe and Leatherbee (2014).

[34] This methodology is based on Acharya et al. (2013).

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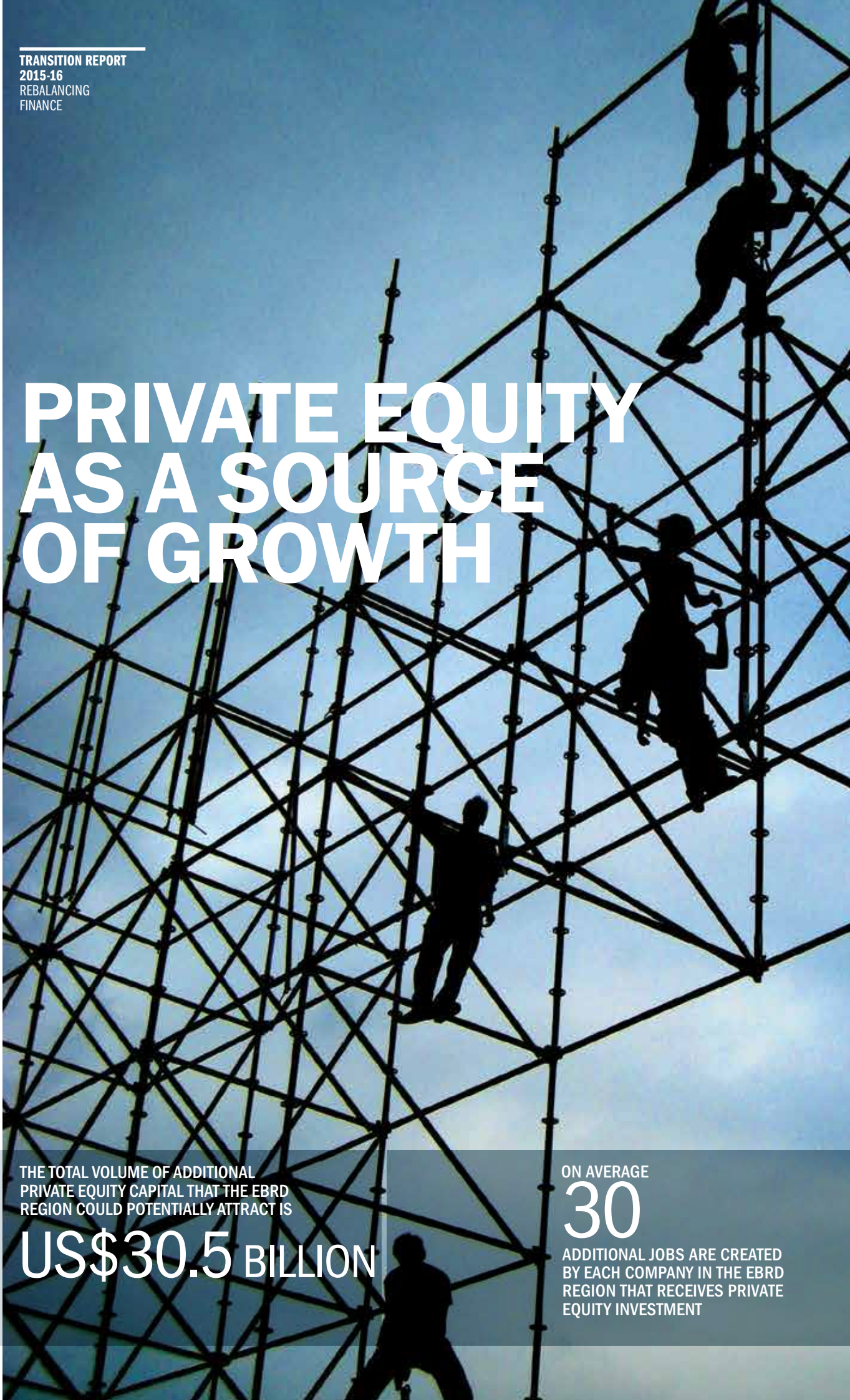
PRIVATE EQUITY AS A SOURCE OF GROWTH



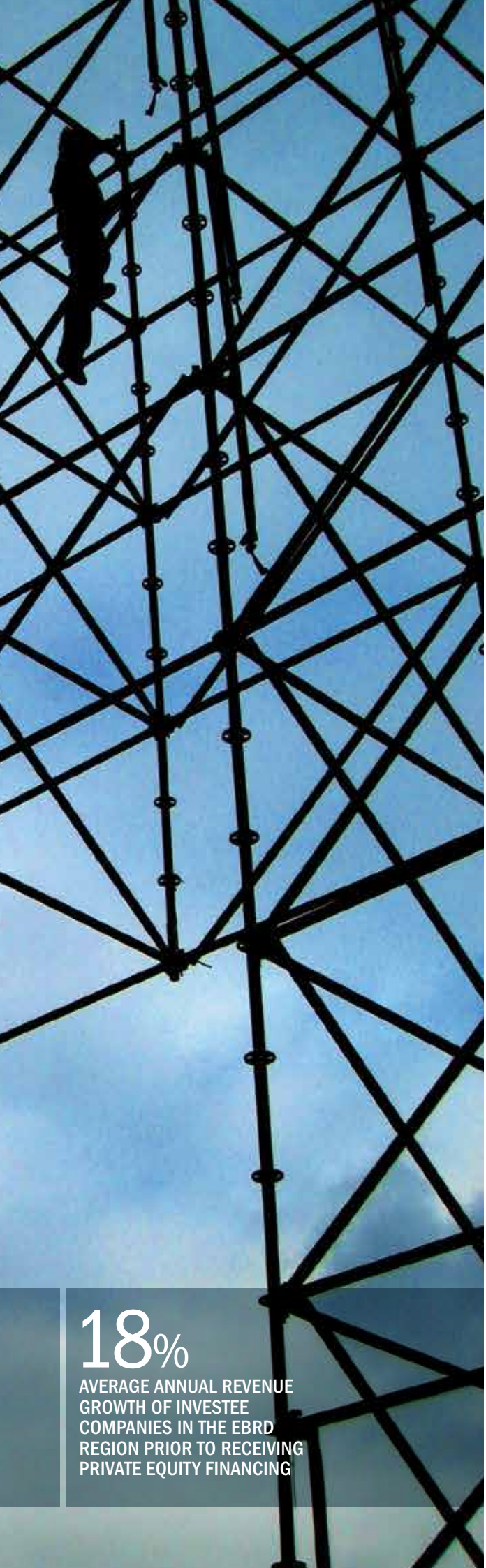
THE TOTAL VOLUME OF ADDITIONAL PRIVATE EQUITY CAPITAL THAT THE EBRD REGION COULD POTENTIALLY ATTRACT IS

US$30.5 BILLION

ON AVERAGE

30

ADDITIONAL JOBS ARE CREATED BY EACH COMPANY IN THE EBRD REGION THAT RECEIVES PRIVATE EQUITY INVESTMENT



18%
AVERAGE ANNUAL REVENUE GROWTH OF INVESTEE COMPANIES IN THE EBRD REGION PRIOR TO RECEIVING PRIVATE EQUITY FINANCING

Private equity funds in the transition region not only target companies with high growth rates but also assist their growth by implementing operational improvements. They also relax companies' credit constraints and increase both employment and physical investment. The transition region is home to a sizeable pool of companies that could potentially benefit from these positive growth effects associated with private equity investment. However, in order for a larger segment of the economy to reap the benefits of private equity investment, policy-makers need to address a number of institutional constraints.

Introduction

Private equity investment has played an important role in stimulating company growth and innovation in the advanced market economies of North America, western Europe and Asia. However, such growth has, at times, been achieved by shedding employment, cutting costs and/or limiting capital expenditure.[1] Such investment may generate short-term financial returns for shareholders, but its long-term implications for the economy as a whole are less clear. It is therefore important to differentiate between the social and financial returns on private equity investment and to have a good understanding of how economic productivity and output respond to private equity financing.

[1] See Kaplan and Strömberg (2009).

Chapter 3 demonstrated that private equity funds in the transition region often rely on operational improvements to achieve financial returns for their investors. This chapter asks a different question: how do these operational improvements contribute to economic development – specifically, employment, productivity, profitability and physical investment – in the companies that private equity funds invest in?

Analysis shows that private equity funds in the transition region have a positive impact on both profitability and employment levels. The estimated impact on revenue and employment in the region is stronger than that reported for advanced economies. This is achieved via a combination of scaling up operations, increasing capital expenditure with the aim of improving labour productivity and introducing leaner production methods associated with better inventory and cash management. Furthermore, private equity financing enables companies to access credit markets and fund some of their physical investment and operational improvements through bank finance. This effect has gained in prominence since the global financial crisis and is of particular benefit to smaller companies.

There is a sizeable pool of companies in the EBRD region similar to those that have already attracted private equity financing. These companies have typically sustained high levels of revenue growth over a number of years, they have room for the operational improvements that private equity funds can deliver, and they are not overvalued. Many of these companies could potentially benefit from private equity injections. Indeed, it is thought that they have the potential to attract an estimated US$ 30.5 billion of private equity financing. However, private equity funds in the region have invested a total of just US$ 9.2 billion since 2010. This disparity reinforces the observation in the previous chapter that private equity is an underutilised source of external finance in the region. More importantly, it means that the positive impact that private equity has on companies and workers remains limited to small sections of the economy.

There are two ways in which policy-makers can help ensure that more companies in the region benefit from private equity financing. First, shareholder protection and the enforcement of corporate governance legislation are essential to increase the effectiveness of private equity in the region and make companies more attractive to potential investors. Given the long-term and illiquid nature of private equity as an asset class, investors need to be given a transparent and reliable legal framework, especially as regards the rights of minority shareholders. Second, the development of public equity markets and the establishment of stock exchanges tailored to small and medium-sized enterprises (SMEs) can provide private equity funds with more opportunities to exit investments. In addition, the development of credit markets can support the development of private equity, as high-growth companies typically rely on both bank loans and private equity financing to fund their expansion.

Private equity and economic outcomes

Evidence from advanced economies

Evidence suggests that private equity investment is associated with significant operational improvements and rising profitability in investee companies.[2] These findings have primarily been documented in developed economies. For instance, private equity activity in the United States and the United Kingdom has a positive impact on total factor productivity and innovation as measured by patent counts and citations.[3] Similarly, companies that have received private equity financing in France and Sweden have experienced increases in operational efficiency and earnings.[4]

How private equity funds improve the operational performance of investee companies remains a matter of debate. Three issues dominate this debate. The first contentious issue is whether private equity funds do indeed improve companies' efficiency or simply invest in more efficient companies that would have performed better subsequently in any case. Evidence suggests that both effects exist. A recent study found, for instance, that companies invested in by US venture capital funds were an average of 7 per cent more productive than other firms. However, these investee companies also experienced, on average, a 12 per cent increase in productivity after receiving the investment.[5] Buyout funds, in contrast, tend to invest in underpriced companies and may contribute little in the way of operational improvements.[6]

A second contentious issue is the impact that private equity has on employment. On the one hand, evidence from the United States and the United Kingdom shows that employment and wages grow more slowly in companies that receive private equity financing relative to the rest of the economy. This is consistent with the idea that private equity funds focus on reducing labour costs in order to improve operational efficiency. On the other hand, evidence from France shows that investee companies experience stronger growth in both jobs and wages than similar companies that have not received such investment.[7] In other words, it does not seem possible to generalise the impact private equity has on employment.

A third contentious issue is whether private equity funds sacrifice long-term investment and focus on generating short-term cash flows. In the 1980s investee companies in the United States experienced reductions in capital expenditure following buyouts.[8] However, subsequent studies have documented a positive impact on capital expenditure and investment in innovative activity in the United States and France.[9] On balance, private equity funds do not appear to sacrifice long-term productivity in return for short-term gains.

In part, these conflicting findings reflect differences in the focus of private equity in different countries. For instance, buyout funds in the United States and the United Kingdom tend to target large, mature firms, where they focus on reducing capital expenditure, restructuring labour and financial engineering in order to increase profitability. In contrast, private equity funds in France, where credit markets are less developed, typically target credit-constrained companies with growth opportunities and help these companies to access alternative sources of finance.[10]

[2] See Kaplan and Strömberg (2009) for a review of academic studies on this subject.
[3] See Chemmanur et al. (2011), Lerner et al. (2011) and Davis et al. (2014) for evidence on the United States. See Harris et al. (2005) and Amess et al. (2015) for evidence on the United Kingdom.
[4] See Bergström et al. (2007) for evidence on Sweden and Boucly et al. (2011) for evidence on France.
[5] See Chemmanur et al. (2011).
[6] See Kaplan and Strömberg (2009).
[7] Furthermore, investee companies in Sweden do not experience wage reductions or the restructuring of labour. See Bergström et al. (2007) and Boucly et al. (2011).
[8] See Kaplan and Strömberg (2009).
[9] See Boucly et al. (2011) and Lerner et al. (2011).
[10] See Boucly et al. (2011).

With this in mind, this chapter examines the impact that private equity investment has on companies' performance in the EBRD's countries of operations. It begins by discussing the screening of companies by private equity funds, before documenting the impact that private equity investment has on revenue, profitability, employment and productivity in investee companies, taking into account the restructuring of labour and credit constraints.

Methodology

This analysis uses the EBRD's proprietary dataset, which covers the investments of more than 100 private equity funds across the EBRD region between 1992 and 2013. The data cover a variety of different types of private equity fund, including buyout, growth capital and venture capital funds (see Chapter 3 for further details).

Simply comparing the performance of companies with and without private equity investment may produce misleading results. This is because private equity investors may be good at choosing companies that have good growth potential. The superior performance of such companies following private equity investment would then reflect the funds' successful screening of potential investment targets, rather than efforts to improve companies' performance.

To address these concerns, changes in a company's performance after it receives private equity financing are compared with changes in the performance of similar companies without private equity involvement (by means of a "difference-in-differences analysis"). It is important to ensure that the companies that receive private equity investment are similar to those that do not (the "control group" in the analysis). The control group for each investee company comprises five similar firms drawn from the Orbis database of companies in the EBRD region. These firms are selected from the same country, industry and year as the investee company and are similar to it not only in terms of age, average sales and investment growth, but also in terms of their revenue, assets and fixed assets over the three-year period preceding the investment.[11]

The impact of private equity on firms in the transition region

Revenue

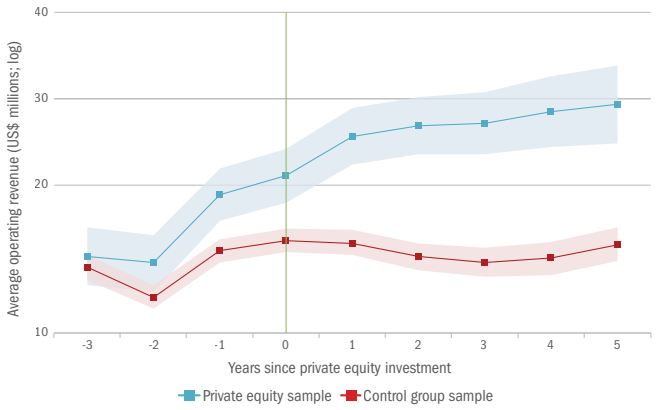
These comparisons reveal that, on average, increases in operating revenue are 35 per cent stronger for companies that receive private equity investment relative to their peers (see Table 4.1). This increase is achieved over a period of three to five years following the initial private equity injection. This is a large effect, given that for most companies in the region revenue grows by less than 10 per cent in a given year. Crucially, this positive impact is not driven by the targeting of high-growth companies. As Chart 4.1 shows, companies that are similar to those in the private equity sample also experience rapid growth in the years prior to the investment, but they fail to maintain that performance in the absence of private equity. The consistent growth in revenue of companies that receive private equity financing also translates into a 20 per cent stronger increase in operating profits relative to their peers.

TABLE 4.1. Impact of private equity investment on growth and productivity

	(1)	(2)	(3)	(4)
Dependent variable:	Operating revenue	Operating profits	Employment	Labour productivity
Average impact of private equity investment	0.3504*** (0.1066)	0.1973** (0.0821)	0.1946*** (0.0659)	0.3011** (0.1177)
Observations	10,210	10,210	10,210	10,210
R^2	0.3207	0.0815	0.2623	0.1528

Source: EBRD, Orbis and authors' calculations.
Note: This table reports the results of a difference-in-differences regression estimating the impact of private equity financing on company-level outcomes. The estimation sample comprises private equity and control group companies. Dependent variables are measured in logs. The results indicate the average impact of private equity investment on the log change (that is to say, change in per cent) in the dependent variable. Standard errors are clustered at the company level and shown in parentheses. *, ** and *** indicate statistical significance at the 10, 5 and 1 per cent levels respectively.

CHART 4.1. Impact of private equity on companies' revenue



Source: EBRD, Orbis and authors' calculations.
Note: Shaded areas indicate standard errors. The green vertical line indicates the year of the private equity investment, so points to the left show the evolution of revenue in the run-up to the investment and points to the right show its subsequent evolution.

