09 November 2011

ATON

EQUITY RESEARCH

FINANCIALS

RUSSIAN BANKS

The Lemons Problem

Current MktCap	$90bn
Target MktCap	$53bn
Potential downside	-41%

With this report we reinitiate coverage of five Russian banks – Sberbank, VTB, Bank St Petersburg, Bank Vozrozhdenie and NOMOS Bank – with SELL ratings.

We believe that a new crisis is around the corner. A combination of high debt levels, an economic slowdown, inefficient monetary policy and flaccid fiscal policy form a risky foundation for EM stock markets. European policymakers prefer the refinancing approach but like anaesthesia this merely masks the pain but does not cure the disease itself – the low competitiveness of the PIIGS economies. There are many other triggers for a crisis including recession in the US, a slowdown in China and potential conflicts in the Middle East. History shows that during downturns, Russia is the hardest hit among EMs, and of the sectors, banking stocks suffer the most.

This time, Russia's banking sector is less prepared to withstand a new crisis even though its ability to weather the initial impact – a liquidity shock – is stronger. The 2008 crisis reshaped the sector to a great extent but the changes were not deep enough to alter critical areas such as poor supervision, weak corporate governance and imbalanced risk appetite. In addition, much has worsened since 2008: asset quality has deteriorated sharply and profit margins have been squeezed materially.

Analysis of key red flags at individual banks shows that the most worrying are asset quality, quality of earnings and corporate governance.

Our new analytical methodology shows that the stock market is more focused on fundamentals today vs 2008 and quality of earnings has become an important factor for stock return. However, fundamentals are very likely to be overlooked at the beginning of any new crisis when the market gains a greater degree of its direction from panic sellers.

Our top-down valuation approach, based on a uniform sector model, valuation ratios and our new methodology, shows downside potential for all five stocks. This is partly confirmed by GEM peer valuations. We also believe that downside risks are higher this time – hardships at one bank would undermine investor confidence not only in the affected bank but in the other banks as well. Because the scope of the problems at all five banks is significantly wider today, in our view the chances that the weakest link will break are much higher.

Aton stock ratings summary

Stock	Ticker	MktCap ($mn)	CP (RUB)	TP (RUB)	Downside (%)	Rating
Sberbank ord	SBER03 RX	60,348	82	55	-33%	SELL
Sberbank pref	SBERP03 RX		64	42	-34%	SELL
VTB	VTBR LI	25,202	$4.82	$2.02	-58%	SELL
BSPB ord	BSPB RX	1,149	99	56	-44%	SELL
BSPB conv pref	BSPBP RX		111	69	-38%	SELL
VZRZ ord	VZRZ RX	617	776	383	-51%	SELL
VZRZ pref	VZRZP RX		300	153	-49%	SELL
NOMOS	NMOS LI	2,283	$12.4	$6.9	-44%	SELL

Source: Bloomberg, Aton estimates

Note: Prices as of 7 Nov 2011 throughout the report

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Investment Summary

In this report we argue that the chances of a new economic crisis within the next 12 months are high and that the Russian banking sector is less prepared to withstand it than in 2008. Global markets remain under strain and rising uncertainty is stimulating further risk aversion among investors. Volatility is growing, demand for hedge positions is close to historical highs, global short positions are near zero and the main global risk indicators show a significant deterioration of investor sentiment since the beginning of 2011.

Figure 1: Key risk indicators

	Last	YtD	Mar-11	Dec-10	Sep-10	Jun-10
S&P VIX	30	70%	24	18	23	27
Global demand for hedge index	1.76	214%	2.07	0.56	1.12	2.29
Gold ($/oz)	1,788	27%	1,396	1,405	1,291	1,240
EMBI+ spread (bpts)	356	+115	274	240	290	316
Russia CDS 5Y (bpts)	208	+61	138	147	166	178
German CDS 5Y (bpts)	87	+29	47	58	40	41

Source: Bloomberg, Aton estimates

Our conversations with investors confirm that many share our view: a combination of high debt, an economic slowdown, inefficient monetary policy and flaccid fiscal policy form a very risky foundation for EM stock markets. Furthermore, many investors feel that the debt problem is particularly acute today, and solutions are difficult to find. European policymakers are relying on refinancing and liquidity injections but these just soothe the pain and do not solve the structural problem – the low competitiveness of the PIIGS economies. Furthermore, these measures are no longer efficient as the markets seem to have become immune to liquidity stimulus and have perhaps even become addicted to it. **The proper treatment for over-indebtedness disease is economic growth, but these days this is very tough to stimulate.** The monetary and fiscal toolkits of policymakers are nearly exhausted and the remaining solutions are either too radical or unlikely to help. While decision-makers look for a solution, the US and the EU are gradually falling into stagnation with strong chances of a recession, as suggested by leading economic indicators.

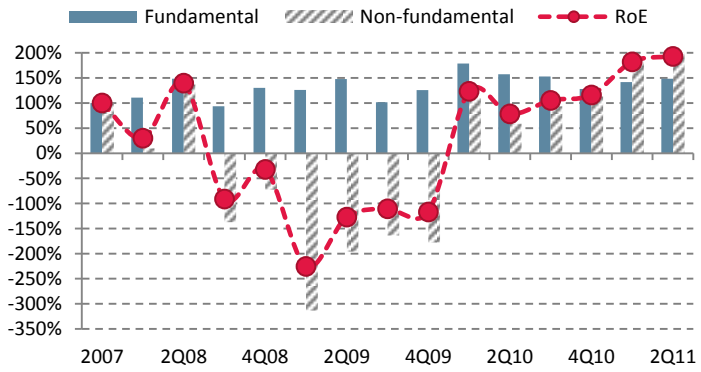
With that said, **we believe the next crisis is around the corner and Russia's banking sector is less prepared to survive without sustaining serious damage.** It is true that the 2008 crisis helped prepare Russia's policymakers to withstand the initial impact of another downturn – the liquidity shock. But the last crisis did not change the critical risk areas of the sector such as sloppy supervision, poor corporate governance and imbalanced risk appetite. More worrying is that many things, especially asset quality and core profitability have worsened and along with the above-mentioned issues they present serious risks in the case of a new downturn.

We arrived at the same conclusions when considering the individual banks. **All five banks have significant weaknesses that could cause serious problems in a crisis.** For example, the crisis-readiness of Sberbank is constrained by corporate governance issues; VTB – poor asset quality and significant corporate governance drawbacks; BSPB – high exposure to risky assets and potential liquidity problems; VZRZ – capitalisation and profitability concerns; and NOMOS – asset quality, funding mix and quality of reporting. At the same time, the high probability of state support almost entirely compensates for these risks for Sberbank and VTB, but not for the other banks.

Our new analytical methodology (supported by real data tests) shows that the market is now much more focused on fundamentals when analysing banks vs 2008. In particular, fundamentals such as higher cost efficiency, higher NIM and a greater

share of interest-earning assets appear to be crucial to the market. More importantly, the market seems willing to compensate investors in the form of higher stock returns for investing in banks with stronger fundamentals. Stock returns for banks that derive their profit from non-recurring income such as securities and FX trading and from accounting tricks involving provisioning are consistently lower. By decomposing RoE into fundamental and non-fundamental factors we learned that **the quality of earnings at some traded banks is very low and investors could be unpleasantly surprised by their financial performance in the next several quarters.** This is particularly true for VTB, NOMOS and BSPB. As an illustration, Figure 2 shows VTB's return on equity (RoE) and its fundamental and non-fundamental components.

Figure 2: VTB's RoE and its components (2007 = 100%)



Source: VTB's IFRS financials, Aton estimates

We can see that the fundamental component is stable but there is little room for further improvements. In fact, VTB's return on equity from core banking operations is the lowest among its peers. The non-fundamental component of RoE, i.e. non-recurring income, is very volatile and extremely sensitive to market conditions – it plummets quickly and deeply when a crisis comes and it is very slow to recover. Along with other factors, this pinpoints the low quality of VTB's earnings.