Employment

Private equity financing also has a positive effect on employment. On average, investee companies see their labour force grow by a fifth more relative to other companies. This corresponds to approximately 30 additional jobs per investment. The impact on employment appears to be stronger in the EBRD region than it is in advanced economies (with a rate of 12 per cent being observed in France, for example),[12] as private equity funds in the EBRD region focus primarily on companies with strong growth potential, rather than mature companies that are in need of restructuring (as discussed in Chapter 3).

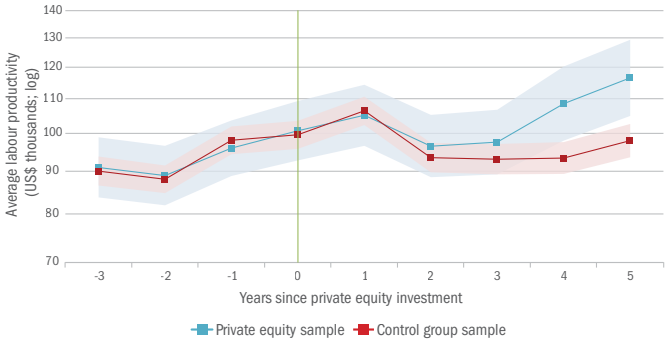
Labour productivity

As sales in investee companies grow faster than employment, sales per employee also increase – by nearly a third more than in other companies. Thus, companies with private equity investment are able not only to increase the number of people they employ, but also to employ these people more efficiently (for instance by adopting leaner production techniques). This runs counter to the widely held view that private equity investment normally entails the shedding of labour.

[11] The Orbis database, which is maintained by Bureau van Dijk, contains detailed data on firms' ownership and financial situations.

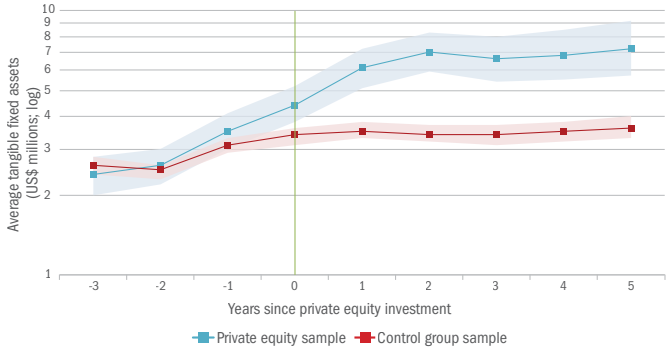
[12] See Boucly et al. (2011).

CHART 4.2. Impact of private equity on labour productivity



Source: EBRD, Orbis and authors' calculations.
Note: Shaded areas indicate standard errors. The green vertical line indicates the year of the private equity investment.

CHART 4.3. Impact of private equity on fixed capital investment



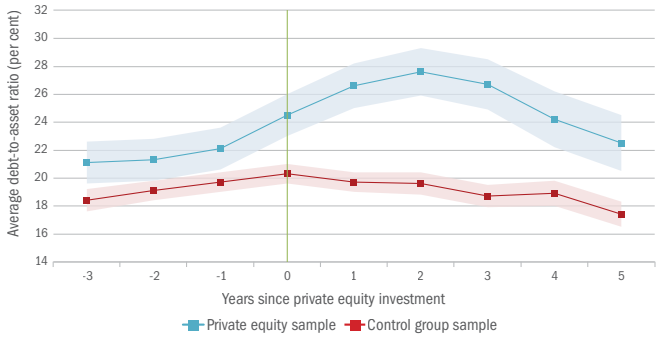
Source: EBRD, Orbis and authors' calculations.
Note: Shaded areas indicate standard errors. The green vertical line indicates the year of the private equity investment.

TABLE 4.2. Impact of private equity on investment and the accumulation of debt

	(1)	(2)	(3)	(4)	(5)
	Tangible fixed assets	Capital intensity	Stock of debt	Leverage	Inventory and cash management
Average impact of private equity investment	0.4126*** (0.1391)	0.4642*** (0.1095)	0.8731*** (0.2865)	0.0263 (0.0173)	0.0527*** (0.0195)
Observations	10,210	10,210	10,210	10,210	10,210
R^2	0.2387	0.2378	0.0448	0.0193	0.0124

Source: EBRD, Orbis and authors' calculations.
Note: This table reports the results of a difference-in-differences regression estimating the impact of private equity financing on company-level outcomes. The estimation sample comprises private equity and control group companies. Tangible fixed assets and the stock of debt are measured in logs. Columns (1) and (3) indicate the average impact of private equity investment on the log change (that is to say, change in per cent) in the dependent variable. Capital intensity is measured as fixed assets per employee. Leverage is the ratio of debt to total assets. Inventory and cash management is measured as the ratio of working capital to total capital employed. Columns (2), (4) and (5) indicate the average impact of private equity investment on the percentage change in the dependent variable. Standard errors are clustered at the company level and shown in parentheses. *, ** and *** indicate statistical significance at the 10, 5 and 1 per cent levels respectively.

CHART 4.4. Impact of private equity on debt-to-asset ratio



Source: EBRD, Orbis and authors' calculations.
Note: Shaded areas indicate standard errors. The green vertical line indicates the year of the private equity investment.

REVENUE GROWTH IS ON AVERAGE
35%
STRONGER IN COMPANIES RECEIVING PRIVATE EQUITY INVESTMENT IN THE EBRD REGION

Improvements in labour productivity may take several years to realise (see Chart 4.2). Initially, investee companies have similar levels of efficiency to their peers, but they then experience stronger improvements in efficiency after a few years of private equity involvement.

Investment

Another widely held view is that private equity funds tend to engage in far-reaching reductions in company assets. In particular, they may limit capital investment and research and development expenditure, which frees up cash in the short term but hurts the future profitability of the company. If financial returns are primarily achieved in this way, the improvement in operational efficiency may be short-lived.

In fact, contrary to this view, private equity funds in the EBRD region substantially increase capital expenditure in order to improve operational efficiency. The analysis reveals that

investee companies experience a 41 per cent stronger increase in their capital stock (which includes buildings, machinery and computers) following private equity investment relative to companies that do not receive private equity financing (see Table 4.2). This remarkable increase in fixed-asset investment translates into a 46 per cent stronger increase in capital per employee.

Increases in physical investment typically take place within two years of private equity funds' initial investment (see Chart 4.3). The stock of physical capital then stabilises, which explains why improvements in labour productivity are realised in later years.

Debt

How do investee companies finance the surge in capital expenditure? On the one hand, companies can use some of the freshly raised equity from private equity funds to invest in physical capital. On the other hand, if some of the equity is used to increase collateralisable assets, then leverage – defined as the ratio of debt to total assets – can also comfortably increase as the company has more assets to borrow against.[13] Thus, private equity financing can also help investee companies to become more creditworthy borrowers in other ways.[14] Banks are often unwilling to finance investment plans submitted by entrepreneurial companies with unpredictable prospects. However, when a private equity transaction takes place, this sends a strong signal to the credit market, indicating that the company has a promising business plan that has been approved by the private equity fund and will be subject to close monitoring by private equity professionals.

The analysis reveals that investee companies' stock of debt almost doubles relative to companies that do not receive private equity investment (see Table 4.2). As with capital expenditure, borrowing takes place in the early years of the investment period (see Chart 4.4). In fact, analysis suggests that investee companies issue additional debt to finance part of their capital expenditure.

The resulting increase in capital intensity translates into higher levels of productivity and revenue, such that there is no significant increase in investee companies' debt-to-asset ratio. The higher levels of revenue are then used to pay down debt in later years.

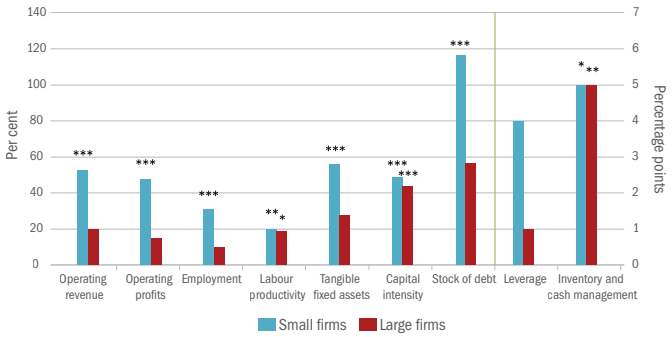
Cash flow management

Private equity funds also seek to improve the operational efficiency of their investee companies through better management of inventories and cash. For instance, they can introduce better inventory management systems and ensure faster payments by customers, which combine to reduce the working capital needed by the company. This allows retained cash to be put to more effective use. Indeed, the data show that investee companies in the EBRD region experience a 5 percentage point improvement in the ratio of working capital to total capital relative to their peers (see Table 4.2).

If access to credit and operational improvements are key to the economic impact of private equity, one would expect stronger outcomes for companies that are more credit-constrained and inefficient prior to that private equity investment. In the EBRD region, such companies are typically smaller and younger firms, which often do not have physical assets and stable cash flows to borrow against. These companies are also less innovative and therefore less productive, as documented in last year's *Transition Report*.

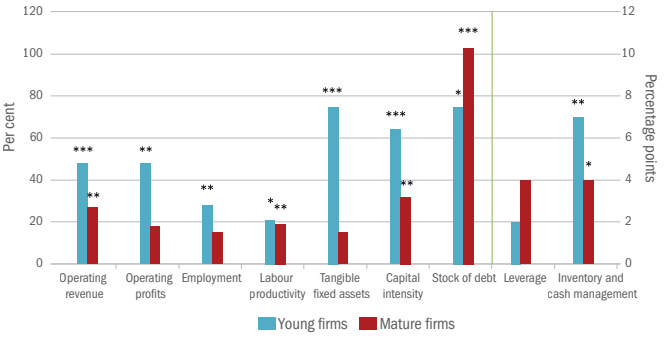
The analysis suggests that private equity financing does indeed benefit small and young companies more than it benefits large and mature companies. The additional growth in revenue caused by private equity investment is around twice as large for small and young companies as it is for large and mature companies (see Charts 4.5 and 4.6). A similar pattern

CHART 4.5. Impact of private equity investment on firms' performance by firm size



Source: EBRD, Orbis and authors' calculations.
Note: This chart shows the results of a difference-in-differences regression estimating the impact of private equity financing on company-level outcomes. The estimation sample comprises private equity and control group companies. Small companies are defined as having average employment levels that are below the sample median in the three years prior to a private equity investment, while large companies have employment levels that are above the median. *, ** and *** indicate statistical significance at the 10, 5 and 1 per cent levels respectively.

CHART 4.6. Impact of private equity investment on firms' performance by firm age



Source: EBRD, Orbis and authors' calculations.
Note: This chart shows the results of a difference-in-differences regression estimating the impact of private equity financing on company-level outcomes. The estimation sample comprises private equity and control group companies. Young companies are defined as being younger than the sample median prior to a private equity investment, while mature companies are older than the median. *, ** and *** indicate statistical significance at the 10, 5 and 1 per cent levels respectively.

[13] The measure of debt used in this analysis is derived from unconsolidated company accounts and excludes debt taken on by holding companies. Debt which is taken on by a private equity fund to finance a buyout transaction and borne by a holding company, which in turn owns the investee company, is not captured.
[14] See Boucly et al. (2011).

can be observed for other measures of performance, including investment in physical capital and cash flow management. Furthermore, the impact on profitability and employment is primarily observed for small and young firms. In other words, large and mature investee companies experience only limited additional growth in their profitability or employment following private equity investment. In these companies, efforts appear to be focused primarily on eliminating operational inefficiencies and improving cash flow management.

The ways in which private equity funds improve investee companies' performance vary from sector to sector. In high-technology sectors, private equity funds undertake large-scale capital investment to improve productivity, but this investment does not seem to create additional jobs (see Chart 4.7). Companies in the retail, wholesale trade and services sectors, which often lack collateralisable assets, see the largest increases in the stock of debt in line with private equity's role in relaxing financial constraints. This additional funding source is then used to increase capital expenditure, which brings about higher levels of employment and profitability.

Strikingly, the impact of private equity on access to credit has doubled since the global financial crisis.[15] This reflects the fact that (in the absence of private equity funds' seal of approval) firms have faced much tighter credit conditions. As a result, the impact of private equity in terms of capital expenditure growth and associated improvements in labour productivity has also increased, ultimately translating into a stronger impact on revenue growth.

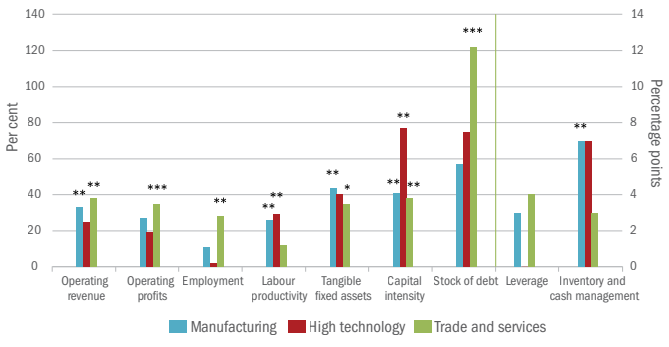
Scaling up private equity in the transition region

Increasing the penetration of private equity investment in the EBRD region could enable a larger set of companies to reap the benefits of such financing. But how many more companies are there in the transition region that could potentially attract private equity financing? To answer this question, this section uses a database of all active companies in the transition region ("the universe of companies") and compares them to the investee companies receiving private equity financing.

Potential targets

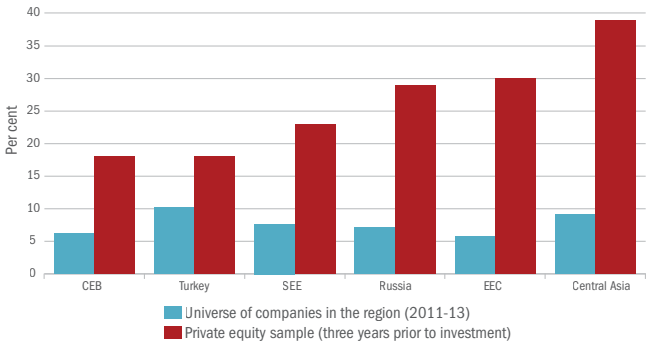
The analysis above suggests that companies must meet four criteria in order to qualify as a potential target for private equity investment. The first is strong growth: potential targets are required to grow faster than the average investee company from the same region prior to investment. Companies in the private equity sample typically display average annual revenue growth of more than 18 per cent prior to receiving private equity financing. This figure is around three times the growth rate of the typical company in the EBRD region since 2011 (see Chart 4.8). Private equity funds investing in eastern Europe and the Caucasus (EEC), Russia and Central Asia appear to target companies with particularly strong growth histories – perhaps to compensate for the perceived higher risks of investing in these regions. For these reasons, the criteria applied to target companies are region-specific. For instance, for the purposes of this analysis, potential targets are required to display growth rates of at least 18 per cent in central Europe and the Baltic states (CEB), but 28 per cent in Russia.

CHART 4.7. Impact of private equity investment on firms' performance by sector



Source: EBRD, Orbis and authors' calculations.
Note: This chart shows the results of a difference-in-differences regression estimating the impact of private equity financing on company-level outcomes. The estimation sample comprises private equity and control group companies. *, ** and *** indicate statistical significance at the 10, 5 and 1 per cent levels respectively.

CHART 4.8. Average growth rates of investee companies and the rest of the economy



Source: EBRD, Orbis and authors' calculations.

[15] This may also reflect the fact that private equity transactions conducted since 2008 are relatively recent, so investee companies have not yet had time to repay a significant percentage of any debt taken on following the private equity investment.

Second, potential targets are required to have a positive return on their assets, but room for operational improvement. The return on assets – defined as the ratio of net income to total assets – captures how efficiently a company uses its capital to generate earnings. Thus, ratios must be no higher than that of the average investee company. Companies that already have high ratios may not be attractive targets, as the scope for further operational improvements may appear limited.

Similarly, the third criterion relates to the sales margin. It is required to be positive, but no higher than that of the average investee company in the private equity sample, leaving scope for improvement.

Lastly, potential target companies are required to have a valuation that is not prohibitively high. Private equity funds report that this is one of the most important factors when it comes to choosing an investment.[16] The proxy for valuation used here is the ratio of a company's book value to its earnings (before interest and taxes).[17] It is assumed that a potential target company's ratio cannot exceed the 70th percentile of the distribution of these ratios in the sample of investee companies. Table 4.3 shows the criteria applied for returns on assets, sales margins and company valuations by region.[18]

On the basis of these criteria, potential target companies in the EBRD region have a total book value of US$ 61 billion (measured in 2013 prices; see Table 4.4). Assuming that owners would be willing to sell half of their companies' shares to potential investors, a total of US$ 30.5 billion could be deployed in the region by equity investors. If all of this amount were to come from private equity funds – rather than being raised through initial public offerings (IPOs), foreign direct investment or other forms of direct ownership – it would correspond to around 0.5 per cent of the region's GDP, a steep increase in private equity penetration (which currently stands at less than 0.1 per cent). Indeed, a total of just US$ 9.2 billion of private equity capital has been invested in the EBRD region since 2010.[19] However, even the increased amount falls short of the level of private equity activity in advanced markets such as the United Kingdom, where the corresponding figure is around 1 per cent of GDP.