Based on our gloomy outlook for the global macro situation and the red flags identified at the sector level, we built a **sector model which we view less as a prediction and more of an illustration.** The model assumes a recession with the bottom reached in 2012; because the next downturn will likely involve a sovereign debt crisis it will take longer to recover, so we assume a slow recovery starting from 2013. We also believe that Russian banks will be operating in a different business environment. **Policymakers are highly likely to repeat their mistake of 2008-09 by flooding the sector with spare liquidity, in our view.** In the last crisis, banks competed for ways to utilise fresh liquidity, driving yields on nearly all assets to extremely low levels which squeezed their own profitability. Massive new injections of liquidity in the next crisis could drive the sector's profitability even lower. Meanwhile the banks will be struggling to solve their asset quality problems, thereby creating new provisions and driving net profits down further. Additionally, a fragile and uncertain recovery of economic activity could encourage the banks to maintain high liquidity cushions and increase capital adequacy.

We based our financial models for individual banks on this uniform sector approach while taking specific features into account. A models-based method combined with a multiples-based approach adjusted to our new methodology formed the basis for our valuations. Figure 3 summarises the target prices implied by our different valuation methods. The resulting target price is the weighted-average 'fair' price under all five valuation approaches.

Figure 3: Summary valuation table

Valuation approach	Weight	Ordinary shares					Preferred shares *		
		SBER03 RX	VTBR RX	BSPB RX	VZRZ RX	NMOS RX	SBERP03 RX	BSPBP RX	VZRZP RX
P/EBPT	20%	43.5	0.0315	51.6	354	416			
P/SEBPT	20%	50.4	0.0344	56.1	389	422			
P/B	20%	56.1	0.0531	67.3	610	591			
Residual income	25%	64.7	0.0104	50.5	247	277			
Target P/B Gordon	15%	61.3	0.0319	53.3	336	458			
12M target price (RUB)		**55.4**	**0.0312**	**55.6**	**383**	**424**	**42.5**	**68.6**	**153**
Current price (RUB)		82.4	0.0741	98.7	776	765	64.4	111	300
Upside/downside		-33%	-58%	-44%	-51%	-45%	-34%	-38%	-49%
			VTBR LI			NMOS LI			
12M target price ($)			**2.02**			**6.86**			
Current price ($)			4.82			12.4			
Upside/downside			-58%			-44%			
Rating		**SELL**	**SELL**	**SELL**	**SELL**	**SELL**	**SELL**	**SELL**	**SELL**

*Sberbank and VZRZ: historical 6M discount; BSPB: NPV of dividend cash flows and conversion option
** EBPT: Earnings Before Provisioning and Taxes; SEBPT: Sustainable Earnings Before Provisioning and Taxes. Please see page 39 for details

Source: Bloomberg, Aton estimates

Based on our 12-month target prices, we assign SELL ratings to all five banks. Out of the five we prefer Sberbank because its price already reflects most of the recession risks. In addition, we believe Sberbank beats its peers in terms of financial strength, ability to withstand a crisis and its better focus on creating shareholder value.

We note that the individual bank models are based on a deep-recession forecast for the entire sector so **target prices based on the residual income model approach should be viewed as the minimum price levels justified from a fundamental point of view**. That is, if the stock prices fall to these levels the market would be pricing in a deep recession in line with our sector model. If prices fall below the targets implied by the residual income model, the market would be pricing in a nearly catastrophic sector view, which should be regarded as a good point at which to buy the stock.

Could the market fall below our minimum justified levels? Judging by the stock performances seen in 2008-09, it is possible: when the market enters the panic-selling phase, fundamentals are ignored. What is more interesting is that prices could stay below fundamentally justified levels for some time after panic-selling is over. The target prices implied by the historical multiples approach (HMA) comprise our estimate of where the market should be valuing these stocks in 12 months.

Figure 4: Downsides of residual income and HMA approaches to current price

Valuation approach	SBER03 RX	VTBR RX	BSPB RX	VZRZ RX	NMOS RX
Residual income	-21%	-86%	-49%	-68%	-64%
HMA	-39%	-46%	-41%	-42%	-38%

Source: Bloomberg, Aton estimates

The discounts show that in the early recovery phase **the market tends to undervalue Sberbank and overvalue other banks, especially VTB, relative to fundamentally justified levels**. We believe the market's current focus on fundamentals will be sustained into the next recovery period and beyond, so VTB, BSPB and VZRZ could then see their valuations at lower levels vs last time. We expect the same to be true for NOMOS, which has a short trading history. This provides additional downside potential for all of the stocks except for Sberbank.

Another observation is that **current stock prices factor in different scenarios for the sector and for individual banks**. We built our individual bank models based on the same sector model, so our Edward-Bell-Ohlson (EBO) model-implied targets (see page 65 for details) are pricing in very similar scenarios for the banks (subject to the

specifics of their businesses). But when comparing the discount of EBO-based target prices to current prices we can see that the market is pricing in different scenarios for different banks. For example, in the case of VTB the EBO-based target price implies 86% downside to current levels, i.e. the market seems to be forecasting rosy times ahead for VTB. At the same time, the downside potential for Sberbank, which is fundamentally stronger than VTB, is only 21%, i.e. the market is pricing in deep stagnation for Sberbank.

Finally, **the downside risks are higher this time**. We believe that investor perceptions of Russia's banking sector are only as strong as its weakest link. That is, if one bank experiences serious problems, we expect that it would undermine investor confidence not only in the affected bank but in the other banks and the entire sector as well. In difficult conditions, we doubt that investors would show any preference for a strong systemically-important bank like Sberbank over the smaller and weaker NOMOS. A good example of this phenomenon is provided by Sberbank's SPO, which had to be postponed because investors were afraid that the BoM scenario might repeat itself. Since YE07 the crisis-readiness of all Russian banks has deteriorated and the weakest link is now even weaker. Therefore, the chances that it will break are much higher this time.

Global Macro Outlook – a New Crisis is Just around the Corner

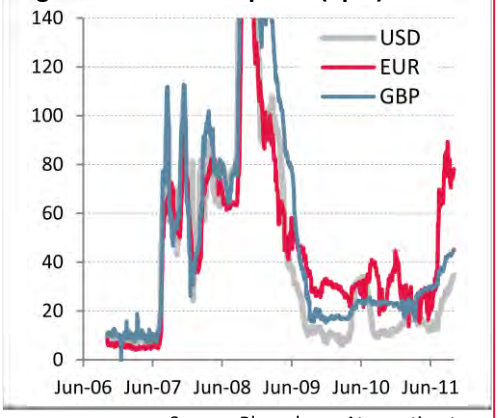
Today, global markets remain under stress and growing uncertainty is stimulating further risk aversion among investors. Volatility is rising, demand for hedging instruments is close to historical highs, global short positions are near zero and the main global risk indicators show a significant deterioration in investor sentiment since the beginning of 2011. There is a strong chance that a new crisis is right around the corner, in our view. The stock market – supported by numerous short-squeezes – fell by around 15% in August-September and a much deeper decline can be expected if the market witnesses massive margin calls and redemptions, which we believe could appear in the next act of the drama.

Figure 5: Global risk indicators

	Last	YtD	Mar-11	Dec-10	Sep-10	Jun-10
S&P VIX	30	70%	24	18	23	27
RTS VIX	47	77%	31	26	26	36
Global demand for hedge index	1.76	214%	2.07	0.56	1.12	2.29
Gold ($/oz)	1,788	27%	1,396	1,405	1,291	1,240
Brent ($/bbl)	116	24%	109	93	78	78
WTI ($/bbl)	96	7%	97	90	75	77
EMBI+ spread (bpts)	356	+115	274	240	290	316
Russia CDS 5y (bpts)	208	+61	138	147	166	178
iTraxx Crossover Europe 5Y (bpts)	727	+289	405	437	519	521
German CDS 5Y (bpts)	87	+29	47	58	40	41
France CDS 5Y (bpts)	183	+82	81	101	79	81
UK CDS 5Y (bpts)	89	+12	57	77	73	80

Source: Bloomberg, Aton estimates

Figure 6: LIBOR-OIS spread (bpts)



Source: Bloomberg, Aton estimates

Structural economic problems in key countries are deepening and the perception of sovereign credit quality among European majors is worsening. The prices of AAA-rated German and French CDSs are testing new highs and their CDS-implied time to default is steadily falling, approaching the level of BBB-rated Russia (around 10 years). Even worse, Europe's debt problems are robbing the key ingredient from the European interbank market – trust between banks. As a result the euro-denominated LIBOR-OIS spread is hovering around 80 bpts, a level observed several months before the 2008 collapse.