Tripling the number of companies receiving private equity investment, which would mean a jump to 2,100 from around 700 (since 2010), could create an estimated 42,000 jobs in the region.[20] However, this calculation assumes that private equity investors will continue looking for relatively large investee companies, whereas the vast majority of potential investment targets identified in Table 4.4 are relatively small. This is particularly true of Turkey (see Chart 4.9). Furthermore, these calculations are not precise and are purely indicative. For instance, the recent downturn in the economic prospects of Russia and the CIS region has probably led to the pool of potential target companies being underestimated in these countries.

TABLE 4.3. Criteria for identifying potential targets for private equity investment

	Return on assets	Sales margin	Valuation
Central Europe and the Baltic states	0.12	0.07	8.33
Eastern Europe and the Caucasus	0.10	0.05	9.33
Russia	0.15	0.13	5.25
South-eastern Europe	0.11	0.11	7.85
Turkey	0.08	0.10	9.17

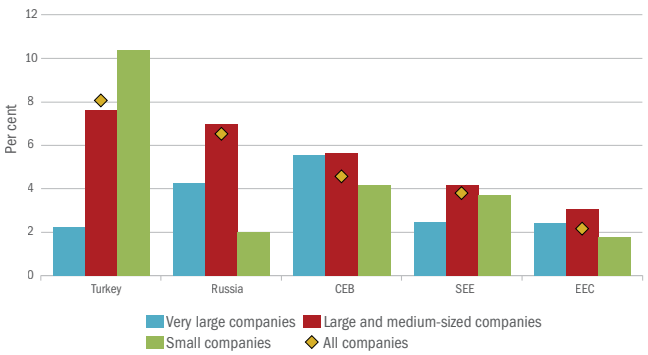
Source: EBRD private equity sample.
Note: This table reports the criteria applied to potential targets from the universe of companies in the region. The return on assets is measured as the ratio of net income to total assets. The sales margin is measured as the ratio of earnings before interest and taxes to operating revenue. A company's valuation is measured as the ratio of book value to earnings before interest and taxes.

TABLE 4.4. Potential private equity investment in the EBRD region

	Number of potential targets	Total value of companies (US$ billions)
Central Europe and the Baltic states	6,014	16.84
Eastern Europe and the Caucasus	3,145	2.01
Russia	16,946	34.78
South-eastern Europe	13,052	5.06
Turkey	505	2.18

Source: Orbis.
Note: Company values are calculated using companies' book values and measured in 2013 prices.

CHART 4.9. Shares of potential targets for private equity funds in the universe of companies



Source: EBRD, Orbis and authors' calculations.

22
COMPANIES ARE CURRENTLY LISTED ON BORSA İSTANBUL'S EMERGING COMPANIES MARKET

[16] See Gompers et al. (2015). In their survey of private equity funds in the United States, all investors mentioned growth in the value of the underlying business as a driver of returns.
[17] As target companies are typically unlisted, their book values are assumed to be strongly correlated with their market values.
[18] These data are not available for companies in Central Asia, which are dropped from the subsequent analysis.
[19] This is based on investment in Russia, Turkey and the CEB, EEC and SEE regions.
[20] This is based on the number of companies that have received private equity financing since 2010 and the estimate of 30 new jobs per private equity investment.

What can policy-makers do?

Given the significant benefits that private equity involvement entails in terms of investment, job creation and company growth, encouraging more private equity investment in the region could help to scale up investment and stimulate more growth. There are a sizeable number of potential private equity targets in the region. However, levels of private equity investment in the region have remained relatively low compared with advanced markets, as documented in Chapter 3. What could policy-makers do to make the region more attractive to private equity investors?

Investor protection and corporate governance

There is a significant degree of heterogeneity across the EBRD region in terms of corporate transparency, investor protection and corporate governance. Weak shareholder protection may discourage investors from engaging in relatively risky, illiquid and long-term projects such as private equity investments. Furthermore, in countries with civil law or socialist legal backgrounds and countries where legal enforcement is difficult, private equity funds are more reliant on obtaining majority control and having more representation on the board.[21] This significantly reduces the number of potential private equity deals, as many entrepreneurs may be reluctant to hand over majority control at an early stage when the valuations of their companies are still low.[22] It also makes it difficult for funds to diversify their portfolios by targeting a large number of companies.

In order to determine the quality of corporate governance legislation and its implementation in the region, the EBRD launched a new corporate governance assessment in 2014.[23] This assessment sought to ascertain whether minority shareholders that want to play an active role in the company, such as private equity funds, (i) can conclude shareholder agreements and rely on their enforceability, (ii) have the option to appoint a board member and (iii) can rely on the disclosure offered by companies.

Shareholder agreements can be an effective tool enabling investors such as private equity funds to protect their investments. However, the EBRD's assessment has revealed limitations in the use of this tool in the transition region. In most countries, shareholder agreements do not need to be disclosed. Furthermore, in most countries it is not clear whether they are enforceable. They seem to be fairly rare in practice, and little or no case law exists on this matter.[24]

Furthermore, while many countries in the region have legislation enabling minority shareholders to appoint board members, it often does not apply automatically. In other words, minority shareholders have to formally request that such provisions be applied. For instance, existing legislation in many countries allows cumulative voting on the appointment of board members to be requested. This would prevent the majority shareholder from appointing all board members.[25] For cumulative voting to work effectively, however, the company's shareholders need to know who the other shareholders are in order to be able to organise themselves, form an alliance and nominate a candidate to elect. Unfortunately, lists of shareholders are not easily available in many cases.

Moreover, in some cases, boards may have little say in decision-making. Companies across the region tend to be organised under a two-tier system, with separate supervisory and executive boards. In an ideal world, the general meeting of shareholders would appoint the supervisory board which would then appoint and remove the company's executives. However, the EBRD's assessment has found that in a number of countries the default legal rule enables the general meeting of shareholders to appoint both the supervisory board and the management (unless the company's by-laws provide otherwise). This mechanism, coupled with the absence of cumulative voting, allows a controlling shareholder to appoint both the supervisory board and the company's executives, depriving the board of any leverage over these executives. This discourages private equity funds from acquiring minority positions and prevents private equity funds that do hold minority stakes from carrying out operational improvements.

Another key aspect of governance from the perspective of potential investors is the level of non-financial disclosure. Although financial reporting in the region has reached a good standard, previous instances of corporate fraud have underscored the importance of validation procedures for financial reports. In this respect, a key role is played by audit committees. Members of a company's audit committee need to be qualified and independent if they are to recommend best practices in the area of reporting and provide stakeholders with a clear picture of key developments in the company. The EBRD's assessment suggests that this may not be the case except for a very small number of countries (such as Poland and Turkey). A lack of independence and expertise on company boards makes it more difficult for private equity funds (which have limited resources) to ensure adequate monitoring of their investee companies.

Development of equity markets

Private equity funds aim to exit their investee companies within a limited period of time and achieve the highest possible valuation. Exiting an investment via an IPO is an attractive option in both regards. However, exiting investments via IPOs is harder in the EBRD region than it is in more advanced economies owing to the lower average level of capital market development. Furthermore, less developed and less liquid capital markets may also reduce the expected returns from an investment. Both factors discourage private equity activity in the region.

Although there is significant variation across countries (see Box 4.1), capital market development tends to be the area where the EBRD region lags furthest behind western Europe and the United States when it comes to attracting venture capital and private equity. According to the index compiled by the IESE Business School, the region scores a lowly 40 out of 100 in this area, where 100 indicates the level of capital market development in the United States (see Chart 4.10), while in other areas (such as investor protection and corporate governance) the region's scores are substantially higher. This shows that increasing the depth of capital markets should be a clear priority when it comes to attracting more private equity investment to the region.

[21] See Lerner and Schoar (2005).
[22] See Lerner and Schoar (2005).
[23] This assessment is based on research carried out by the EBRD's Legal Transition Team. These questionnaires are based on internationally recognised best practices and cover both relevant legislation and "soft law" governance norms such as corporate governance codes. The EBRD team validates responses to the questionnaire by looking at the applicable framework and the disclosure offered by the 10 largest listed companies in each country.
[24] In a few countries – such as Estonia, Latvia and Poland – they are considered enforceable, but this is often subject to strict legal conditions. The assessment has also found that shareholders rarely seek redress on behalf of the company (by means of a "derivative suit") where they feel that their rights have been breached.

A number of policy options are available to facilitate the development of public equity markets. First, policy-makers can support the establishment of exchanges designed specifically for SMEs (see Box 4.2). Many of the companies in the EBRD region that attract private equity financing are SMEs and more SMEs may be able to attract such funding if they can list their shares on an exchange with relative ease at the time of exit. In contrast with a national stock exchange which typically caters for large conglomerates, an "SME growth market" allows smaller companies to float shares under a more flexible regulatory system at a lower cost. A very successful example of such an exchange is the AIM in the United Kingdom, while Poland, Romania and Turkey all have fledgling SME growth markets. Stricter enforcement of insider trading rules is also instrumental in supporting the development of equity markets (see Box 4.1).

Second, channelling more savings from households and institutional investors into equity markets is crucial. EU member states' efforts to establish a capital markets union should help to match institutional investors with productive companies across the EU (including SMEs and start-ups, which are most in need of long-term capital). In particular, the European Commission's green paper on this issue[26] recommends measures to reduce transaction costs and cross-border marketing costs, which should increase competition and attract new players. Harmonising regulations in the areas of insolvency legislation and tax regimes should also encourage institutional investors to invest larger amounts in the region's capital markets. This could help EU member states in the EBRD region to attract foreign capital and make up for their relatively low levels of domestic savings.

A third and related policy option concerns pension systems in the region. Since the global financial crisis, there have been setbacks in a number of countries in terms of the development of mandatory funded pension systems, which have placed private pension funds under intense pressure. When funded pension schemes are cut back as a result of regulatory changes, the liquidity and efficiency of local capital markets suffer. As a result, less funding is available for the region's companies and the prospects of a successful IPO become less certain. This has a particular impact on capital directed towards long-term "alternative" investments such as private equity.

CHART 4.10. Attractiveness of eastern Europe in terms of private equity (2015)

Source: 2015 Venture Capital and Private Equity Country Attractiveness Index (http://blog.iese.edu/vcpeindex).

COMPANIES IN THE EBRD REGION RECEIVING PRIVATE EQUITY INVESTMENT HAVE ON AVERAGE

150

EMPLOYEES

700

COMPANIES IN THE EBRD REGION HAVE RECEIVED PRIVATE EQUITY INVESTMENT SINCE 2010

[25] Under the cumulative voting system, each shareholder has one vote per share for each of the directors to be elected, but can use all of those votes on a single director. Cumulative voting is not provided for by law in Azerbaijan, Bosnia and Herzegovina, Bulgaria, Cyprus, Estonia, FYR Macedonia, Hungary, Jordan, Morocco, the Slovak Republic, Slovenia or Tunisia.

[26] See European Commission (2015).

Conclusion

This chapter has shown that private equity investment can help to transform companies, ultimately boosting investment, employment and growth in the EBRD region. Private equity funds help companies to gain better access to credit and increase physical investment. These funds constantly monitor companies' operations to ensure that investment in capital helps to make employees more productive rather than merely replacing them. As a result, a company that attracts private equity financing will enjoy stronger growth in revenue and employment than similar companies that do not have access to such risk capital.

The positive effect private equity has on employment and physical investment is striking, particularly as negative effects have sometimes been found in advanced economies where private equity funds tend to focus on cutting costs and restructuring in mature companies. In the EBRD region, in contrast, private equity funds typically invest in credit-constrained companies with considerable growth potential, adopting strategies that generate investment and jobs.

The number of companies in the region that have strong growth prospects and could potentially attract private equity funding is estimated at around 40,000 – more than 50 times the actual number of companies that have received such financing in recent years. Extending equity financing to just a fraction of these companies would create a significant number of jobs and boost investment.

In order to increase the presence of private equity firms in the region, policy-makers can help to strengthen the protection of minority shareholders and support the development of private equity markets. As they are often minority shareholders, private equity firms stand to benefit from improved enforcement of regulations designed to protect minority shareholders and the application of industry best practices in terms of information disclosure rules. Furthermore, the establishment of stock exchanges that are specifically designed for smaller companies can help to enhance SMEs' access to equity financing and improve private equity funds' exit opportunities, making investment in SMEs more attractive. Stricter enforcement of insider trading laws is another crucial driver of stock market development and an area where significant work remains to be done across the region. Last but not least, it is also important to revitalise bank lending in the region, as private equity firms and other equity investors rely on complementary debt financing to fund investment underpinning the growth and modernisation of firms.

BOX 4.1. AN ANATOMY OF STOCK MARKETS IN EMERGING EUROPE[27]

Emerging market stocks have become an integral part of global stock portfolios following the wave of financial liberalisation in the late 1980s and early 1990s. While most emerging stock markets have been studied in detail, relatively little is known about stock markets in emerging Europe, which have tended to be liberalised later than those of other emerging markets.[28] This box provides an overview of the development of stock markets in central and eastern Europe, Kazakhstan, Russia and Turkey since the mid-1990s. It uses firm-level data to construct stock market indices and market development indicators that help to assess the current state of development of the region's stock markets, as well as looking at the benefits of diversification for global investors.

Indicators of stock market development

Stock market development can be tracked using five key indicators. The first indicator, the ratio of total market capitalisation to GDP, measures the size of the stock market relative to the size of the economy. Two liquidity indicators, stock market turnover and the average percentage of non-zero daily returns, track the evolution of market liquidity. And the last two indicators track stock market concentration at firm and industry level respectively, using Herfindahl-Hirschman Indices (HHIs). Investors prefer unconcentrated stock markets with more opportunities for diversification.

These indicators suggest that Russia and Turkey have the most highly developed stock markets thanks to the large market capitalisations of their domestic listed companies and their high levels of trading activity (see Table 4.1.1, where darker shading indicates a higher level of development). They are similar to Germany in these respects, but they lag some way behind the United States. However, stock market activity in these countries continues to be dominated by a few industries, as reflected in their high concentration indices. The same is true of the rest of the region.

Drivers of stock market development

After the fall of the Iron Curtain, many countries in the region liberalised their stock markets by allowing foreign investors to invest in domestic stocks, introducing insider trading laws and – at a somewhat later stage – establishing electronic trading systems. Countries implemented these policies at different times, and the reform process remains incomplete across the region. Knowing which reforms are most strongly associated with the development of stock markets can help policy-makers to determine their priorities in this area.

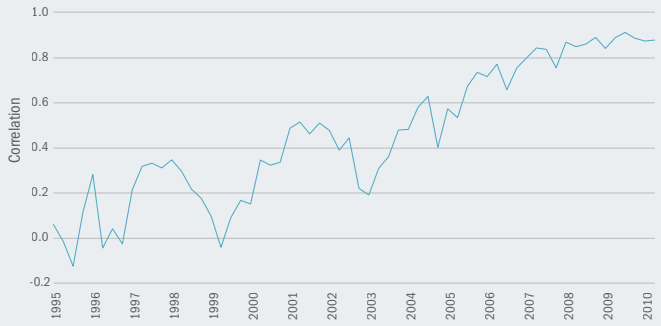
[27] This box is based on Baele et al. (2015).
[28] See Bekaert and Harvey (2014).

TABLE 4.1.1. Indicators of stock market development

	Equity market development ranking	Ratio of market capitalisation to GDP	Turnover	Non-zero returns	Firm-level HHI	Industry-level HHI
Russia	1	0.59	0.81	0.91	0.05	0.20
Turkey	2	0.39	1.37	0.83	0.03	0.22
Hungary	3	0.22	1.07	0.95	0.20	0.16
Poland	4	0.32	0.37	0.81	0.04	0.22
Slovenia	5	0.19	0.09	0.85	0.12	0.11
Czech Rep.	6	0.21	0.49	0.97	0.27	0.31
Lithuania	7	0.12	0.07	0.90	0.06	0.18
Ukraine	8	0.09	0.10	0.78	0.10	0.21
Bulgaria	9	0.08	0.06	0.66	0.03	0.15
Estonia	10	0.09	0.31	0.81	0.10	0.35
Croatia	11	0.14	0.06	0.90	0.30	0.29
Romania	12	0.08	0.14	0.82	0.21	0.33
Serbia	13	0.05	0.08	0.70	0.07	0.31
Latvia	14	0.04	0.03	0.62	0.14	0.34
Slovak Rep.	15	0.03	0.28	0.24	0.59	0.67
Kazakhstan	16	0.06	0.01	0.65	0.25	0.39
Germany	-	0.43	1.14	-	-	0.14
United States	-	1.18	1.76	-	-	0.13

Source: Baele et al. (2015).
Note: Turnover is defined as the ratio of the total dollar trading volume per year over the end-of-year market capitalisation. Non-zero returns is the value-weighted average percentage of non-zero daily price returns in local currency. HHI indicates the Herfindahl-Hirschman Index and captures how total stock market capitalisation is distributed across listed companies and industries.