In our conversations with investors we have noticed one major change since the beginning of 2011. Earlier, we talked about the possibility of negative events such as stagnation or recession. Today discussions have evolved into determining whether – not if – we will have stagnation or recession. That is, the very idea that something bad will happen, one way or another, seems to be treated as a given. Additionally, **many investors share our view that a combination of high debt levels, an economic slowdown, inefficient monetary policy and flaccid fiscal policy form a very risky foundation for EM stock markets.**

Many investors also share the opinion that the debt problem is particularly acute today and a solution will be difficult to find. The roots of a new crisis lie in the previous downturn. Global and especially European debt problems became particularly acute once corporate debt migrated to the higher, sovereign level after massive government-funded bailouts of failed corporations.

At the sovereign level the range of cures for over-indebtedness disease is limited and basically includes default, refinancing and economic growth. The first is too radical and would have grave short-run consequences. The second option is the most likely and could result in relief for DM and EM stock markets. But we need to remember that **refinancing is like anaesthesia – it masks the pain but does not cure the disease.** In this manner, the actions of European authorities – including open market debt repurchases, expansion of the European Financial Stability Fund and

recapitalisation of banks – may ease investors' financial pains, but they cannot cure Europe's key structural problem: the low competitiveness of the PIIGS economies.

In our view, only economic growth and associated investments that boost competitiveness can cure the diseases of over-indebtedness and low competitiveness. Unfortunately for the markets and investors, stimulating economic growth is very difficult in the current circumstances. Most fiscal policy instruments available either lead to further debt increases or to social unrest which is especially dangerous for governments in a pre-election year.

Meanwhile, the monetary policy toolkit is now essentially limited to expanding money supply because liquidity injections no longer work. **The market seems to have become immune to liquidity stimulus: the economy is no longer reacting positively to QEs and may even be addicted to them.** For example, the recent withdrawal of another round of QE and its substitution with the resurrected Operation Twist resulted in a material fall in indices and a further deterioration of investor sentiment. In a similar vein the announcement of plans to save Greece and European banks infused a sense of optimism for a couple of days but the market quickly sank back into its negative mood.

The third economic growth stimulant is the currency exchange rate which is very likely to be used. However, it is highly unlikely that this would help PIIGS economies because they are price-takers in this game and the contribution of exports to their GDP is fairly small. While the decision-makers look for a solution, the US and the EU are gradually sliding into stagnation with strong chances of slipping into recession, as suggested by leading economic indicators.

Apart from European debt and bank issues we see many other potential triggers for the next crisis. For one, the US economy could fall into stagflation or recession. There could also be a growth slowdown in China leading to a decline in commodity prices, which would be seriously detrimental to commodity exporters such as Russia. Further unrest in the Middle East (possibly inspired by the Arab Spring) or an escalating conflict between Israel and the Arab states could also trigger a major downturn.

Regardless of what event triggers the next crisis, Russia will be hit the hardest among EM. Over the past three years there were four instances when MSCI Russia has fallen by 15% or more. On each of these occasions Russia underperformed EM. Crucially, Russian banking stocks were hit especially hard in almost all of these cases.

As a result, **we advise investors to avoid Russian banking stocks for the next 12 months. We believe a new crisis is around the corner and if it occurs, banking stocks will likely fall first and be hardest hit.**

Chronicles of 2008: Yesterday's Problems Led to Today's Sorrow

Banking crises occur when normal liquidity flows in the financial sector are interrupted. The Russian banking crisis of 2008 was no exception. However, it was unique in the sense that the measures used to fight it determined the way the sector developed over the next few years and bred the problems the sector sees today.

Liquidity Saved the System in 2H08…

For Russia's banking sector the active phase of the crisis started in Aug-Sep 2008. After Lehman Brothers collapsed, fears of possible counter-party defaults spread quickly among Russian bankers. Under conditions of high uncertainty the first non-payments on the interbank market undermined trust between banks. Lack of confidence in each other's creditworthiness paralysed the normal flow of liquidity and pushed interbank rates to extremely high levels.

Figure 7: 1M MOSPRIME interbank rate

Source: CBR, Aton estimates

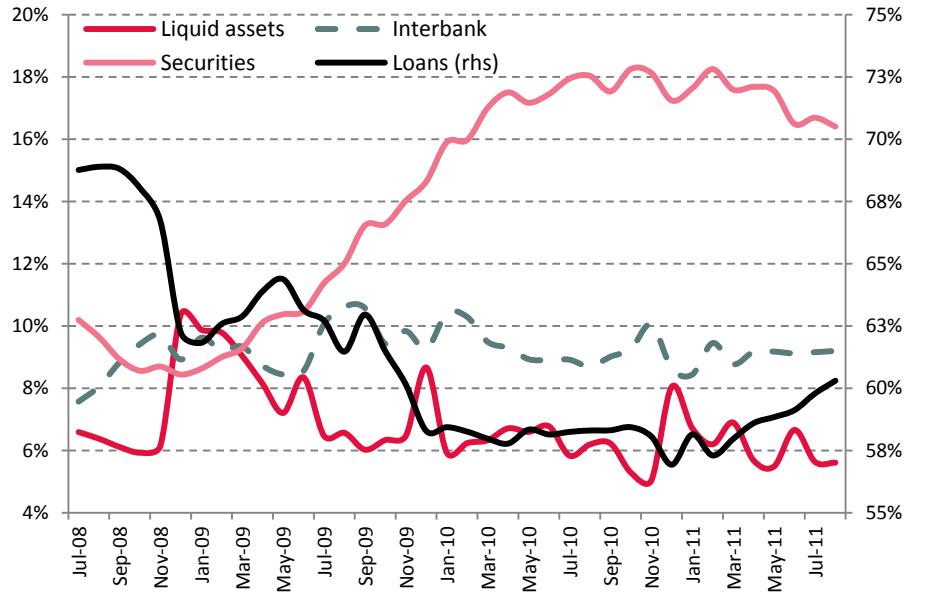
Russia's financial authorities remembered the lessons of previous banking crises and took bold steps. In Sep 2008 the Ministry of Finance (MoF) provided Sberbank, VTB and Gazprombank with RUB60bn to jumpstart the interbank market and extended the use of its deposit auctions (aggregate limit: RUB1.3trn) to a large circle of banks. Several weeks later, the Central Bank of Russia (CBR) opened an uncollateralised lending window (aggregate amount: RUB1.7trn) and was given the authority to enter into direct REPO transactions with market participants. Later, the CBR admitted MICEX-registered banks to direct REPO auctions and expanded the list of securities eligible for REPO. Additional liquidity was provided through subordinated loans from VEB, the refinancing of loans for key corporates, sizeable capital injections into Sberbank and VEB and support for the domestic securities market by VEB.

…but it Squeezed Margins Thereafter

Near the end of 1Q09 most Russian banks had satisfied their emergency needs for liquidity and systemic stability risks had passed. At the same time, the authorities kept the liquidity taps open and large banks, attracted by low funding rates, continued taking in new funds. Already in 1Q09, after accumulating considerable fresh liquidity, the banks started looking for ways to utilise the funds. A commercial bank has three ways to earn money: lending to corporates or individuals, lending to other banks and investing in securities. At that time, the logic of the typical Russian bank was quite simple. Lending to corporates seemed like a poor option because most borrowers were distressed and the risks of default and soaring NPLs were high.

The same was true for retail lending. Interbank lending was not attractive because the bidders were either small (and thus unprofitable) or needed liquidity to help troubled affiliated corporates. Weighing these considerations, the banks started to actively buy bonds and equities, inspired by attractive valuations and the benign REPO market regime. As a result the share of securities in sector assets increased from around 9% on the eve of the last crisis to 16% today.