CHART 4.1.1. Correlation between stock market returns in emerging and western Europe



Source: Baele et al. (2015).

The enforcement of insider trading laws – as evidenced by prosecutions – systematically fosters the development of stock markets, according to an unreported regression analysis. In countries with stronger enforcement, market capitalisation and liquidity levels tend to be higher, and larger numbers of companies (and companies in more industries) tend to be listed on the stock exchange. In countries with weak enforcement, market-makers protect themselves by increasing their sell price and lowering their buy price, thereby increasing transaction costs and the cost of issuing stock. Thus, by reducing the cost of stock, stronger enforcement of insider trading laws fosters trading activity and attracts more companies to the stock market. The introduction of electronic trading has also contributed to increases in market capitalisation in many countries.

Diversification benefits

Stock market investors are keen to hold a diverse portfolio of investments. So, do stock markets in emerging Europe offer additional diversification opportunities for investors? In the early 1990s Latin America and south-east Asia were regarded as the ideal investment opportunities, offering growth potential and great diversification benefits, as there was little correlation between returns in these markets and those in developed markets.[29] Over the last two decades, however, the two have become much more strongly correlated. As a result, the diversification benefits of investing in emerging markets have become less clear. At the same time, stock markets in the EBRD region were liberalised later than others and were still relatively poorly integrated with world markets when the global financial crisis struck.[30]

Since the financial crisis, however, returns in emerging Europe's stock markets have been very similar to those in western European stock markets (see Chart 4.1.1, in which the custom-made emerging Europe index is based on more than 2,000 individual stocks from the stock markets listed in Table 4.1.1; the western European stock market index comes from MSCI).[31] This indicates that the factors affecting the future profitability of companies in the EBRD region have been closely aligned with those prevailing in western Europe. If this strong correlation persists in the coming years, the region may be unable to offer many diversification benefits to global investors.

[29] See Harvey (1995).
[30] See Bekaert and Harvey (2014).
[31] The stocks in Chart 4.1.1 have passed a series of inclusion tests looking at data availability and liquidity, as well as careful checks on return data. These custom-made value-weighted indices aim to account for around 85 per cent of total market capitalisation.

BOX 4.2. EXCHANGES AS COMPANY FINANCING HUBS

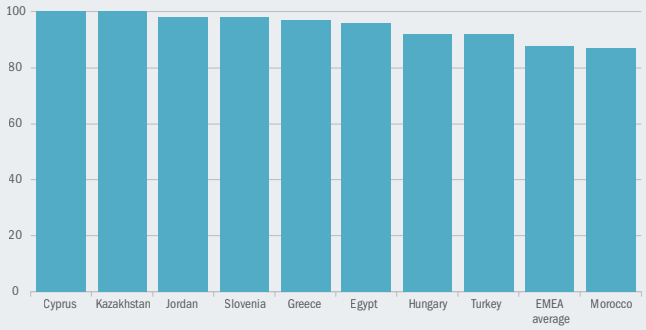
Small and medium-sized enterprises (SMEs) are a major driver of economic growth and employment in the EBRD region. However, it has become harder for SMEs to obtain bank financing since the global financial crisis (see Chapter 2). Equity markets could help to alleviate constraints in terms of SMEs' access to finance, as regards both equity (via the listing of companies) and debt (via the issuance of corporate bonds). However, much remains to be done if exchanges are to become effective providers of financing to SMEs.

In terms of market capitalisation, SMEs already make up the majority of most exchanges' clients in the EBRD region (see Chart 4.2.1). However, SMEs typically face the same listing requirements and regulatory regimes as large companies. Brokerage and initial public offering (IPO) consultancy fees can be particularly high for SMEs as a percentage of sales or profits. For instance, the average cost of an IPO for SMEs in Turkey is 7 per cent of the capital raised, compared with only 4 per cent for larger companies.

A few stock exchanges in the EBRD region already have designated SME market segments, such as the Emerging Companies Market operated by Borsa İstanbul, the NewConnect market at the Warsaw Stock Exchange or the Aero market recently established by the Bucharest Stock Exchange. These segments remain relatively small. For instance, 22 companies are currently listed on the Emerging Companies Market, which had a trading volume of US$ 890 million in 2014. SMEs listed there benefit from a special subsidy of approximately US$ 35,000 from Turkey's SME Development Center, which helps to bring down the costs faced by smaller firms. Special incentives encouraging brokers, investment banks, analysts and accounting firms to specialise in small companies also reduce the cost of listing for SMEs. Shares in SMEs tend to be traded less frequently than blue-chip stocks, so the design of SME markets and their legal and regulatory environments needs to take account of the lower levels of liquidity in these segments.

The US Jumpstart Our Business Startups (JOBS) Act, the new EU Markets in Financial Instruments Directive (MiFID II) and Canada's TMX Group provide some guidance in this respect. In the United States, the JOBS Act focuses on what it calls "emerging growth companies" (EGCs), providing a legal framework for EGCs with audited accounts that plan to raise up to US$ 1 million of capital annually and unaudited EGCs planning to raise up to US$ 500,000 per year. SMEs are subject to less onerous registration procedures and reporting/disclosure requirements, while at the same time specific investment restrictions apply for retail investors in this segment.

CHART 4.2.1. Percentage of overall market capitalisation accounted for by small and mid-caps



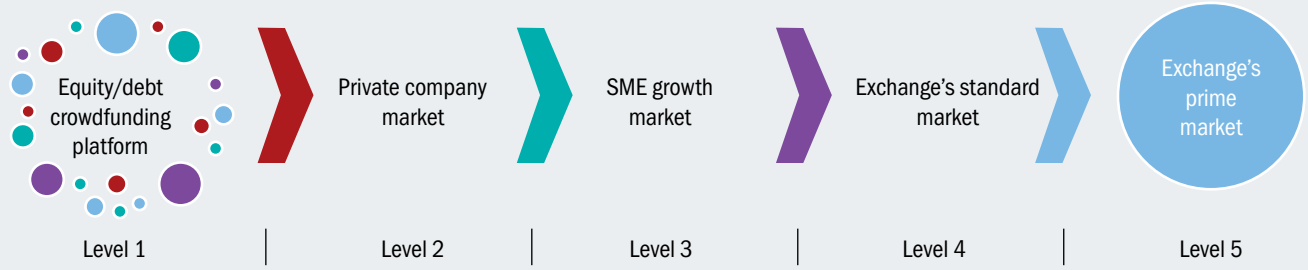
Source: World Federation of Exchanges 2013 Market Segmentation Survey.
Note: Small and mid-caps are companies with market capitalisation of up to US$ 1.3 billion. EMEA stands for Europe, Middle East and Africa.

In the EU, MiFID II creates new tailor-made markets for SMEs in the form of multilateral trading facilities (MTFs).[32] MiFID II maintains high levels of protection for investors, while reducing unnecessary administrative burdens for issuers in these markets. Existing growth markets can voluntarily choose to register as SME growth markets, as long as at least 50 per cent of issuers are SMEs.

Exchanges with a multi-level equity market structure covering issuers of various sizes that are at different stages of development are in a very good position to offer SMEs access to capital markets (see Chart 4.2.2). For example, the TMX Group in Canada operates a tiered equity market consisting of three markets: (i) the Toronto Stock Exchange (TSX), the main market targeting large and medium-sized companies; (ii) the TSX Venture Exchange, a junior equity market focusing on SMEs; and (iii) the NEX market segment, which is for companies which do not fulfil the criteria for listing on the TSX or the TSX Venture Exchange. The multi-level market structure provides companies with simplified listing procedures, helping them to graduate to higher market segments.

The development of such specialist SME exchanges and simplified regulatory and listing requirements for SMEs can greatly improve SMEs' access to finance across the EBRD region and diversify the funding options available to SMEs.

CHART 4.2.2. A company financing hub with a multi-level structure



Source: EBRD.

[32] An MTF is a trading platform operated by an approved market operator (such as an exchange or an investment bank). The US equivalent is the alternative trading system (ATS). MTFs were introduced by the first Markets in Financial Instruments Directive (MiFID) with the primary aim of enhancing competition, encouraging trading and offering competitive prices. MTFs are subject to more relaxed regulatory requirements compared with regulated markets operated by exchanges.

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MACROECONOMIC OVERVIEW

€60 BILLION
MONTHLY ASSET PURCHASES UNDER THE ECB'S QUANTITATIVE EASING PROGRAMME

IN 2014 THE ANNUAL GROWTH RATE IN THE TRANSITION REGION WAS
1.9%
DOWN FROM 2.3% IN 2013

COMMODITY EXPORTERS ACCOUNT FOR AROUND
40%
COMPARED WITH AN AVERAGE OF AROUND 10% WORLDWIDE

Over the past year the economic outlook in the transition region has been shaped by a significant decline in the price of oil, persistent geopolitical uncertainty, the launch of a quantitative easing programme in the eurozone and the ongoing crisis in Greece. Although economic growth in many commodity-importing countries has picked up, average growth in the region has been weighed down by the negative shocks faced by Russia, other commodity exporters and countries with strong economic ties to Russia. As a result, the annual growth rate of the transition region as a whole is projected to decline for the fourth consecutive year in 2015.

Introduction

The annual growth rate in the transition region fell from 2.3 per cent in 2013 to 1.9 per cent in 2014 and it is predicted to fall further in 2015. This slowdown in growth has been more pronounced in the region than for emerging markets globally.

At the same time several developments over the past 12 months have shaped the economic outlook for the region. First, oil prices have declined significantly from the levels observed between 2010 and mid-2014. Second, the geopolitical uncertainty surrounding the conflict in Ukraine has remained at very high levels while rising extremism and geopolitical tensions in the Middle East have adversely affected the economies of the southern and eastern Mediterranean (SEMED) and Turkey. Third, in January 2015 the European Central Bank (ECB) announced a quantitative easing programme involving monthly purchases of eligible government bonds by eurozone central banks. In contrast, the US Federal Reserve has phased out its third round of quantitative easing and is expected to tighten monetary policy in the future. Meanwhile, the crisis-hit economies of Ukraine and Greece have continued to undergo major macroeconomic adjustment.

Economic growth in the region

On balance, central Europe and the Baltic states (CEB) have benefited from the ECB's quantitative easing programme, the tentative recovery in the eurozone and the decline in commodity prices. Domestic demand has been the main driver of growth, with unemployment declining and wages rising. Exports have also picked up in some countries. In several cases growth has been boosted by sizeable increases in public investment prior to the end-2015 deadline for disbursement under the previous EU structural funds programme.

Growth performance in south-eastern Europe (SEE) has been mixed, despite an improving external environment. On balance, the region has showed considerable resilience in the face of country-specific negative shocks, such as the severe floods seen in Bosnia and Herzegovina and Serbia in mid-2014. Cyprus is continuing to perform well under its bailout programme (which has been in place since April 2013) with contractions in output slowing significantly in 2014.

After six years of deep recession, Greece (a recipient member country of the EBRD since 2015) recorded marginally positive annual growth (of 0.8 per cent) in 2014. In 2015, however, uncertainty about the new government's reform programme and its relations with international creditors dented investor and consumer confidence, leading to a steady outflow of deposits from the banking system. Matters came to a head in late June and early July when the government closed the country's banks and imposed strict limits on cash withdrawals from ATMs, as well as wide-ranging capital controls. Greece also temporarily went into arrears on its payments to the International Monetary Fund (IMF). The situation eased in the second half of July when the

EU agreed to a €7.2 billion bridging loan to Greece through the European Financial Stabilisation Mechanism, allowing Greece to clear its arrears with the IMF and make a scheduled bond payment to the ECB. The banks reopened on 20 July but the limits on withdrawals and capital controls remained in place.

The annual growth rate in Turkey fell to 2.9 per cent in 2014. The economy has continued to fall short of its growth potential in 2015, despite benefiting from the decline in oil prices, as expectations of monetary tightening in the United States, rising geopolitical tensions in the region, the perceived volatility of domestic politics in the wake of the parliamentary elections in June and weak investor sentiment have increased the country's risk premium, while its export performance has been relatively modest. Turkey's persistent current account deficit narrowed somewhat in 2014, helped by declines in commodity prices, but remained large at 5.7 per cent of GDP.

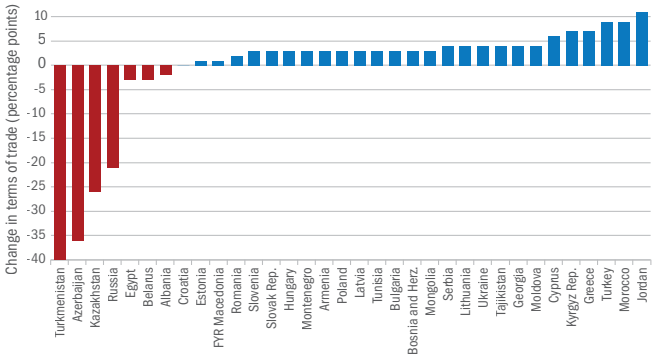
The recovery in the SEMED region has gained momentum. Growth in Egypt, the region's largest economy, has strengthened, driven by increases in private consumption and investment. Economic activity has benefited from policy reforms, a more stable political environment and – thanks to financing from the Gulf Cooperation Council – an accommodative fiscal policy. Elsewhere in the region the pace of recovery has been slower. Meanwhile, the region has continued to suffer from extremist attacks.

While the economic outlook has, on balance, strengthened somewhat in the CEB, SEE and SEMED regions, it has become substantially weaker in Russia, Central Asia and eastern Europe and the Caucasus (EEC). Russia's output contracted in the first half of 2015, with declines in oil prices exacerbating structural problems in the economy and compounding the effect of economic sanctions imposed by the European Union, the United States and several other countries. Indeed, real wages and retail sales fell at a rate of almost 10 per cent in the first few months of 2015.

Declines in remittances and export demand from Russia, coupled with country-specific structural bottlenecks, led to a significant weakening of growth in the EEC region and Central Asia in late 2014 and the first half of 2015. Economic activity in Ukraine suffered further in the first half of 2015, reflecting a lack of investor and consumer confidence, the tightening of fiscal and monetary policies as part of the country's macroeconomic adjustment and reform programme, ongoing discussions on external debt restructuring, increases in energy tariffs, bank failures and far-reaching changes in the banking sector.

The remainder of the macroeconomic overview looks in greater detail at the changes in the external environment and their impact on the economies of the region.

CHART M.1. Terms-of-trade changes due to declines in oil prices



Source: IMF World Economic Outlook and authors' calculations.
Note: These calculations assume that the price of Brent crude oil averages US$ 55 per barrel in 2015, compared with US$ 97 per barrel in 2014. A country's terms of trade are defined as the average price of its exports as a percentage of the average price of its imports.

Declining commodity prices

The price of Brent crude oil has declined sharply from the US$ 100-110 per barrel that was observed in 2010-13 and the first three quarters of 2014. It reached a low of around US$ 45 per barrel in January 2015 before edging up to around US$ 65 per barrel. It then declined again in July 2015, standing at around US$ 50-55 per barrel, when Iran (a major oil producer) concluded an agreement with the international community that paves the way for the removal of economic sanctions restricting the country's exports. The declining price of oil primarily reflects increases in the production of oil (including shale oil) in the United States at a time of weak growth in global demand. Prices of metals have also declined, albeit less dramatically.

Most of the EBRD's countries of operations have benefited directly from the decline in oil prices through reduced bills for energy imports and improvements in their terms of trade (that is to say, the average price of their exports in terms of the average price of their imports; see Chart M.1). The economies that have benefited most from declines in the price of hydrocarbons through reduced import bills include Cyprus, Greece, Jordan, the Kyrgyz Republic, Morocco and Turkey. In the CEB region energy import bills are estimated to have fallen by an average of around 2 per cent of GDP.

Countries in the SEMED region are also benefiting from fiscal savings as a result of reduced spending on explicit or implicit domestic energy subsidies. It is estimated that a 50 per cent decline in oil prices is associated with fiscal savings of between 1 and 3 per cent of GDP across the region. Moreover, lower oil prices provide a favourable environment for further reforms of

subsidies – an important element of improving the sustainability of public finances in these countries in the medium term.

At the same time, while gains from reductions in oil prices are generally spread across numerous countries, the losses are concentrated in major exporters of oil and gas (Azerbaijan, Kazakhstan, Russia and Turkmenistan). The decline in oil prices has significantly weakened the economic outlook in these countries. In Russia, for example, declines in oil prices have compounded the effect of weak investor confidence in light of the economic sanctions imposed since March 2014, as well as structural problems in the economy.

While Azerbaijan and Kazakhstan are even more dependent on hydrocarbon exports than Russia (in terms of their contribution to total exports, government revenues and total value added), these economies have been able to accumulate substantial savings in special oil funds, creating the policy space necessary to deploy large-scale fiscal stimulus and thereby cushion the impact of reduced exports and fiscal revenues. In Russia, by contrast, the scope for fiscal loosening is limited by the relatively low level of fiscal reserves in the country's stabilisation funds.