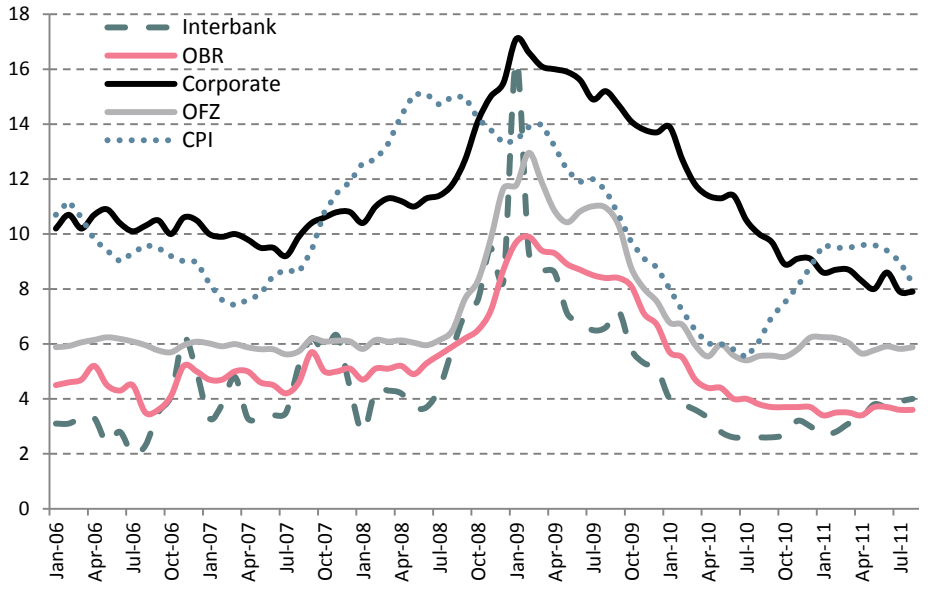
Figure 8: Banking sector asset structure – securities gain weight



Source: CBR, Aton estimates

In 2Q09, corporate demand for credit began to recover. Banks were generally afraid to lend due to the risk of soaring NPLs and they started providing loans only to high-quality borrowers. However, the amount of accumulated liquidity was so high that competition for good borrowers quickly drove down yields in the segment. To save their margins banks started switching to lower-grade corporates which were willing to pay higher rates. Later on, competition intensified in this segment as well.

Figure 9: Interest rates – competition drives them down (%)

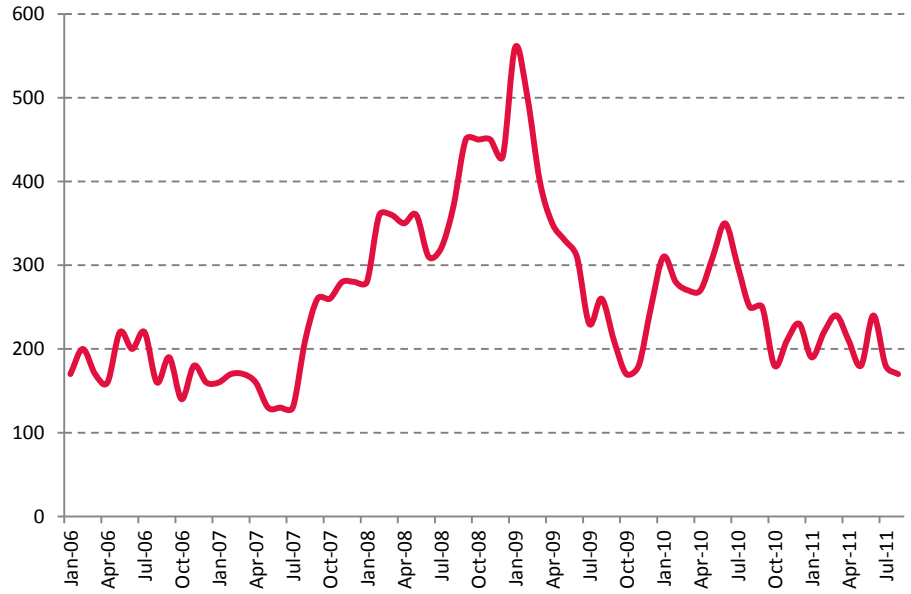


OBR and OFZ are domestic sovereign bonds issued by the CBR and MoF, respectively

Source: CBR, Aton estimates

The CPI environment was supportive of a lower rate environment, and in the end the competitive pressure to allocate large amounts of idle liquidity drove yields down in all corporate segments as well as among other interest-earning assets. After nearly two years, the short-term corporate loan rate fell to around 8% and its spread to the short-term retail deposit rate compressed to slightly below 200 bpts.

Figure 10: Short loan-deposit spread – competition consumes margins (bpts)



Source: CBR, Aton estimates

The spread is now around 160 bpts lower than in 1H08. This is not worrisome at first glance, but if we consider the scope of the other problems facing the sector, we can see that it is decidedly negative.

Overall, the 2008 crisis and the government's response appear to have moulded the contours of the sector's development in 2009-11 and essentially determined its current problems.

Are You Ready for a Rough Ride?

The 2008 crisis shaped the banking sector's current landscape. In some respects, it made the sector stronger. For example, the CBR and the sector in general are now better prepared to withstand the initial phase of a new crisis, the liquidity shock. But in some ways the sector is now more vulnerable. For example, in the wake of the last crisis, asset quality deteriorated sharply and profitability was squeezed. More importantly, the crisis was not deep enough to catalyse positive changes in critical risk areas of the sector. All things considered, **we believe that Russia's banking sector is less prepared to withstand a new crisis despite its improved ability to weather the impact of a liquidity shock**.

We note that this conclusion – like any other generalisation – is not necessarily true for each and every bank or in each and every respect. Nevertheless, identifying the strengths and weaknesses at the sector level is important for understanding how well each particular bank is prepared for a new downturn. It is also crucial for discerning the red flags which must be examined in more detail for each of the five banks under coverage.

Many of the issues are qualitative in nature and it is difficult to compare a bank's 'crisis-readiness' today with its position three years ago. To allow for clearer quantitative comparisons, we assigned numerical values to each problem area.

Figure 11: How well is Russia's banking sector prepared for a crisis? (10 = highest risk)

		Risk Score				Risk Score	
Factors	**Weight**	**Mid-2008**	**Today**	**Factors**	**Weight**	**Mid-2008**	**Today**
Macroeconomics, regulation and competitive environment	**5**	**6.6**	**6.7**	**Capitalisation**	**4**	**6.3**	**7.0**
General macroeconomic conditions		6.0	7.0	Capital adequacy		7.0	6.0
Dependence on oil		8.0	9.0	Pressure on capitalisation		7.0	7.0
Banking sector cycle		7.0	6.0	Potential for further shareholder support		4.0	7.0
Attitude of public towards banking sector		7.0	6.0	Quality of capital		7.0	8.0
Election factor		2.0	7.0	**Asset quality**	**5**	**5.3**	**7.4**
Exchange rate policy		8.0	6.0	Amount of bad assets		2.0	9.0
CBR's readiness to support the sector		6.5	3.3	Client creditworthiness		7.0	6.0
Liquidity infrastructure		7.0	2.0	Exposure to risky assets		4.5	8.0
Interest rate policy		6.0	2.0	Securities holdings		3.0	8.0
Willingness to support		8.0	1.0	High-risk lending		6.0	8.0
Dependence on the CBR		5.0	8.0	Concentration		7.0	7.0
Moral hazard		6.0	9.0	Collateral policies		6.0	7.0
Quality of banking supervision		8.0	8.0	**Funding and liquidity**	**3**	**6.4**	**6.0**
General competitive environment		5.0	7.0	Stability of funding base		8.0	6.0
Corporate governance	**4**	**7.0**	**7.3**	Debt and interbank market conditions		5.0	7.0
Ownership structure and related-party transactions		7.0	8.0	Asset-liability mismatches		6.5	6.0
Risk management and loan underwriting		7.0	7.0	Currency		7.0	4.0
Quality of reporting and accounting		7.0	7.0	Maturity		6.0	8.0
Earnings and profitability	**2**	**7.0**	**7.7**	Liquidity		6.0	5.0
Quality of revenue and earnings		7.0	8.0	Cushion size		7.0	3.0
Interest rate environment		6.0	8.0	Riskiness		5.0	7.0
Cost efficiency		8.0	7.0				
Overall weighted risk score						**6.3**	**7.0**

Source: Aton estimates

In the next sections we discuss each of these issues in detail.

Macroeconomics, Regulation and Competitive Environment

General macro conditions

Despite the many post-crisis measures put in place (or promised) by the government, the key systemic macroeconomic weakness persists – **Russia is still heavily dependent on oil. More worrying, this dependence has deepened since 2008:** the non-oil budget deficit increased from 5.4% of GDP in 2008 to 12.9% in 2010. The non-oil current account deficit deteriorated as well: 8.4% of GDP in 2008 to 9.2% in 2010, and it is expected to grow further. (For a comprehensive discussion of these issues, see Aton's macroeconomics note *Oil or Nothing* released 30 Aug). This means that a severe drop in the oil price (e.g. to $34/bbl, the low touched in late 2008) would hit the government's creditworthiness much harder than in the last crisis. **This suggests that the state's theoretical ability to bail out the sector is somewhat lower today than in 2008**.

Certain government officials have argued that the banking sector is now at a **different stage of the cycle**. Indeed, unlike in mid-2008, the sector is no longer red-hot and we have not seen a lending boom in several years. Russia's securities market does not look overheated either – a large portion of speculative capital (especially foreign) has left the market and the leverage of most securities market participants has decreased. This means that any potential fall in lending volumes and stock market prices might not be as large or as painful as last time. However, we note that **the scope for other problems is great**. Furthermore, **deeply negative sentiment towards EM in times of crisis is likely to outweigh any positives in the domestic environment and we expect Russia to face an aggressive sell-off in the case of a new crisis**.

Another difference is that **the attitude of the general public towards the banking system has improved a little** over the last three years. This is evidenced by the retail deposit boom. One of the catalysts was the government's deposit insurance initiative under which the Deposit Insurance Agency (DIA) guarantees payment of retail deposits that do not exceed RUB0.7mn. The DIA successfully coped with a series of notorious bank failures, which boosted the confidence of depositors. **Nevertheless, the overall level of trust in Russia's banking system remains low**, according to recent sociological polls (e.g. a study by ROMIR published in Oct 2011). This means the potential for runs on banks is still a significant risk for the sector. And as before, this risk is aggravated by the peculiarities of Russian legislation which stipulate that all retail and a certain portion of corporate deposits are on-demand and depositors can withdraw their funds at any time.

We should also bear in mind that **2011 and 2012 are election years in Russia** and the ruling party has already launched its campaign. Investors are hearing assurances about the good health of the banking sector and promises for its bright future. We caution investors to discount any pre-election statements to avoid getting caught up in a false sense of optimism. It is also worth remembering that in pre-election periods regulators are more inclined to disguise bad banking practices and less inclined to initiate structural reforms – quick fixes are the name of the game.

Foreign exchange policy

The major change in foreign exchange policy has been the move towards a **managed free-floating exchange rate over the course of 1H11.** On the positive side, a freely floating rate serves as a natural hedge for exporting companies which contribute the lion's share of Russia's GDP. An improved cross-currency hedge adds to their creditworthiness and ultimately to the asset quality of their lender banks. On the negative side, the smaller scope for CBR interventions has already made the exchange rate more volatile. This is harmful for banks with asset-liability currency mismatches and revenue structures skewed towards FX trading. **Overall, we believe**

the effect on the banking system is more positive than negative. However, if a new crisis comes, pressure on the rouble might be significant and the CBR would have to step in with substantial interventions to prevent damaging exchange rate swings. The pre-election period makes a return to a controlled exchange rate policy rather likely, in our view.

CBR's readiness to support the sector

We believe the CBR's ability to play the role of lender of last resort has improved significantly when compared to mid-2008. First of all, **the CBR has a well-tested and efficient infrastructure in place to provide liquidity to the sector.** The regulator gained strong experience in 2008, demonstrated an excellent track record, has all the necessary normative acts in place and can boast numerous mechanisms for providing liquidity support that have been tested and fine-tuned. Secondly, **the CBR's interest rate policy is now more benevolent.** The CBR's REPO rates are much lower and the corridor between the REPO and DEPO rates is narrower today. This means that banks can borrow at lower rates and the theoretical volatility of money market rates is reduced. Finally, **the CBR has demonstrated a strong willingness to support the sector**. Even today, when we are seeing only the first signs of a new crisis, the CBR is ready to provide and absorb significant amounts of liquidity at low rates. We also believe that if the sector needs more liquidity in the future, the maximum limit for the CBR's direct REPO and uncollateralised lending operations could be increased considerably. For example, the CBR has recently stated that it could provide more than RUB1trn if needed. All of these developments suggest that **the regulator could materially contribute towards alleviating any negative impact on liquidity caused by the onset of another crisis**.

However, every coin has two sides. As noted, the CBR and the MoF injected too much liquidity into the system when fighting the 2008 crisis. Banks used these funds to buy securities and the sector's liquidity cushion is now represented mainly by holdings of securities. During a crisis, the only way to convert these securities into cash would be direct REPO with the CBR because the securities market and interbank REPO would be effectively closed. This means that **banks are now much more dependent on the CBR and its liquidity disbursement mechanisms vs mid-2008**. More importantly it means that the CBR must keep direct REPO and other liquidity-disbursement mechanisms open for banks whether it wants to or not and whether it is able to do so or not. Furthermore, it must keep them open long term because the banks' holdings of securities are considerable. Put differently, **the cost of the CBR's inability or unwillingness to support the sector is now higher than in 2008**.

Moral hazard

The banks seem to understand very clearly that withdrawal is not an option for the CBR, especially in the pre-election period. This gives rise to a moral hazard. That is, **the banks (especially state-owned and politically-connected institutions) believe they will be bailed out whatever the situation**. Increased anticipation of an almost-guaranteed bailout reduces their motivation to adhere to conservative risk-management policies and encourages them to boost returns by taking higher risks onto their balance sheets. **It also changes the motivation of bank managers. They may prefer to invest a bank's resources in enhancing their political lobby rather than creating shareholder value by building on the bank's competitive strengths.** This belief is bolstered by myopic government actions: the CBR-funded bailout of Bank of Moscow (BoM) is a good example. In our view, large banks are now less motivated to scrupulously assess M&A risks because they believe the government would patch any holes in the target's balance sheet because of its 'systemic importance'.

Quality of banking supervision

Unfortunately, **the quality of banking supervision remains low**. As in 2008, the CBR currently leans towards a bureaucratic and form-over-substance supervision policy, as it does not have enough resources to closely monitor individual banks and it frequently lacks the authority to prevent bad practices. These problems are aggravated by the CBR's lack of independence – powerful politicians and the senior managers of large banks can push it into making decisions that are suboptimal for the sector as a whole. The cases of International Industrial Bank (IIB) and BoM are good examples of the negative effects of poor regulation and moral hazard.

General competitive environment

We believe **the general competitive environment has deteriorated vs 1H08** because of the more pronounced domination of state-owned banks (SBs). SBs' competitive strengths rest on two factors – natural (market) and artificial (non-market). The natural factors include lower funding costs (due to higher creditworthiness stemming largely from government ownership) and a stronger franchise (e.g. a broad branch network and solid brand recognition). The non-market factors include a strong political lobby emanating from their systemic status as well as the personal connections of top managers. For example, SBs can influence decisions by the government and its agencies (including regulators) which helps them to receive lucrative business and enjoy more relaxed regulation. In the post-crisis competition, SBs started relying more on non-market factors when doing business which made the general competitive environment less meritocratic and more difficult for private banks.

Capitalisation

Figure 12: Banking sector's N1 ratio

Source: CBR

The **sector's capitalisation has strengthened since the 2008 crisis**. The average-weighted RAS-based capital adequacy ratio (CAR), also known as the N1 ratio, increased to 15.2% (as of 1 Oct 2011) from 14.5% (on the same date in 2008). There have been many cases of Tier I and Tier II capital injections made by shareholders or the government as well as public placements of equity and subordinated debt. The current N1 rate of 15% is sufficient to absorb losses and support active asset growth in the sector in normal times. However, it is unlikely to be sufficient in a crisis as we show later in this report.