The recession in Russia has resulted in major negative spillover effects for many oil-importing economies in the EEC region and Central Asia which are heavily dependent on Russia for exports, investment and remittances (see the index measuring economic dependence on Russia and the accompanying discussion in the *Transition Report 2014*). In these countries the indirect effects of declining oil prices (through their impact on Russia) may more than offset any direct gains from improvements in their terms of trade.

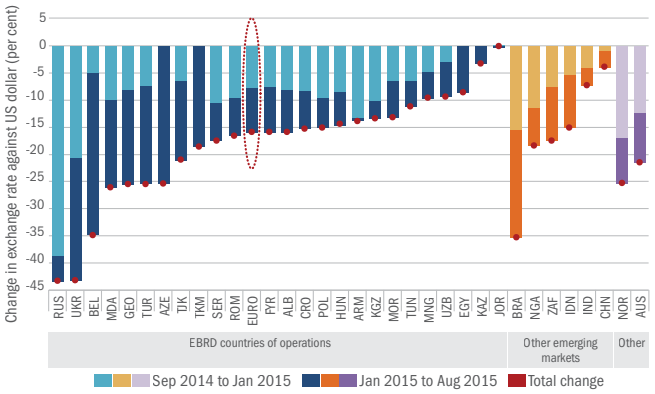
Launch of a quantitative easing programme in the eurozone and the crisis in Greece

Another development that has shaped the economic outlook for the region is the launch of a quantitative easing programme in the eurozone. In late January 2015, faced with falling inflation and a weak outlook for growth in the eurozone, the ECB announced a quantitative easing programme involving monthly asset purchases of €60 billion, directly targeting public debt. The programme will remain in place until at least September 2016. Although that announcement was largely anticipated by the markets, the size and scope of the programme surpassed market expectations.

In response, stock markets in the eurozone rallied and yields on sovereign bonds declined (temporarily turning negative in some cases) before recovering somewhat. The euro then depreciated further against the US dollar in June and July 2015 as the Greek crisis intensified.

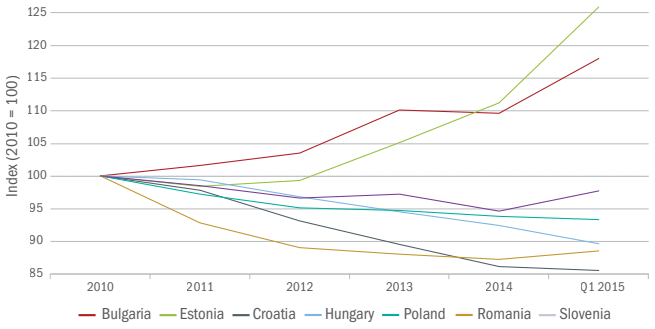
Monetary conditions in eurozone countries and countries with close economic ties to the eurozone have softened following the implementation of quantitative easing. Cyprus, Estonia, Latvia, Lithuania, the Slovak Republic and Slovenia are all directly eligible for asset purchases under the programme (Lithuania being the latest transition country to join the eurozone, having done so on 1 January 2015). Greece may also become eligible as agreement has been reached with the European Commission, the ECB,

CHART M.2. Changes in exchange rates against the US dollar



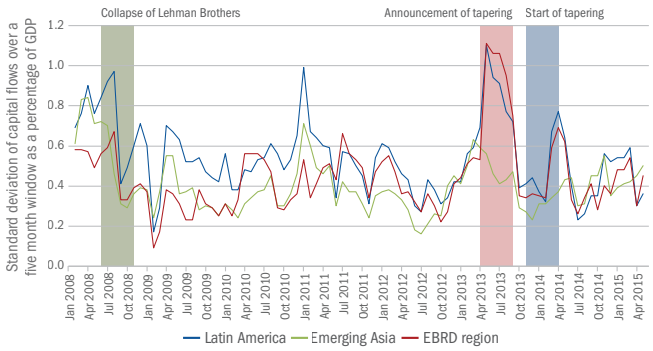
Source: Bloomberg and authors' calculations.
Note: Positive values indicate appreciation against the US dollar.

CHART M.3. Exchange rate-adjusted unit labour costs relative to the EU-15 average



Source: Eurostat and authors' calculations.
Note: Unit labour costs are adjusted for exchange rate differentials and expressed relative to an unweighted average of unit labour costs in the EU-15 economies. Estimates for the first quarter of 2015 are based on incomplete preliminary data.

CHART M.4. Volatility of flows to emerging markets



Source: EPFR Global and authors' calculations.
Note: GDP-weighted averages across countries, based on mutual fund flows. Shaded areas correspond to five-month periods around each event.

the IMF and the European Stability Mechanism regarding a new bailout programme. Interest rates in many other countries in central Europe and the SEE region have declined, mirroring interest rates in the eurozone. Stock markets in these countries have also seen significant gains. For instance, equities in Hungary and Poland outperformed both the S&P benchmark and global emerging market benchmarks in the months that followed the announcement of quantitative easing.

In addition, most currencies in the CEB and SEE regions (as well as that of Turkey) have weakened against the US dollar, mirroring the euro (see Chart M.2). Weaker currencies (on a trade-weighted basis) and more accommodative monetary conditions should boost competitiveness in these economies. While many new EU member states have gained in competitiveness relative to the EU-15 economies since 2010 in terms of exchange rate-adjusted unit labour costs, a number of them (notably Bulgaria and the Baltic states) have been losing competitiveness (see Chart M.3).

At the same time, depreciating currencies can increase the cost of servicing debt denominated in US dollars. Turkey, in particular, may be affected by the rising burden of US dollar-denominated debt, while the depreciation of the euro – the currency of Turkey's key trading partners – is limiting the competitiveness gains derived from the weaker lira.

Expected monetary policy tightening in the United States

By contrast with developments in the eurozone and Japan, monetary policy in the United States has been neutral as the total assets of the Federal Reserve have stopped increasing. As a result, the US dollar has appreciated against most currencies. US monetary policy is expected to gradually tighten as the Federal Reserve raises interest rates.

As discussed in the *Transition Report 2014*, monetary tightening in the United States tends to reduce capital inflows in emerging markets (at least temporarily) and increase the volatility of such inflows. This reflects a perceived deterioration in the balance between the risks and rewards of investing in emerging markets when returns on investment in core advanced markets rise.

Flow data for mutual funds suggest that funds' inflows and outflows are indeed strongly correlated across emerging markets in Asia, Latin America and Europe as they tend to be driven to a very significant extent by the global attitude to risk and monetary conditions in the United States.[1] Furthermore, the volatility of monthly inflows in emerging markets (calculated as the average standard deviation of monthly flows to various countries, expressed as a percentage of GDP, over a five-month period) spiked when the forthcoming tapering of quantitative easing was first announced in June 2013 (see Chart M.4).

The actual tapering (that is to say, the reduction of the monthly purchases of assets by the Federal Reserve) did not start until January 2014 and it was well anticipated and largely priced in by the markets. Nevertheless, the volatility of flows to emerging markets spiked again (albeit less dramatically) when the Federal Reserve actually began tapering.

This episode suggests that capital flows to emerging markets are likely to become significantly more volatile once interest rates begin to rise, with reduced net inflows in emerging markets initially. Countries that rely heavily on capital flows other than foreign direct investment (FDI) for the financing of their current accounts (such as Turkey) will be particularly vulnerable if US interest rates rise more strongly than expected. A sell-off in China's stock markets in August 2015 led to a sharp increase in volatility in the global financial markets. As a result, capital outflows from emerging markets appear to have intensified.

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BASIS POINTS
CUMULATIVE INTEREST RATE INCREASE BY THE CENTRAL BANK OF RUSSIA IN DECEMBER 2014

[1] See Forbes and Warnock (2012) for evidence that global – rather than domestic – factors play a key role in explaining waves of capital flows. Rey (2013) shows that increases in interest rates in the United States are associated with rises in global measures of risk and uncertainty.

Increased geopolitical uncertainty

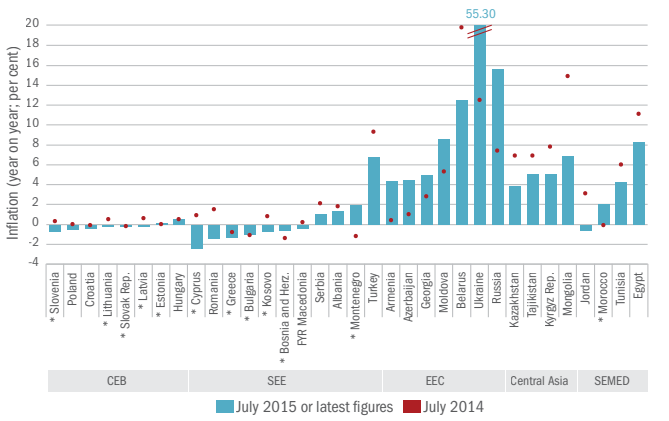
The economic outlook for Russia, the EEC region and Central Asia has also been negatively affected by the increased geopolitical uncertainty in the region. The conflict in Ukraine escalated repeatedly in the second half of 2014 and early 2015. The signing of the Minsk II accord in February 2015 has helped to contain the risks on the ground in Ukraine but the situation in eastern Ukraine remains highly volatile.

The sanctions imposed on Russia by the United States and the EU remain in place, as do the Russian counter-sanctions (bans on selected food imports from sanctioning countries). These sanctions, combined with uncertainty about their possible escalation in the future, have limited the ability of banks and firms to access international debt markets, contributed to an increase in net private capital outflows and negatively affected business confidence. If sanctions remain in place for a prolonged period of time, they may negatively affect innovation and technological modernisation in Russia, with a negative impact on productivity in the long term.

Geopolitical tensions are also affecting Turkey and the SEMED region, with the global and regional terrorist threat posed by Islamic State increasing in both Iraq (Turkey's second largest export partner) and Syria. The weaker export environment and deteriorating market sentiment that have resulted from these tensions have all but offset the benefits of declining oil prices for Turkey's economy. Pressure on the value of the country's currency and equities has been compounded by the inconclusive results of the parliamentary elections in June and the military intervention against Kurdish and Islamic State positions in July 2015. Political tensions also remain high in Libya and terrorist attacks have hit the tourist industries of a number of countries in the region.

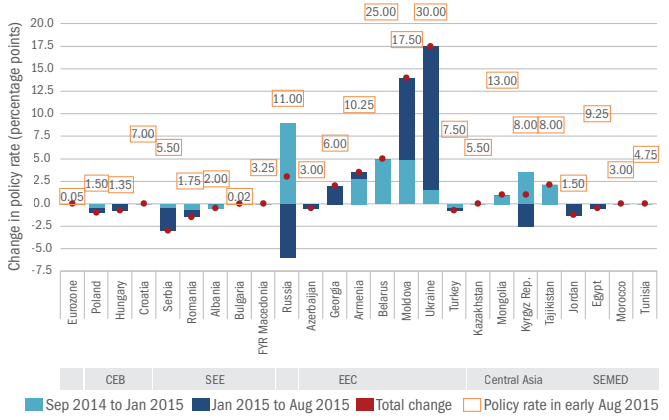
The SEMED countries that have been worst affected by this regional and domestic instability are Jordan and Tunisia. In Jordan, conflict in neighbouring Iraq and Syria has disrupted exports, including those to Turkey and Lebanon. Furthermore, Syrian refugees now account for nearly one-fifth of Jordan's population. This massive influx of refugees has strained public services, government finances and labour markets. In Tunisia, on the other hand, the recent worsening of the domestic security environment is expected to weigh heavily on tourism and investment.

CHART M.5. Inflation rates



Source: National authorities via CEIC Data.
Note: The rates shown are year-on-year figures based on consumer price indices. * denotes a country that uses the euro as legal tender or as an anchor for its exchange rate peg.

CHART M.6. Changes in central bank policy rates



Source: National authorities via CEIC Data.

Inflation and interest rates

The sharp decline in oil prices has contributed to further disinflation in most countries in the region. In several CEB and SEE countries consumer prices have declined over the last 12 months (see Chart M.5).[2]

In contrast, inflation in Russia rose to around 15 per cent year-on-year in July 2015. This largely reflected a combination of the pass-through of import prices following the depreciation of the rouble and the impact of the ban on selected food imports that was imposed in 2014 on countries that placed economic sanctions on Russia. Currency depreciations also resulted in significant increases in inflation in the Kyrgyz Republic, Tajikistan

[2] See Iossifov and Podpiera (2014) for detailed analysis of the factors behind lower inflation in selected CEB and SEE countries.

and Ukraine. Meanwhile, inflation in Turkey is well above the central bank's target for the fourth consecutive year as the depreciation of the lira has pushed up the prices of imported goods, offsetting the disinflationary impact of lower oil prices.

Policy interest rates have been cut in many CEB, SEE and SEMED countries against the background of weak inflationary pressures and quantitative easing in the eurozone (see Chart M.6). At the same time, central banks in a number of countries in the EEC region and Central Asia have had to raise interest rates in response to pressure on their currencies and rising inflation. The Central Bank of Russia, for example, raised its policy rate by 750 basis points, to 17 per cent, in December 2014. By August 2015, however, this rate rise had been almost entirely reversed. At the same time, the central bank provided ample liquidity support to its banking system.

Unemployment

Unemployment has been declining in the CEB and SEE regions, attesting to a strengthening recovery (see Chart M.7). In Poland, the region's largest economy, unemployment has fallen to a level last seen in 2009. This, in turn, has supported a rise in real disposable income and strengthened domestic demand.

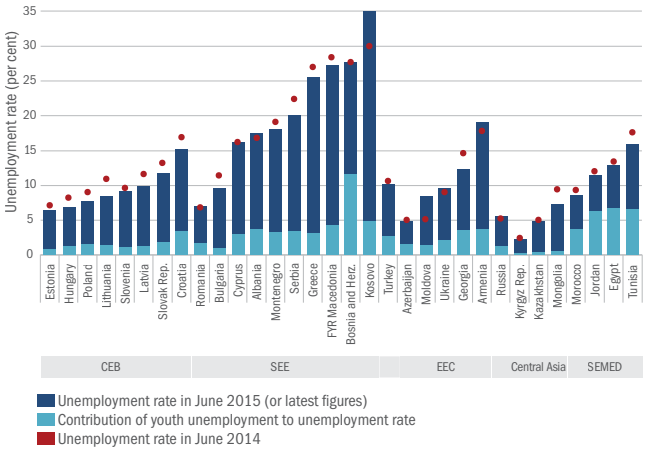
Elsewhere, unemployment rates have remained broadly unchanged, while in crisis-hit Ukraine unemployment has increased. Unemployment in the SEMED region remains high, at levels of between 10 and 15 per cent. In Bosnia and Herzegovina, FYR Macedonia, Kosovo and the SEMED countries, the presence of relatively large numbers of young adults (that is to say, people aged between 15 and 24) and limited job prospects for new entrants have resulted in youth unemployment making a major contribution – between 4 and 12 percentage points – to total unemployment rates (see Chart M.7). In SEMED countries rigid labour markets that favour existing workers and a skills mismatch arising from outdated educational models are further exacerbating the problem of youth unemployment.

Capital flows and remittances

Private capital flows to the transition region have been volatile and remain modest overall. The CEB and SEE regions saw net capital inflows totalling around 1 per cent of GDP in 2014. These inflows declined in the first half of 2015, according to preliminary data. Net private capital outflows from Russia have continued, standing at US$ 154 billion in 2014 and US$ 53 billion in the first half of 2015. To a large extent, these figures reflect the repayment of external debt by Russian banks and firms, since Russia's external debt declined from US$ 732 billion in mid-2014 to US$ 522 billion on 1 October 2015. Turkey continues to rely on non-FDI private capital inflows to finance its large current account deficit (which narrowed somewhat in 2014, standing at 5.7 per cent of GDP).

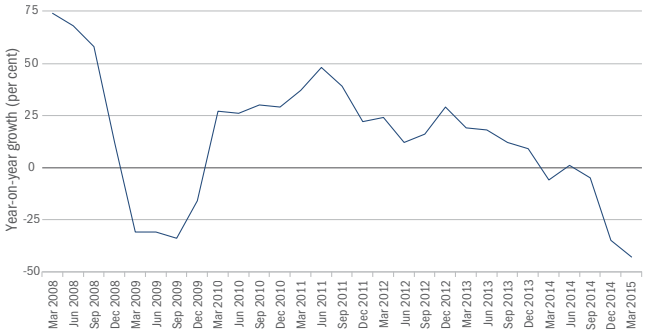
The decline in remittances from Russia to Central Asia and the EEC region has been particularly sharp. By early 2015 remittances were declining at rates similar to those observed in 2009 at the height of the crisis – by around 40 per cent year-on-year

CHART M.7. Unemployment rates



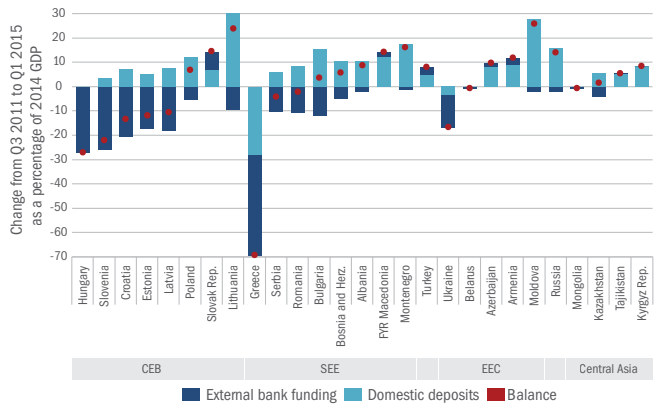
Source: National authorities via CEIC Data.
Note: "Youth unemployment" means unemployment among people aged 15-24.

CHART M.8. Remittances from Russia have declined sharply



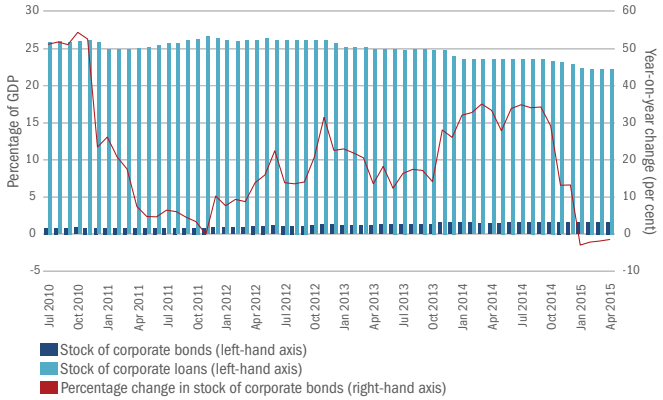
Source: Central Bank of Russia.
Note: Based on data on remittances to Armenia, Azerbaijan, Belarus, Georgia, the Kyrgyz Republic, Moldova, Mongolia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

CHART M.9. Changes in external bank funding and domestic deposits



Source: Bank for International Settlements, national authorities via CEIC Data, IMF World Economic Outlook and authors' calculations.

CHART M.10. Stocks of corporate loans and bonds in the CEB and SEE regions as a percentage of GDP



Source: National authorities via CEIC Data, IMF World Economic Outlook, Bloomberg and authors' calculations.
Note: Data represent GDP-weighted averages for the CEB and SEE regions.

AROUND 2% OF GDP

VALUE OF THE STOCK OF OUTSTANDING CORPORATE BONDS IN CENTRAL AND SOUTH-EASTERN EUROPE

in US dollar terms (see Chart M.8). The impact of declining remittances has been particularly strong in Armenia, Moldova, the Kyrgyz Republic and Tajikistan, where remittances totalled between 20 and 50 per cent of GDP before the crisis (see also Box 2.4).

The decline in remittances reflects a combination of a weaker rouble and the return of a significant number of migrants to their home countries. Although data on actual migration flows are very patchy, hundreds of thousands of migrant workers are reported to have returned to Tajikistan, Uzbekistan and other countries in Central Asia and the EEC region.

Remittances have continued to rise in SEMED countries, where a significant percentage of remittances come from Gulf Cooperation Council countries and the United States.

Currency movements

Weaker inflows of remittances and declines in exports have led to downward pressure on the currencies of countries in the EEC region and Central Asia, including Belarus, Georgia and Moldova (see Chart M.2). A number of countries in this region have intervened extensively in foreign exchange markets and/or raised interest rates to limit the depreciation of their currencies. The currencies of the region's major commodity exporters, Azerbaijan, Kazakhstan and Turkmenistan, have also weakened in response to declines in export revenues. The Ukrainian hryvnia lost almost 45 per cent of its value against the US dollar between August 2014 and July 2015, reflecting the depth of the economic crisis in the country.

The rouble depreciated sharply in late 2014 and early 2015. It then fluctuated broadly in line with the movements of the oil price. In mid-2015 it was around 40 per cent weaker against the policy basket of the US dollar and the euro than it had been a year earlier. Meanwhile, Russia's international reserves declined from around US$ 500 billion in early 2014 to around US$ 350 billion in mid-2015 and have stabilised around that level.

Credit conditions and non-performing loans

Credit growth in the CEB and SEE regions has remained subdued. The rate at which parent banks are reducing their exposure to these regions appears to have increased again in late 2014 and early 2015. In many countries this reduction has not been fully offset by an expansion of the domestic deposit base (see Chart M.9), resulting in tighter credit conditions overall. At the same time, a gradual shift to a larger role for domestic deposits as a source of funding is a welcome development, as it makes the provision of credit more stable in the long term.[3]

Corporate bond issuance in the region has increased strongly since the 2008-09 crisis but from a very low base (see Chart M.10). As a result, overall volumes of outstanding bonds in the CEB and SEE regions, which total around 2 per cent of GDP, represent only a small fraction of the total stock of corporate bank credit. Consequently, the growth of bond financing has been unable to offset the negative or very weak loan growth seen in these economies. Furthermore, corporate bond issuance came

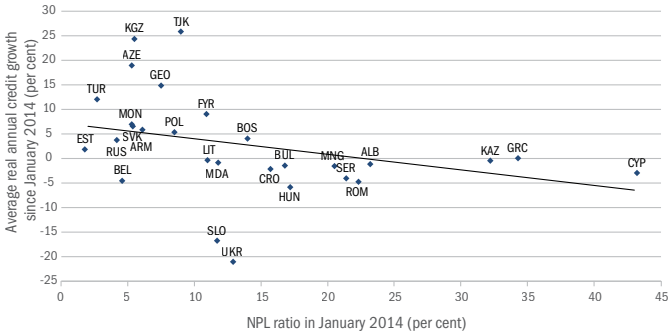
[3] See, for instance, Rai and Kamil (2010) for empirical evidence.

to a halt in early 2015, reflecting weak capital flows to emerging markets more generally.

The recovery of credit remains constrained by high non-performing loan (NPL) ratios. Indeed, Chart M.11 shows that the growth of real bank credit has, on average, been substantially weaker in countries with persistently high NPL ratios. The analysis in Chapter 1 of this report shows that this relationship also holds over longer periods of time and in larger samples of countries. NPLs limit the willingness and ability of banks to lend to corporate and household clients. On the other hand, a lack of credit growth makes it more difficult for companies to refinance their debt or secure bridge financing in the event of temporary liquidity problems, thereby exacerbating NPL problems in an economy.

As a result of decisive action by regulators, NPL ratios have recently declined significantly in both Kazakhstan (following the very high levels observed in 2008-14) and Romania. In contrast, as Ukraine's recession has deepened, its NPL ratio has risen rapidly, approaching 30 per cent. NPL ratios are estimated to be well in excess of 40 per cent in Cyprus and Greece, and close to 20 per cent in several other SEE countries, with even higher ratios in the case of corporate loans. The NPL ratio has also risen in Tunisia, where NPLs account for around 16 per cent of total loans, concentrated in state-owned banks. In addition, significant delays in passing laws to recapitalise and restructure public-sector banks and create an asset management company to absorb toxic assets are restricting the flow of fresh credit to businesses and holding back growth.

CHART M.11. Real credit growth and non-performing loans



Source: National authorities via CEIC Data, and authors' calculations.
Note: Definitions of non-performing loans may vary across countries.

Outlook and risks

The annual growth rate in the transition region is expected to fall from 1.9 per cent in 2014 to 0.2 per cent in 2015, before picking up moderately to 1.6 per cent in 2016. To a large extent, this weakening of economic growth reflects the impact that declining oil prices have had on commodity-exporting countries (which account for a large percentage of the region's GDP – around 40 per cent, compared with averages of around 20 per cent in emerging markets globally and around 10 per cent in all economies worldwide) and countries with strong economic ties to Russia. The average numbers, however, mask a significant variation across countries.

Quantitative easing in the eurozone, the weaker euro and declines in oil prices are all benefiting economies in the CEB and SEE regions. Growth in the CEB region is expected to average around 3 per cent in 2015 and 2016, allowing incomes to continue to converge with those of the EU-15 economies. Growth in most of the SEE region is expected to strengthen in 2015 and improve further in 2016. However, the outlook for Greece remains highly uncertain, as it is largely dependent on a commitment to implementing reforms agreed under a new bailout programme and the response of economic activity to those reforms.

Output in Russia is expected to contract in real terms in both 2015 and 2016 as real income, consumption and investment all decline in the face of significantly lower oil prices, which are exacerbating structural problems and the impact of economic sanctions. The general outlook in the EEC region and Central Asia has worsened owing to negative spillovers from the recession in Russia and currency depreciation in the region is amplifying risks associated with currency mismatches in corporate and public-sector balance sheets. Meanwhile, Ukraine's economy is expected to return to growth in 2016 after a deep recession in 2015.

AROUND
40%
DECLINE IN REMITTANCES FROM RUSSIA TO CENTRAL ASIA, THE CAUCASUS AND MOLDOVA IN US DOLLAR TERMS IN THE FIRST HALF OF 2015

The annual growth rate in Turkey is expected to remain around 3 per cent in both 2015 and 2016, significantly below the country's long-term potential, as the positive impact of declines in oil prices is being offset by weaker external demand, elevated domestic political uncertainty following the inconclusive parliamentary elections in June and the limited scope for interest rate cuts given Turkey's considerable dependence on capital inflows. Meanwhile, declines in oil prices, improved prospects in key export markets and a number of economic reform measures will all continue to support growth in the SEMED region, which is expected to strengthen in 2015.

A high degree of uncertainty surrounds the outlook for growth. Geopolitical risks relating to the situation in Ukraine remain elevated and an escalation of that conflict would have significant negative spillover effects for the region as a whole. The conflict in Syria and the threat posed by Islamic State and other groups are also important sources of risk for the region – particularly the economies of the SEMED region and Turkey – through their impact on trade, investment, tourism and migration flows. In addition, if monetary policy in the United States is tightened more strongly than expected, it could result in sharp increases in external financing costs and large capital outflows from emerging markets, including the transition region. The Institute of International Finance projects net capital flows to emerging markets in 2015 to be at the lowest level in more than two decades.

The persistent uncertainty surrounding the situation in Greece is another major source of risk and a deterioration in the economic outlook for the eurozone could increase the withdrawal of funds by European parent banks operating in the region and exacerbate the contraction of credit, constraining growth in investment and consumption. Furthermore, a potential further decline in oil prices would increase pressure on the Russian economy, with negative spillovers for the economies of Central Asia and the EEC region.

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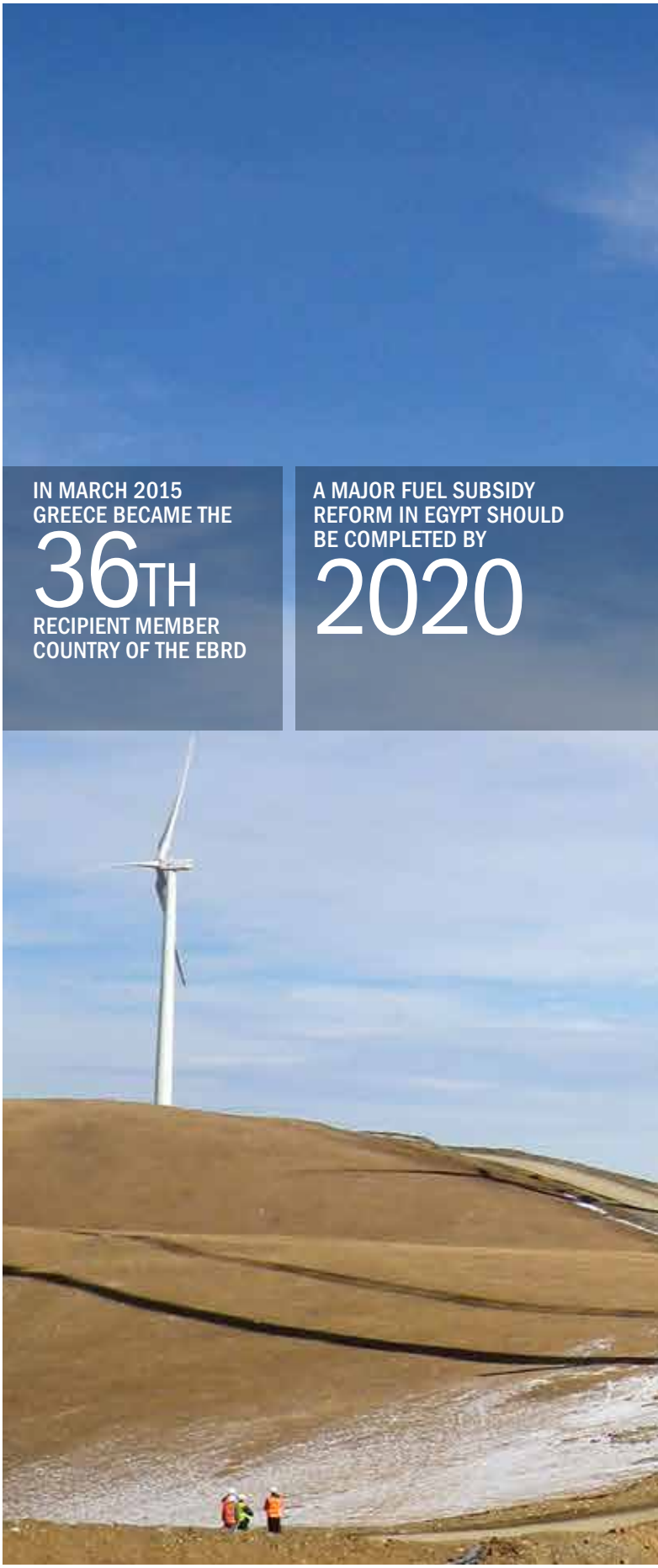
While the political and economic environment remains challenging, the outlook for market reforms appears to have improved. There are opportunities for reform in many sectors and countries that could help to bring economic structures and institutions more into line with those of advanced market economies. However, many transition countries still lag behind best practices when it comes to promoting the sustainable use of resources and inclusion.

Introduction

The last year has been another challenging one for reformers across the transition region. Many of the factors identified in the *Transition Report 2013* that keep countries "stuck" in transition and deter market-oriented reforms – such as weak or negative growth, global and regional turbulence and instability, and weak states and public administrations – continue to be observed. At the same time, however, encouraging signs of progress have been seen in selected cases. While there have been isolated instances of the reversal of reforms, the overall direction has been positive, which bodes well for longer-term growth prospects. In particular, significant progress has been made with the enhancement of infrastructure, as cash-strapped governments increasingly realise the value of fostering private-sector involvement in the building and maintenance of transport links and municipal services.

The EBRD has been systematically tracking the progress of transition and structural reforms since the first *Transition Report* was published in 1994. However, the way these assessments are carried out has evolved over the years.[1] A major advance in 2010 was the introduction of sector-level indicators. These now cover 18 sectors in each country, assessing the size of the remaining transition challenges in terms of creating market structures and building market-supporting institutions. The methodology underlying these sector-level scores is currently the subject of a thorough review and may be altered in the coming years. As a result, this year's *Transition Report* adopts a "light-touch" approach. Rather than carrying out a full update, this section reviews developments over the last year and flags major changes that could potentially – but will not necessarily – warrant an upgrade or downgrade of these sector-level scores in the future. As discussed below, the watch list that has been compiled this

[1] For a brief history of these transition indicators and details of how they have changed over time, see Chapter 1 of the *Transition Report 2010*.



STRUCTURAL REFORM

POSITIVE DEVELOPMENTS IN SECTOR-LEVEL TRANSITION INDICATORS OUTNUMBER NEGATIVE DEVELOPMENTS BY

30 TO 8

COMPARED WITH THE NEGATIVE OVERALL TREND LAST YEAR

21

OF THE 36 COUNTRIES IN THE REGION HAVE LARGE TRANSITION GAPS IN AT LEAST ONE COMPONENT OF THE NEW SUSTAINABLE RESOURCE INDEX

year is, on balance, overwhelmingly positive. The horizontal country-level indicators measuring liberalisation, privatisation and enterprise reform have been discontinued this year, mainly because the measurement of transition progress has moved beyond the point where it can be adequately captured by these scores. However, developments in the area of competition policy, which is an area that still lags behind, are still being tracked carefully across the region using (among other things) a unique annual EBRD survey of competition authorities.

This year's *Transition Report* contains an important innovation, namely the introduction of two new sustainability indicators reflecting the EBRD's priorities under its Sustainable Resource Initiative (SRI). The existing sustainable energy indicator has been complemented by new indicators measuring the efficient use of water and materials. These two new components assess the extent to which the structures and institutions in the EBRD's countries of operations promote the reuse and recycling of natural resources. The results suggest that approaches to the efficient use of water and materials are even less developed than in the case of energy efficiency, with cost structures not taking account of the cost of water or environmental degradation.

Lastly, this section updates the EBRD's youth and gender inclusion scores. The problem of young people being excluded from economic opportunities has attracted attention at a global level in recent years, as it is believed to be one of the main sources of regional instability. The results show that high unemployment among youth populations is a common feature of many parts of the transition region and is exacerbated by large skill mismatches, especially in the southern and eastern Mediterranean (SEMED).