The pressure on capitalisation is high and rising. In late 2009 the sector's N1 started to gradually decline from its peak of 21%. The key drivers were active asset growth, a shift towards riskier operations (which require larger capital cushions) and the scheduled maturing of subordinated portions of capital. In addition, for some banks capital continued to be consumed by losses and M&A activity. In case of a crisis, the pressure on capitalisation from asset growth would definitely diminish while pressures from other factors would remain essentially unchanged, in our view. Regardless of whether we see a crisis or not, there will be one more source of pressure – the CBR's new regulations on capital adequacy and provisioning policy (Directive #2612-U [which comes into force on 1 Jan 2012] and #2613-U [effective 1 Oct 2011]). These directives require banks to increase provisioning and earmark larger capital cushions for risky assets such as securities, non-core assets, loans to financial companies and loans to related parties, to name a few. For more details see our 17 Aug note *Changes in Banking Regulation: Obey the Rules, If There's No Other Choice*.

The potential of further shareholder support may be weaker this time. Shareholders injected considerable fresh capital into the banks starting in late 2008 to prevent bankruptcies, recover losses and bolster future asset growth. In case of a new crisis, we believe we would see shareholders injecting smaller amounts of new capital or even refraining altogether. This is because many owners (both corporates

and individuals) have not yet recovered from the last crisis. Given limited budgets it makes more sense for owners to inject funds into real-sector companies with 10-15% RoE than into a bank operating in post-crisis mode with a below-5% rate of return. Another reason is that a significant amount of capital has left the country since the last crisis: the CBR estimates cumulative capital flight at nearly $300bn in 2008-11 (or 4.8% of cumulative GDP for the same period).

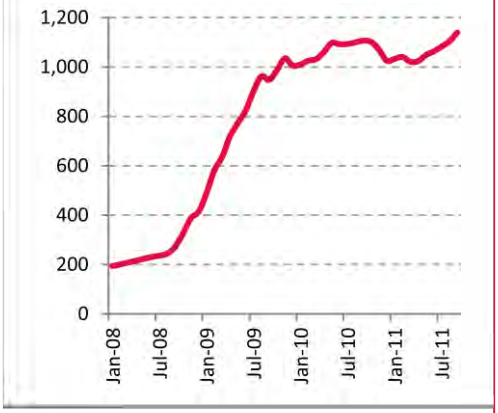
The problem of capital quality has become more critical. For many Russian banks the reported amount of capital does not necessarily equal the real amount of capital. Economic capital, i.e. the actual amount of capital that can absorb losses and be distributed after liquidation, is usually materially lower. The difference between reported capital and economic capital cannot be calculated precisely using public accounts. Expert estimates, which take into account the amount of doubtful related-party loans, operations with promissory notes, credit-deposit schemes and other ways to boost capital, range from 10% to 50% of reported capital. Our rough estimate suggests that 25% is about right today. The use of capital-boosting accounting tricks and business practices was popular in 2008 and we believe that it became even more widespread during and after the crisis. This is because in tough times many bank owners had no other choice than to artificially enhance capital in order to save their banks and affiliated industrial holdings as well.

Asset Quality

Bad assets

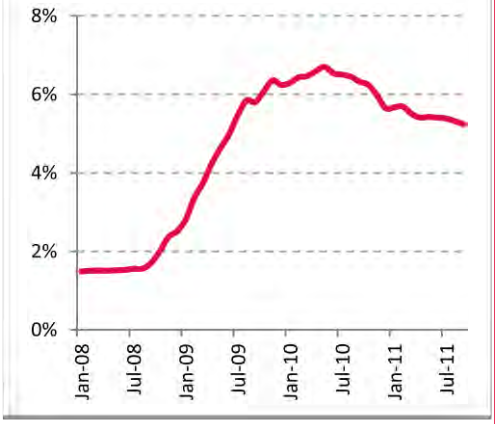
One of the most dangerous consequences of the last crisis was the **sharp increase in the amount of bad assets accumulated on the banks' balance sheets.** We believe this problem is acute and poses a considerable risk for the sector in case of a new crisis. However, this does not appear to be the consensus view. Many experts, including state officials, say the sector NPL ratio reached its peak in May 2010 at 6.7% of total loans and the situation has been steadily improving since then. We strongly disagree with this position. **We believe the reported NPL ratio, which is based on the usual 'days overdue' approach, is only a small part of the bigger story. In our view, it no longer serves as a comprehensive measure of asset quality for Russian banks**. Instead, investors should look at the volume of bad assets, which is a broader category encompassing not only NPLs but restructured loans, seized collateral and other hidden forms of troubled assets, as well. To illustrate this key difference, we need to do some asset-quality maths:

Figure 13: Sector RAS NPLs (RUBmn)



Source: CBR, Aton estimates

Figure 14: Sector RAS NPL ratio



Source: CBR, Aton estimates

- Despite a falling NPL ratio, the absolute value of NPLs has been steadily rising since 3Q08. By 1 Oct 2011 it reached RUB1.14trn or 5.2% of all loans, according to official statistics. This figure is based on Russian Accounting Standards which define NPL simply as the overdue portion of a loan. For example, if an interest payment is overdue, it becomes NPL but the principal of the loan (and other loans to the same borrower) is still classified as performing. This is materially different from the Basel definition of NPL – all related indebtedness overdue for 90+ days – which investors are accustomed to working with. Our experience shows that Basel NPLs on average are now 2.0-2.5x higher than RAS NPLs for Russian banks. Therefore, there are currently around RUB2.55trn (11.7% of all loans) of Basel NPLs in the Russian banking sector.

- This is the tip of the iceberg because many bad loans are not classified as NPLs. One of the ways to avoid classifying an overdue loan as NPL is to restructure it and the banks have been actively doing so. Banks soften their loan terms by giving non-performing borrowers another chance to pay in the hope that this temporary measure will maximise the loan recovery rate. Quite frequently, banks use the following scheme: a bank issues a new loan with new (more lenient) terms to an old (weak) borrower who uses the proceeds to repay the

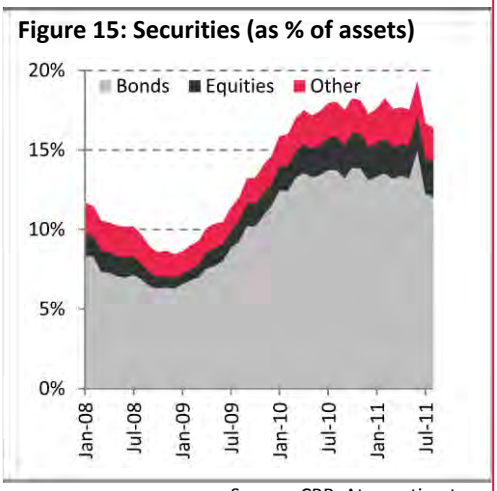
old, overdue loan. As a result, the real quality of the loan book does not change while reported NPLs decline. The CBR estimated the total amount of restructured corporate loans at RUB1.56trn at YE10. Our experience (backed by conversations with bankers) suggests that over a one-year period around 30-35% of total restructured loans become non-performing again. Therefore, after adding a respective share of restructured corporate loans, the NPL ratio rises to 14.1%. After including restructured retail loans and pre-emptively restructured loans (i.e. restructured before an interest payment was actually missed) this figure increases to around 15.3% of all loans. If we continue this exercise by including related-party loans (for the reasons described below), **the NPL ratio rises to around 20% of all loans today, on our estimates, or slightly more than 100% of reported capital.**

Client creditworthiness

In general, the **creditworthiness of corporate clients has increased when compared to mid-2008 but the change has been small**. After examining the financials of the 25 largest traded Russian corporates we can draw the following conclusions. Despite the fact that their aggregate net debt amount remains essentially the same, their debt profile has improved. Corporates refinanced their expensive debt at lower rates (around 120 bpts lower), lengthened their debt maturity profiles (the share of short-term debt is 26% today vs 37% in 2008) and adjusted the FX structure of their liabilities. At the same time, the cash generation ability of many corporates has not returned to pre-crisis levels, average net debt/EBITDA is still at around the same level, and there are still many industries which are not strong enough to withstand a long recession, in our view. In general, we believe there will be fewer corporate defaults in case of a new crisis but the scope of this problem is unlikely to be significantly smaller when compared to 2008-09.

Exposure to risky assets

Figure 15: Securities (as % of assets)



Source: CBR, Aton estimates

Russian banks have significantly increased the securities holdings on their balance sheets, which reached RUB4.6trn (16% of total assets and 130% of total reported capital) on 1 Sep 2011 vs RUB3.0trn (10% and 80%, respectively) in mid-2008. This exposes the banking sector to several risks:

- Firstly, the banks' asset structures have become more volatile because the value of securities can change fairly quickly. This is especially true for the stocks and bonds of companies from EMs and Russia in particular, which tends to record the deepest falls during any crisis.
- Secondly, the large amounts of securities could trigger huge losses on their income statements when the securities are marked-to-market during a crisis. This would hit profitability and the capitalisation of many banks and translate into much higher bottom line volatility.
- Thirdly, the securities market has become more fragile in the sense that it could fall quicker and deeper if a new crisis emerges. Historical data shows that Russian banks tend to move as a group on the securities market. This means that if a small group of banks starts selling securities, the trend could snowball quickly across the entire sector. The desire to minimise losses tends to push banks to sell as quickly as possible, driving prices lower and lower.
- Finally, new CBR directives force banks to create larger capital cushions for securities holdings. This requirement will aggravate the pressure on capitalisation.

On average, loan portfolios have become riskier. After a contraction in 2009, the share of retail loans has returned to 23.5% today, down slightly from 25.0% on 1 Oct 2008. The last crisis demonstrated that **retail lending** in Russia contracts quicker and deeper and starts recovering later than corporate lending, whereas the retail NPL ratio grows to higher levels and starts declining later. The structure of the retail

portfolio has not changed much with the share of mortgage loans increasing to 27% today from 24% on the verge of the 2008 crisis. This keeps the risks associated with retail lending at around the same level. However, banks have taken significant steps toward expanding retail loans with zero/low initial down payments and zero/low collateral. History shows that borrowers of such loans are more prone to default. Thus, we believe that overall sector risk related to its retail exposure has increased. The second area of elevated risk is increased exposure to **highly cyclical industries** with poor track records of debt servicing during a crisis. For example, the banking sector is now more exposed to real estate and related industries (around 25% of the corporate portfolio, on our estimates), financial services (around 4%) and transport (around 3%). Finally, in pursuit of higher margins banks have continued to lend extensively to the **SME segment** which now accounts for 11% of the sector's assets, according to CBR data. The SME segment turned out to be even more risky than retail – since YE08 it has demonstrated higher NPL ratios, fallen more deeply and started recovering later. The SME segment is also characterised by poorer collateral policies (e.g. no collateral, improperly structured and illiquid collateral), higher fraud levels and weaker corporate governance standards.

Concentration and collateral policies

Corporate loan book concentration remains high. Ever since the early 1990s loan concentration has been one of the weakest points of the Russian banking sector. Based on the financials of several systemic banks, we found that concentrations have not decreased and in several cases have even increased as compared to the end of 1H08. The sector still offers many examples of a single, large loan accounting for more than 20% of a bank's equity and the size of these loans is frequently higher than in mid-2008. This means that loan books at the sector level are still vulnerable and dependent on the behaviour of several key borrowers.

Collateral policies remain weak and have deteriorated in many cases, on our estimates. Weak collateral policies represent a significant risk to the stability of the system and many individual banks as well. This is especially important during a crisis because the characteristics of collateral determine the loan recovery rate and impact on net profit and capital. Below we list the drawbacks of collateral policies which are typical for Russian banks.

- The valuation of collateral is often inadequate and does not reflect realisable value. Furthermore, the valuation is rarely adjusted for changes in the realisable price of the pledge over the course of the loan. Therefore, the price at which a pledge can be sold during a crisis is often materially lower than the appraisal value stated in the loan agreement.
- The low liquidity of collateral is a problem, as well. In many cases loans are secured by specialised fixed assets (e.g. a factory or a poorly located office building) which have little attractiveness for potential buyers.
- The poor structure of loan agreements under which the seizure of collateral is complicated or even impossible. This undermines the bank's ability to make the borrower service its debt properly.
- Fictitious collateral which is common for related-party loans.
- A special case is represented by uncollateralised loans (e.g. consumer loans or corporate overdrafts) which demonstrate the highest propensity to default in crisis times. In particular, overdrafts have regained their popularity in Russia because banks have increased their consumer and SME lending, both of which frequently require no collateral, and substituted direct lending with purchases of unsecured bonds from the open market.

Corporate Governance

As in 2008 the ownership structure of Russian banks remains complex and opaque. Our experience shows that the banking sector is the most transparent in Russia. Nevertheless, it is still impossible to precisely identify related parties and estimate the exact amounts and terms of related-party loans (RPLs) based on public disclosures. This is true for all banks regardless of size and ownership structure. Based on public information and indirect estimates by other experts, **we believe that related-party lending is likely to have increased since mid-2008 and now stands at around 40-50% of equity**. This exposes the sector to high risks because well-hidden RPLs are more likely than average to become problem loans in a crisis (or any change in the external operating environment), the recovery rates on such loans are very low and the effective rates are frequently below-market. The second risk area is related-party deposits which tend to be withdrawn very quickly if the business environment of the group deteriorates. Finally, a high amount of RPLs usually implies a strong discrepancy between reported capital and economic capital in crisis times.

Risk management and loan underwriting policies are still poor though in many cases they have become more conservative. Overall, we think that loan origination practices and risk management standards have become more cautious since the last crisis. At the same time, the risk appetite of Russian banks is still high and they often pursue higher margins at the expense of accepting greater risk on the balance sheet. In our view, some banks, blinded by the need to increase profitability, have gone too far in softening their loan origination and investment standards.

Reporting quality and auditing standards remain unimpressive. The most frequent official reason for the revocation of banking licences involves misrepresentations in financial statements. As evidenced by the cases of IIB and BoM the potential harm from misrepresentation can be significant. Given the limited independence of auditors (particularly small local auditor firms), weak internal controls at the banks themselves and considerable room for management discretion in applying accounting standards (both IFRS and RAS), Russia's banking sector is clearly not protected against the falsification of financial statements, even at large banks.

Earnings and Profitability

The quality of revenue and earnings has deteriorated further. As discussed below, the quality of revenues and earnings is one of main weak points for many Russian banks and the sector as a whole. Non-recurring items such as income from securities and FX trading and 'one-off' sources can represent considerable shares of a bank's revenue while the manipulation of provisioning policy is a common practice at many Russian banks. These factors result in higher volatility of revenues and earnings, depressed long-term profitability and a greater probability of negative surprises for investors. Fortunately, this is not true for each and every bank in Russia.

As noted, **competition between banks has driven interest rates too low**. In competing for ways to invest excessive liquidity, the banks drove yields on key interest-earning assets, including first and foremost loans, to very low levels. For example, the one-year interest rate on a corporate loan in roubles is around 6.0% today. In our view, rates are too low and are insufficient to weather the impact of a new crisis. Strong competition also forced the banks to soften the non-interest terms of their loans as well. For example, many banks attracted clients with longer loan maturities, easier collateral requirements, more benign refinancing options and higher overdraft limits. These provisions are innocuous in normal times but can be deadly if a crisis comes or when questions of default and collateral repossession appear on the scene.

Figure 16: Corporate 1Y RUB loan rate

Source: CBR

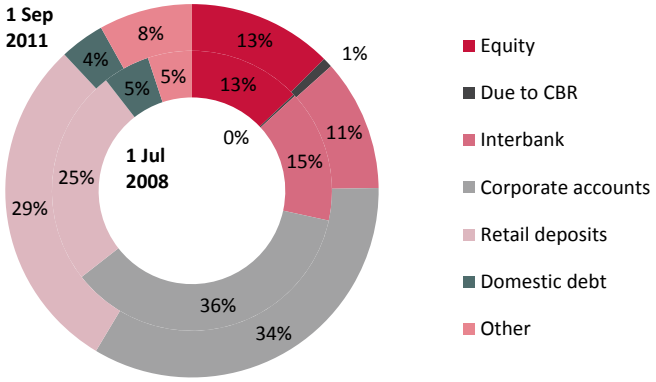
Finally, **at the sector level cost structures are not yet in crisis mode**. Since the early stages of the 2008 crisis nearly all banks have been addressing the problem of high operating costs. However, in spite of considerable efforts to optimise cost structures, little has been achieved, in our view. The banks themselves claim that if a crisis comes they will address this issue in a more zealous manner, but we do not see any significant room for cuts because of the rigid nature of bank operating costs.