Sector-level transition indicators

Table S.1 presents the current transition scores – which range, as usual, from 1 (denoting little or no progress with market-oriented reforms) to 4+ (denoting the standards of an advanced industrialised economy) – for 15 sectors in 35 countries in the EBRD region.[2] As explained above, these scores are the same as those published in last year's *Transition Report*, since a full update has not yet been carried out. However, major reforms and other developments have taken place over the last year that may potentially entail changes to scores when the full assessment is conducted. Consequently, a number of scores in the table are shaded in green, indicating that they are on "positive watch", while others are shaded in orange, signalling that they are on "negative watch". The former outnumber the latter by a significant margin – by 30 to 8. At a broad sectoral level, the largest number of positive developments is in the area of infrastructure, with 14 scores on positive watch and just two on negative watch. However, positive developments also outnumber negative developments in the corporate sectors (by four to one), the financial sectors (by seven to four) and even the energy sector (by five to one), reflecting a more positive outlook than in recent years.

Infrastructure

The largest number of positive developments is in the road sector. In the majority of cases, this reflects an increasing interest in fostering private-sector involvement in the building of new roads or in the maintenance of existing networks. In Poland, for instance, the maintenance and reconstruction of regional roads is continuing to be tendered out on the basis of public-private partnerships (PPPs). In April 2015, for example, the Lower Silesian Road and Railway Service in Wroclaw issued a contract notice for an availability payments-based PPP involving the reconstruction and maintenance of between 90 and 315 kilometres of provincial roads in the Dolnoslaski region.

However, important developments on the PPP front are also occurring in less advanced countries. In Kazakhstan, the Almaty Ring Road PPP was tendered out in the summer of 2015. This was Kazakhstan's first PPP project, after the government amended legislation in June 2014 to facilitate PPPs. The project involves building a road of 66 kilometres around Kazakhstan's largest city under a 20-year availability payments-based concession. In Albania the government has relaunched the procurement process for the €40 million Milot-Morine Highway PPP, while preparations are under way for a first PPP road project in Belarus. Other positive developments in the road sector include the introduction of new tolling methods in Russia and Serbia, as well as ongoing discussions regarding the restructuring of a state-owned road construction and maintenance company in Croatia.

Several EU member states and candidate country Serbia have also made important progress in the area of railway-sector reform. Major restructuring of Serbia's state-owned railway company Železnice Srbije began in July 2015, while the Slovak Republic's wagon fleet is being privatised and Poland's freight operator PKP Cargo has conducted successful initial and secondary public offerings. In Croatia, meanwhile, there are several new entrants in the cargo market, including operators from Germany, Hungary and the Slovak Republic. Reforms are also under way in the urban transport sector, which has seen increases in the numbers of private bus operators and maintenance providers in Hungary, as well as a new system for collecting tolls from heavy goods vehicles to be introduced in Russia by the end of 2015.

The picture is more mixed in the water and wastewater sector. In Egypt, a new tariff adjustment schedule for water and wastewater has been endorsed by the government with the aim of achieving full cost recovery for commercial users and improving cost-recovery rates for household users within the next five years. The first tariff increases took place in July 2015. In Armenia there has been a reversal of decentralisation over the last year, with the government announcing its intention to consolidate all water assets in the country under a single operator. Generally, decentralised structures tend to be more conducive to efficiency gains, as local operators have a clear responsibility for running their operations in a cost-effective manner. In the case of Armenia, however, the government is more concerned in the short term about imposing greater discipline and curbing corruption. Once these objectives have

[2] In March 2015 Greece became a recipient member country of the EBRD. As in the case of Cyprus, the EBRD's involvement in Greece is expected to be temporary, with no new investment after the end of 2020. The EBRD is carrying out a full assessment of the sectoral challenges facing Greece as part of the development of a formal strategy for the country.

TABLE S.1. Sector-level transition indicators in 2015: overall scores and countries on positive/negative watch

	Corporate sectors				Energy		Infrastructure				Financial sectors				
	Agribusiness	General industry	Real estate	ICT	Natural resources	Electric power	Water and wastewater	Urban transport	Roads	Railways	Banking	Insurance and other financial services	MSME finance	Private equity	Capital markets
Central Europe and the Baltic states															
Croatia	3	3+	3+	4	4-	3	3+	3+	3+	3-	3+	3+	3-	2+	3+
Estonia	3+	4+	4+	4	4	4+	4	3+	3	4	4-	3+	3+	3-	3
Hungary	4	4-	4-	4-	4-	3	3+	3+	4-	3+	3	3	3	3	3+
Latvia	3	4-	4-	3+	4-	3+	3+	4-	3	4-	3+	3+	3	2+	3+
Lithuania	3+	4	4-	4-	4-	3+	3+	4-	3	3	3+	3+	3	2+	3
Poland	3+	4-	4-	4	3	3+	4-	4-	4-	4-	4-	3+	3	3+	4-
Slovak Republic	3+	4+	4	4-	4-	4	3+	3+	3+	3+	4-	3+	4-	2+	3
Slovenia	4-	3+	4	3+	3+	3	3+	3+	3	3	3	3+	3-	3-	3+
South-eastern Europe															
Albania	3-	2+	3-	3+	3-	2+	2+	3-	3-	2	3-	2	3-	1	2-
Bosnia and Herzegovina	3-	2	2-	2+	2	2+	2	2+	3	3+	3-	2+	2+	2-	2
Bulgaria	3	3+	3+	4-	3+	3	3	3+	3-	3+	3	3+	3	3-	3-
Cyprus	3-	4+	3	4-	3-	3	3+	3+	3	Not applicable	3-	Not available	Not available	Not available	3+
FYR Macedonia	3-	3	3-	4-	2+	3	2+	3-	3-	3-	3-	3-	3	1	2-
Kosovo	2+	2-	2-	2+	2	2+	2+	2+	2+	3-	2+	2	3-	1	1
Montenegro	2+	2+	2+	3+	3+	2+	2	3	2+	2+	3-	2+	3	1	2
Romania	3	3+	3+	3+	4-	3+	4-	3+	3	3+	3	3+	3	3-	3-
Serbia	3-	3-	3-	3	2	2+	2+	3-	3-	3	3-	3	3	2	2
Turkey	3-	3	3+	3+	3+	3+	3-	3	3-	3-	3+	3	3	3-	4
Eastern Europe and the Caucasus															
Armenia	3-	3	3-	3	2+	3+	3-	2+	3-	2+	2+	2	2+	1	2
Azerbaijan	2+	2	2	2-	2+	2+	2-	2	2+	2+	2	2	2	1	2-
Belarus	2+	2	2	2	1	1	2-	2	2	1	2	2	2	1	2-
Georgia	3-	3-	3-	3-	2	3+	2	2+	2+	3	3-	2	3-	1	2-
Moldova	3-	2-	2+	3	3	3	2	3	3	2	2+	2+	2	2-	2
Ukraine	3-	2+	3-	3-	2-	3	2+	3-	3-	2+	3-	2+	2+	2	2
Russia	3-	3-	3-	3+	2	3+	3	3	3-	4-	3-	3-	2	2+	4-
Central Asia															
Kazakhstan	3-	2	3	3	2-	3	2+	2+	3-	3	2+	2+	2	2-	2
Kyrgyz Republic	2+	2	2+	3	2-	2+	2	2	2-	1	2	2-	2-	1	2-
Mongolia	3-	2+	2	3	2	2+	2	2	2-	3-	2+	2	2+	2-	2-
Tajikistan	2	2-	2-	2+	1	2	2	2	2-	1	2	2-	2-	1	1
Turkmenistan	1	1	1	2-	1	1	1	1	1	1	1	2-	1	1	1
Uzbekistan	2	1	2	2	1	2+	2-	2	1	3-	1	2	1	1	1
Southern and eastern Mediterranean															
Egypt	2	2	2+	3	1	2+	1	2	2+	2-	2+	2+	2-	2	2+
Jordan	2	2+	3-	3+	2+	3	2-	2+	3-	2	3	2+	2+	2	2
Morocco	2+	3-	3-	3+	2-	2	2+	3	3-	2	3	3-	2+	2+	3
Tunisia	3-	3+	3-	3	2	2	2	2+	2+	2+	2+	2+	2	2-	2+

Green shading denotes country/sector on positive watch

Orange shading denotes country/sector on negative watch

Source: EBRD.

Note: The transition indicators range from 1 to 4+, with 1 representing little or no change relative to a rigid centrally planned economy and 4+ representing the standards of an industrialised market economy. For a detailed breakdown of each of the areas of reform, see the methodological notes in the online version of this *Transition Report* (tr-ebrd.com). A country/sector being placed on positive or negative watch is indicated by a colour code: green indicates positive developments over the past year and orange indicates negative developments. The sustainable energy indicator has also undergone an assessment of positive and negative developments, but is presented in Table S.2 alongside the other two components of the sustainable resource index.

been achieved, the authorities should consider reinstating a more decentralised structure. In Tajikistan, meanwhile, the holding company responsible for most of the country's regional water supplies has become insolvent, partly as a result of inadequate management. However, this development could also represent an opportunity to restructure the management and governance of the majority of the country's water utilities, which has the potential (if good practices are implemented) to result in a much-improved structure for the provision of water services.

Corporate sectors

In recent years it has been difficult to detect tangible progress in the region's corporate sectors. By their very nature, corporate-sector reforms tend to be more incremental and take longer to have a visible impact on the economy. However, several countries have taken steps to improve the business environment and attract investment in the last year. One notable example is Albania, where concrete reforms have been implemented in order to make it easier to start a business and transfer property, and where a concerted effort is under way to reduce the size of the informal sector. In Egypt, meanwhile, major amendments to the country's investment law have been approved and ratified, strengthening the protection afforded to investors and streamlining procedures by setting up a one-stop shop. The resolution of disputes between investors has also been improved.

There have been mixed developments in privatisation of the telecommunications sector. The incumbent in the Slovak Republic, Slovak Telekom, was fully privatised by selling all remaining shares held by the government to Deutsche Telekom but in Slovenia the attempted sale of Telekom Slovenije failed, which had a negative impact on investor appetite in the sector.

Financial sectors

Many countries' financial sectors are still feeling the impact of the various crises that have hit the region in recent years and are struggling to deal with legacy and new non-performing loan portfolios. However, the last year has seen visible progress in this area, with efforts to clean up banking systems and strengthen their resistance to further shocks.

The country that has made the most progress is Ukraine which, since 2014, has seen the closure of more than 50 banks that were characterised by non-transparent ownership, excessive related party lending and weak management and corporate governance. However, banking-sector balance sheets in Ukraine remain under pressure owing to the strong depreciation of the hryvnia and increased credit risks in the context of the country's deep recession. Bank recapitalisation is ongoing and important regulations, including rules on related party lending, have been adopted in order to make the banking sector more resilient.

Elsewhere, major reforms are under way in both Cyprus, where new legislation on insolvency and foreclosure should help to address the country's serious non-performing loan problem, and Slovenia, where steps are being taken to consolidate the banking sector and prepare for privatisation. Tajikistan's banking sector is also under pressure from increasing levels of non-performing loans. Georgia, meanwhile, has been criticised by international financial institutions for proposing a banking supervision bill that would shift the supervisory responsibility for the financial sector away from the central bank to a new agency. Despite a presidential veto, the bill was approved by the Georgian parliament in September 2015, creating uncertainty about the future independence and quality of banking supervision in Georgia. The most negative development in the region's banking sectors was observed in Moldova, where a massive fraud in three large banks resulted in up to US$ 1 billion (around 13 per cent of the country's GDP) disappearing from the system. This highlighted the severe problems faced by the Moldovan banking system in terms of weak corporate governance and limited transparency.

Certain developments in Egypt could help improve the institutional environment for MSME finance. I-Score, an Egyptian private credit bureau that focuses on SME and consumer information, has developed a separate entity that will provide SME credit ratings from 2016. The Egyptian government in collaboration with local banks is also working towards the establishment of one-stop shops where registration services and loan access are provided hand-in-hand. This could prove particularly helpful in the light of a large informal sector. In addition, a microfinance law was passed in the country in 2014, which should provide more clarity and certainty for operations in the sector.

In the non-bank financial sector, the past year has seen the adoption of a new commercial law in FYR Macedonia which provides better legal conditions for international financial institutions and private equity funds to invest in equity. FYR Macedonia is also hosting SEE Link, a new regional trading platform which brings the Macedonian, Bulgarian and Croatian stock exchanges together on a single trading platform. In Romania, the development of capital markets should be facilitated by a number of important legislative and regulatory changes that have taken place in 2014 and 2015. One negative development in the insurance sector is the backward step seen in Slovenia where the state has classified several insurance companies and pension funds as "strategic" with the intention of playing a major role in those companies. This means that the prospects for privatisation in that sector are even more remote than they were before.

Energy

Last year's *Transition Report* noted that 2014 could prove to be a turning point for reforms in the energy sector after several difficult years during which a number of countries reversed previous reforms. On the evidence of developments so far in 2015, that optimism appears to be justified. The governments of both Egypt and Ukraine have introduced measures to reduce state subsidies related to energy prices, as a result of which there has been a sharp rise in prices for consumers. While such measures are often unpopular with the general public, they can help to remedy large deficits, allow state resources to be used for other, more pressing matters and can help to attract investment in the sector.

In Serbia the first phase of the corporate restructuring of state-owned energy company EPS has begun, and the retail electricity market for households was fully opened up in January 2015. However, there have been further negative developments in the Hungarian energy sector, following a succession of reductions in administered prices in recent years. Indeed, the price that Hungarian households pay for electricity is now significantly below the EU average.

In the natural resource sector, the most notable developments in the last year have also been observed in Egypt and Ukraine. In the former, a number of measures have been introduced to create a more stable and attractive operating environment for private investors: a fuel subsidy reform programme to align oil and gas prices with international levels by 2020 and the diversification of gas imports via competitive global liquefied natural gas markets. In Ukraine, a major reform of the gas sector is under way as part of the country's negotiations with international creditors. The Ukrainian authorities have made a decisive start in this regard, embarking on a tough reform programme designed to help the sector deal with corruption scandals. These initial steps include measures to tackle inefficiencies in the governance of state-owned company Naftogaz and reduce subsidies for end users.

Sustainable resources – a new approach to measurement

The sustainable use of resources lies at the heart of successful transition. In 2013 the EBRD launched its Sustainable Resource Initiative (SRI) with the aim of promoting the efficient use of energy, water and materials. This year's *Transition Report* presents two new indicators – measuring sustainable water and sustainable use of materials – as well as updating the existing transition scores for sustainable energy (positive/negative watch). While there are differences in the way these three indices are constructed, their key principles and main features are the same in the interests of consistency (see the methodological notes in the online version of this *Transition Report* for more details). All three are based on the familiar 1 to 4+ scale.

Table S.2 presents the scores for these indicators. Two general points immediately emerge from the table. The first is that the scores are fairly low on average, mostly clustered between 1 and 2+ (with the exception of central Europe and the Baltic states [CEB] where 3- is the lowest score). This suggests that, apart from the CEB countries, the region's sustainable resource gaps are generally large, particularly in the fields of water efficiency and materials efficiency. In fact, the water and materials indices are fairly similar to each other, with only a small number of countries recording differences of more than a couple of notches. The largest gaps can be found in eastern Europe and the Caucasus (EEC), Central Asia and the SEMED region, echoing the pattern observed for the other transition scores discussed above.

Second, there are significant market failures in all three SRI areas, implying that the adoption of legislation is the main driver of improvements. This is particularly true of sustainable water and recycling projects where the cost of water and environmental degradation is not factored in, which often leads to neglect on the part of companies and public bodies.

A further examination of the three indices yields a number of other interesting conclusions.

Sustainable energy gaps

As previous scores are available for this indicator, it is possible to see how the situation has evolved over time in different parts of the transition region. Although progress with renewable energy, a sub-component of the sustainable energy index, is most advanced in the CEB region and parts of south-eastern Europe (SEE), one notable feature of these results is that progress has slowed – and even been reversed in some cases – in EU member states and accession countries. This may be due to the financial pressures faced by governments, which have rushed to modify (as in the case of Romania) or cancel (as in the case of Bulgaria) their schemes supporting renewable energy. This has often had a negative impact on installations already in operation due to the retroactive nature of the measures taken.

Elsewhere in the region, some governments are turning to renewable energy as a solution to their energy shortages. Interestingly, in some SEMED countries (such as Jordan) competitive tender procedures for wind and solar photovoltaic power have led to prices that are lower than those paid to conventional fossil fuel installations. However, the overall picture in most non-EU countries shows some success with the adoption of primary legislation but little progress with designing and implementing all the required secondary rules and regulations. The result, therefore, is a relatively poor level of performance.

In the area of energy efficiency, energy tariffs in the residential sector rarely reflect costs. In some transition countries, energy is either provided virtually free of charge or collection rates are low. Even when prices reflect (or come close to reflecting) costs and collection rates are good, capital markets are not sufficiently well-developed to provide the funding required for further efficiencies. However, some progress is being made thanks to improved regulatory structures (such as minimum standards for buildings and industrial processes) and market incentives (such as cost-recovery tariffs, and reduced grid and commercial losses). There have also been some advances in the creation of national/regional carbon markets but pilot projects launched in this area (such as those in Kazakhstan and Ukraine, which the EBRD has supported with policy advice and technical assistance) have set the CO_2 price/carbon tax too low to act as a meaningful signal to markets.

Water efficiency gaps

A number of countries (and regions within individual countries) are suffering from water shortages. Detecting this phenomenon is not straightforward. When analysis is conducted using river basins as a baseline instead of national borders, a complex picture emerges with a number of regions being affected by water stress and/or vulnerability.[3] One finding from this index is that there is little correlation between the water efficiency transition score and water stress/vulnerability. In other words, problems with the supply or availability of water have not been enough to

[3] See Gassert et al. (2013).

trigger appropriate changes to regulations and market incentives. This is probably a reflection of several factors, such as (i) the need for international coordination in the case of some river basins; (ii) the substantial investment that is required, coupled with the difficulty of charging water and wastewater prices that would allow such investment to be financed; and (iii) the existence of deep externalities – not only environmental factors but also externalities relating to split incentives, asymmetric information and "early-mover costs".

The main driver of progress in this area is the adoption and enforcement of rigorous legislation, which in the EU finds expression in the Water Framework Directive. This is used as a benchmark for methodology and all related legislation (such as the Wastewater Directive, the Drinking Water Directive, and the Integrated Pollution Prevention and Control Directive). In non-EU countries in the region, there is only very limited regulation of water issues and priority is given to the quality and availability of drinking water and irrigation, which is typically responsible for up to 80 per cent of global water consumption. As regards market structures, much remains to be done in setting water supply, wastewater and water abstraction (extraction) tariffs at cost-recovery levels. Other challenges are cross-subsidisation (for agriculture and, to a lesser extent, households) and non-payment, which often exceeds 60 per cent in Central Asia and the EEC region. Sewerage infrastructure generally covers a good proportion of the urban population but a significant percentage of rural residents and businesses tend not to be covered.

Materials efficiency gaps

When assessing materials efficiency gaps, the principle of waste hierarchy should be used to guide policy design and implementation, as is the case in EU member states under the Waste Framework Directive. It is common in Central Asian, EEC and certain SEMED countries to dump most – if not all (in the case of Armenia, for example) – waste in uncontrolled areas. Recycling rates are often close to zero.

The EU member states and most accession countries have enacted the framework law and the by-laws (regarding packaging, end-of-life vehicles, electronic equipment and batteries) required by the EU and in some cases they are doing well in terms of achieving certain targets. Difficulties normally arise at the implementation stage, with one typical example being the persistence of dumping sites and illegal landfills. Bulgaria, for instance, still sends 100 per cent of its municipal solid waste to landfill sites, despite 50 per cent recycling being the agreed EU target for 2020. In other countries enforcement is skewed to protect nationally important industries. For example, there is no scheme for oil in Estonia, where the shale oil mining industry produces around 73 per cent of total non-hazardous waste.

In SEMED countries, waste is typically a lower priority than water or energy, so they either lag behind in terms of formulating comprehensive framework legislation on waste (as in the case of Egypt and Jordan) or they devote insufficient resources to its effective implementation (as in the case of Tunisia and Morocco). The informal sector plays an important role in reusing and recycling a variety of materials, typically in very unsafe and insanitary conditions. At the same time, the lack of a suitable supply chain providing a reliable flow of waste acts as a barrier to the adoption of commercial reuse/recycling strategies, with companies sometimes preferring to import waste rather than using the waste produced locally.

Youth and gender inclusion gaps

The EBRD's youth and gender inclusion gaps have been updated for 2015, with Greece being included in the assessment for the first time. Meanwhile, the analysis of youth inclusion has been expanded this year to incorporate new information. Indicators have been added to explore the extent to which labour market structures affect youth employment, specifically with reference to labour market regulations and business constraints, the ease of starting a business and the level of labour taxes and contributions as a percentage of profit (with that information being taken from the World Bank Enterprise Survey 2014 and the World Bank Doing Business Report 2015). Youth employment gaps have also been expanded to include long-term unemployment, informal and vulnerable employment and school leaver/graduate unemployment rates (using International Labour Organization [ILO] and World Bank data for 2014).

The resulting gaps are shown in Table S.3. They paint a stark picture of the challenges that young labour market entrants face in many parts of the transition region. More than half of the young labour force (age 15-24) is unemployed in Bosnia and Herzegovina, FYR Macedonia and Greece, with youth unemployment rates also exceeding 40 per cent in Montenegro and Serbia. Youth unemployment rates remain at 30 per cent across the SEMED region with the majority of unemployed young people still searching for their first jobs after completing their education. More than 80 per cent of unemployed young people in Egypt have been unemployed for more than 12 months. In parallel, the SEMED countries experience some of the highest rates of inactivity, with a third of young people "not in employment, education or training" (NEET).

Paradoxically, high unemployment rates often co-exist with a widespread shortage of skilled workers for available entry-level jobs, suggesting a skills mismatch (that is to say, a misalignment between the relative compositions of labour demand and labour supply). In order to examine this issue, a new skills mismatch dimension has been added to the assessment of youth inclusion gaps. These gaps are based on the ILO's Key Indicators of Labour Markets (KILM; 2012 data and latest figures) and measure two types of skills mismatch (using levels of educational attainment as a proxy for skills). The first type concerns mismatches between the supply of and demand for skills and is based on a comparison of the educational attainments of employed and unemployed people. The second concerns the mismatches between the skills that young people possess and those required by their jobs. In addition, the gap assessment also includes an indicator measuring firms' perception of the extent to which the skills mismatch constitutes an obstacle to their operations (with these data taken from the fifth round of the Business Environment and Enterprise Performance Survey [BEEPS V]).

TABLE S.2. Sustainable Resource Initiative (SRI) transition gaps in 2015: overall scores

	SRI		
	Water efficiency	Materials efficiency	Sustainable energy
Central Europe and the Baltic states			
Croatia	3	3	3-
Estonia	3	3+	3-
Hungary	3+	3+	3
Latvia	3+	3	3+
Lithuania	3	3+	3+
Poland	3	3	3
Slovak Republic	3+	3+	3
Slovenia	3	3	3+
South-eastern Europe			
Albania	2	2	3+
Bosnia and Herzegovina	2+	2	2
Bulgaria	3-	3-	3-
Cyprus	3-	2+	3-
FYR Macedonia	2	2	2+
Greece	3-	3-	4-
Kosovo	2-	2	2-
Montenegro	2+	2+	2
Romania	3-	3-	3+
Serbia	2	2+	2+
Turkey	2+	3-	3
Eastern Europe and the Caucasus			
Armenia	2	2-	3-
Azerbaijan	2-	2	2+
Belarus	2	2+	2
Georgia	2-	2-	3-
Moldova	2	2	2+
Ukraine	2	2	2+
Russia	3-	3-	2
Central Asia			
Kazakhstan	2	1	2-
Kyrgyz Republic	2-	1	2
Mongolia	2+	1	2
Tajikistan	1	1	2+
Turkmenistan	1	1	1
Uzbekistan	2-	1	2-
Southern and eastern Mediterranean			
Egypt	2-	2-	2+
Jordan	2	2	2+
Morocco	2+	2	3
Tunisia	2+	2+	3-

Source: EBRD.
Note: The sustainable water and materials indicators are new this year, whereas a watch list approach similar to the one for the other sector assessments has been applied to the sustainable energy indicator. There have been seven instances of positive developments and one negative development, which are denoted by green and orange shading, respectively – Latvia and Lithuania are making good progress towards their renewable energy targets, possibly before the deadline in 2020. Poland is also progressing with the transposition and implementation of EU directives. In FYR Macedonia, tendering procedures for hydro-power plants have been improved and the penetration of renewable energy technology has increased. Serbia has also seen positive developments by passing a new Energy Law with the potential of unlocking sustainable energy investments. By adopting its "Green Economy Concept" in 2013, Kazakhstan has committed to making sustainability an important policy objective and Egypt has created stronger incentives for sustainable energy investments by creating a feed-in tariff system and increasing electricity tariffs. The negative outlook for Albania reflects the government's hesitation in approving and transposing key sustainable energy legislation and a deteriorating business environment for owners of hydro-power plants.

The largest skills mismatch gaps can be observed in the SEMED countries, Turkey, Romania and the Kyrgyz Republic, where large percentages of undereducated young people co-exist with rising graduate unemployment, highlighting the complexity of the challenge that these countries face (see column 5 of Table S.3). Skills mismatches are a particular concern in Egypt and Jordan where almost 50 per cent of employers consider an inadequately educated workforce to be a "major" constraint on their firms. Skills mismatch gaps are medium-sized in almost all other countries for which data are available (with the exception of Estonia where the gap is small). These results are broadly in line with the gaps observed in relation to the quality of education, which are large in most SEMED countries (as well as Azerbaijan, the Kyrgyz Republic, Romania and Ukraine) and medium-sized in most other countries (with the exception of Estonia, Georgia and Slovenia, where they are small), highlighting the need to realign curriculums and teaching methods, as well as the need for more effective work-based learning opportunities that are in line with the needs of the private sector.

Lastly, financial inclusion gaps for young people show signs of narrowing in Serbia and Turkey. These developments aside, financial inclusion has generally been downgraded since last year owing to the addition of a new indicator measuring the percentage of young people saving money with a formal financial institution. The youth inclusion gaps for labour market structure remain largely unchanged, with the exception of upgrades for Bulgaria and Jordan and a downgrade for the Kyrgyz Republic due to lower scores for the ease of starting a business (as shown by the World Bank Doing Business Report 2015).

The gender inclusion gaps have also been revisited and updated in 2015, with indicators added for most dimensions to strengthen the focus on social norms and women's agency, female decision-making in employment, business and administrations, and female graduates in STEM (science, technology, engineering and mathematics) subjects. The resulting gender gap assessment (see Table S.4) shows medium to large gaps in relation to legal regulations and social norms in the SEMED region and increases from small to medium-sized gaps across parts of eastern Europe and the Caucasus and Central Asia. Gaps in relation to education and training have risen to medium-sized in central Europe and some Central Asian countries (namely the Kyrgyz Republic, Mongolia and Uzbekistan) whereas gaps regarding access to finance, labour policies and labour practices have remained broadly unchanged across all regions.

TABLE S.3. Youth inclusion gaps in 2015

	Labour market structure	Youth employment	Quantity of education	Quality of education	Skills mismatch	Financial inclusion
Central Europe and the Baltic states						
Croatia	Medium	Large	Small	Medium	Medium	Medium
Estonia	Small	Medium	Small	Small	Small	Small
Hungary	Medium	Medium	Small	Medium	Medium	Medium
Latvia	Small	Medium	Small	Medium	Medium	Small
Lithuania	Medium	Medium	Negligible	Medium	Medium	Large
Poland	Medium	Large	Small	Medium	Medium	Medium
Slovak Republic	Medium	Large	Small	Medium	Medium	Large
Slovenia	Medium	Medium	Small	Small	Medium	Small
South-eastern Europe						
Albania	Medium	Large	Small	Medium	Not available	Small
Bosnia and Herzegovina	Medium	Large	Medium	Medium	Not available	Medium
Bulgaria	Medium	Medium	Medium	Medium	Medium	Medium
Cyprus	Small	Large	Small	Medium	Medium	Medium
FYR Macedonia	Small	Large	Medium	Medium	Medium	Medium
Greece	Medium	Large	Small	Medium	Medium	Medium
Kosovo	Small	Large	Not available	Not available	Medium	Small
Montenegro	Small	Large	Negligible	Medium	Not available	Medium
Romania	Medium	Large	Small	Large	Large	Small
Serbia	Medium	Large	Medium	Medium	Not available	Medium
Turkey	Medium	Large	Medium	Medium	Large	Medium
Eastern Europe and Caucasus						
Armenia	Small	Large	Small	Medium	Medium	Small
Azerbaijan	Medium	Large	Medium	Large	Not available	Medium
Belarus	Medium	Small	Small	Medium	Not available	Medium
Georgia	Small	Large	Medium	Small	Not available	Medium
Moldova	Medium	Medium	Small	Medium	Medium	Small
Ukraine	Medium	Medium	Small	Large	Medium	Small
Russia	Medium	Medium	Small	Medium	Medium	Medium
Central Asia						
Kazakhstan	Small	Medium	Small	Medium	Not available	Medium
Kyrgyz Republic	Small	Large	Small	Large	Large	Medium
Mongolia	Small	Large	Medium	Medium	Not available	Small
Tajikistan	Medium	Large	Medium	Not available	Not available	Medium
Turkmenistan	Not available	Not available	Negligible	Not available	Not available	Small
Uzbekistan	Medium	Not available	Medium	Not available	Not available	Large
Southern and eastern Mediterranean						
Egypt	Medium	Large	Large	Large	Large	Medium
Jordan	Medium	Large	Small	Medium	Large	Medium
Morocco	Medium	Large	Large	Large	Not available	Large
Tunisia	Medium	Large	Medium	Large	Large	Small
Comparator countries						
France	Medium	Medium	Small	Medium	Medium	Medium
Germany	Medium	Small	Medium	Medium	Small	Small
Italy	Medium	Large	Small	Medium	Medium	Large
Sweden	Medium	Medium	Medium	Small	Small	Small
UK	Small	Medium	Small	Small	Medium	Small

Source: EBRD.
Note: Methodological changes have been made in the following areas: labour market structure, quantity and quality of education, financial inclusion and youth employment (previously called "opportunities for youth"). Please refer to the methodological notes in the online version of this *Transition Report* (tr-ebrd.com) for more details.

TABLE S.4. Gender inclusion gaps in 2015

	Legal regulations and social norms	Access to health services	Education and training	Labour policy	Labour practices	Employment and business	Access to finance
Central Europe and the Baltic states							
Croatia	Small	Small	Medium	Medium	Medium	Medium	Small
Estonia	Small	Small	Medium	Small	Large	Medium	Medium
Hungary	Small	Small	Medium	Small	Medium	Medium	Medium
Latvia	Small	Small	Medium	Small	Large	Medium	Medium
Lithuania	Small	Small	Medium	Negligible	Medium	Medium	Medium
Poland	Small	Small	Small	Small	Medium	Medium	Medium
Slovak Republic	Small	Small	Medium	Small	Medium	Medium	Medium
Slovenia	Small	Negligible	Medium	Small	Medium	Medium	Medium
South-eastern Europe							
Albania	Medium	Small	Small	Small	Medium	Large	Medium
Bosnia and Herzegovina	Medium	Medium	Medium	Small	Medium	Large	Medium
Bulgaria	Small	Small	Medium	Small	Medium	Medium	Small
Cyprus	Small	Not available	Negligible	Not available	Not available	Medium	Small
FYR Macedonia	Medium	Medium	Medium	Small	Large	Medium	Large
Greece	Large	Not available	Small	Medium	Large	Large	Medium
Kosovo	Not available	Not available	Not available	Not available	Not available	Not available	Large
Montenegro	Small	Medium	Negligible	Medium	Large	Large	Medium
Romania	Small	Medium	Small	Small	Large	Medium	Medium
Serbia	Small	Small	Small	Small	Large	Medium	Medium
Turkey	Small	Small	Medium	Small	Large	Large	Large
Eastern Europe and Caucasus							
Armenia	Medium	Medium	Small	Negligible	Large	Medium	Medium
Azerbaijan	Small	Medium	Medium	Medium	Large	Large	Large
Belarus	Small	Small	Medium	Medium	Large	Small	Medium
Georgia	Medium	Medium	Medium	Small	Large	Medium	Small
Moldova	Medium	Medium	Medium	Small	Large	Small	Small
Ukraine	Small	Small	Medium	Small	Large	Medium	Medium
Russia	Small	Small	Negligible	Medium	Large	Medium	Medium
Central Asia							
Kazakhstan	Medium	Medium	Negligible	Medium	Medium	Medium	Medium
Kyrgyz Republic	Medium	Medium	Medium	Medium	Large	Medium	Small
Mongolia	Small	Medium	Small	Medium	Large	Small	Small
Tajikistan	Medium	Medium	Medium	Small	Large	Large	Large
Turkmenistan	Medium	Medium	Not available	Medium	Large	Medium	Large
Uzbekistan	Medium	Medium	Medium	Medium	Large	Large	Large
Southern and eastern Mediterranean							
Egypt	Large	Medium	Medium	Medium	Large	Large	Large
Jordan	Large	Medium	Medium	Medium	Large	Large	Large
Morocco	Medium	Large	Large	Medium	Large	Large	Large
Tunisia	Medium	Small	Medium	Small	Medium	Large	Large
Comparator countries							
France	Small	Small	Medium	Medium	Medium	Medium	Medium
Germany	Negligible	Small	Medium	Negligible	Medium	Medium	Small
Italy	Small	Negligible	Small	Small	Medium	Medium	Large
Sweden	Negligible	Negligible	Medium	Negligible	Small	Small	Small
UK	Medium	Small	Medium	Small	Medium	Medium	Small

Source: EBRD.
Note: Methodological changes have been made in the following areas: Legal regulations and social norms, access to health services, education and training, labour practices, employment and business, and access to finance. Please refer to the methodological notes in the online version of this *Transition Report* (tr-ebrd.com) for more details.

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