Funding and Liquidity

Funding structure

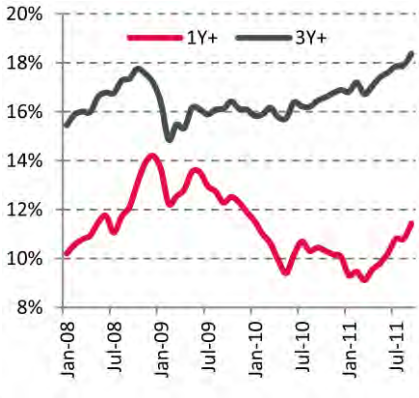
Funding mix has shifted from debt and interbank to deposits. Based on aggregate RAS data for individual banks we see a clear trend of increasing reliance on deposits for funding, both retail and corporate, since the beginning of 2009. The main drivers have been the high deposit rates offered in 2009-10, the slightly improved attitude of the general public towards the sector's retail segment, the large amounts of spare cash available from frozen investment projects and high rates in the corporate sector. A higher share of retail deposits in funding increases the negative impact of any potential bank run because the general public remains quite cautious. Nevertheless, retail deposit funding is more granular and tends to be more stable than wholesale financing. The reduced reliance on short-term debt funding and less exposure to foreign currency-denominated debt is also positive for the sector's stability. In 2009-10 the banks refinanced most of their expensive debt at lower rates and prolonged the maturity of their debt portfolios, both public and private. Finally, the sector has reduced its reliance on the interbank market for funding, which turned out to be the most unstable funding source in the last crisis. All these developments are positive for the stability of the sector's funding base, in our view.

Figure 17: Sector liabilities breakdown



Source: CBR, Aton estimates

Figure 18: Maturity ALM (% of assets)



Source: CBR, Aton estimates

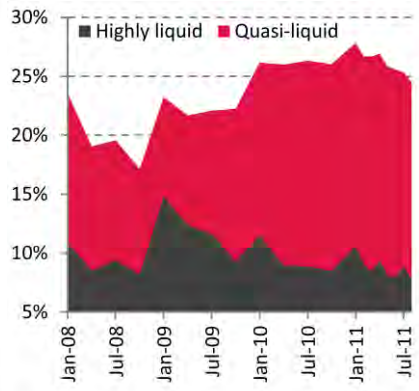
Funding from the debt and interbank markets is already constrained. The public debt market has been closed to Russian issuers since Aug 2011. Banks have now switched to interbank funding thereby pushing up money market rates (5.3% today vs 3.8% in June 2011). We see this hike as transitory because the demand for liquidity was not systemic, but rather driven by several banks (e.g. foreign-owned banks channelling funds to their European parent banks) and one-off liquidity outflows (e.g. tax payments). In any case, the interbank market has never been a reliable source of funding for Russian banks during hard times as it can cease functioning almost instantaneously. This has already occurred on the foreign interbank market as foreign counterparties are less and less willing to participate even in low-risk syndicated loans for Russian banks.

Asset-liability mismatches are still significant. Since mid-2008 **the banks have managed to significantly improve their currency asset-liability mismatches** (ALM) making the discrepancies between asset and liability currency exposures much

smaller. In addition FX positions have become more manageable and predictable as a higher portion of open FX positions is now hedged. This is definitely positive for the sector's stability and profitability in our view. However, currency ALM risks have not been completely eliminated. Firstly, there is potential counterparty risk in FX swap contracts in the case of distressed European banks. Secondly, there are material currency ALMs on the balance sheets of some borrowers which could potentially harm their ability to service bank loans. If currency ALMs have improved in general, **maturity ALMs seem to have worsened when compared to mid-2008**. As before, the banks are funding long asset positions with short money. The RAS-based ALM for maturities over three years has increased to slightly more than 18% of assets today, up almost 2 ppts since June 2008. The relative ALMs for maturities over one year have remained at around the same levels over the same period.

Liquidity

Figure 19: Liquid assets (% of assets)



Source: CBR, Aton estimates

The liquidity cushion for Russian banks has grown but its structure has become riskier. For the system as a whole, the amount of highly liquid and quasi-liquid assets has increased to 24% of total assets today vs 19% on 1 July 2008. This is positive as it should increase the sector's resilience against future shocks. However, the share of highly liquid assets like cash and equivalents (including deposits with the CBR) has remained at 2008 levels while the amount of quasi-liquid assets, represented by securities, has increased materially. As noted, it is extremely risky to hold these assets in a crisis since the only way to convert them into cash would be through direct REPO with the CBR. We believe the CBR would keep this window open in a crisis and allow the most important banks (say, the top 50) to receive as much liquidity as they demand. Therefore, these quasi-liquid assets should not pose a significant problem. However, these holdings are no less hazardous from the point of view of overall market risk and potential margin calls on banks.

Summary

As indicated in Figure 11, the overall 'crisis-readiness' score for Russia's banking sector deteriorated to 7.0 from 6.3 on the eve of the 2008 crisis. On the one hand, positive changes have been recorded since mid-2008 including the CBR's increased readiness to support the sector, better liquidity on the balance sheets and a generally more stable funding base. These changes suggest **the sector is sufficiently armed to meet the first phase of a crisis – the liquidity shock**. On the other hand, negative developments include a sharp deterioration of asset quality, lower profitability and more fragile macroeconomic conditions. The negative changes lead us to believe that **the sector is less prepared to survive to the end of the next crisis without suffering significant losses**.

The key **red flags** at a sector level include asset quality (the volume of bad assets and exposure to risky assets), quality of revenue and earnings, capitalisation (loss absorption capacity), corporate governance and asset-liability mismatches. We will explore these issues in detail for the individual banks in the next sections.

Methodological Comment I: May the Fundamentals be with You!

Before we begin analysing the red flags for each individual bank we need to discuss one methodological issue – the analysis of bank fundamentals. The last crisis showed that one of the most essential analytical caveats, 'fundamentals matter,' was forgotten by many investors, who suffered as a consequence.

RoE: Important Before, even More Crucial Today

When analysing and comparing banking stocks, investors tend to rely on two multiples – P/E and P/B. These ratios are designed to reflect market valuations and the perception of two different aspects of a bank's operations – net profit coming from the income statement (P/E) and the accounting book value of equity coming from the balance sheet (P/B). Despite the apparent dissimilarities these ratios are two sides of the same conceptual coin – a bank's efficiency in creating shareholder value as measured by RoE, because RoE is a product of P/B and the inverse of P/E.

This is why a great number of market studies have demonstrated that RoE is the single most powerful explanatory variable for predicting the returns of banking stocks. Our simple econometric test of the relationship between stock return and the RoE of **66 GEM banks in 2007-11** confirmed that RoE was indeed a statistically significant variable. Put differently, **RoE does a good job of explaining the variability of banking stock returns, both pre-crisis and post-crisis**. More importantly, the significance of RoE in explaining stock variability increased dramatically after the recent crisis. In the pre-crisis years of 2007-08, RoE explained 12% of the return variability and was statistically significant at a 5% level, but not at 1%. In the post-crisis years of 2010-11 RoE explained nearly 30% of stock return variability and it became very significant in statistical terms.

Figure 20: RoE explained 12% of return variability in 2007-08

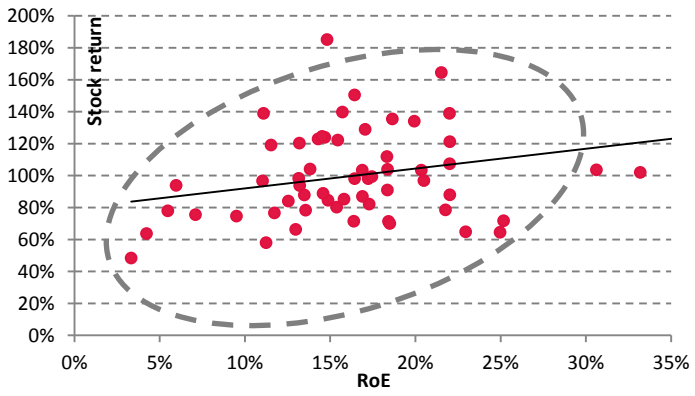
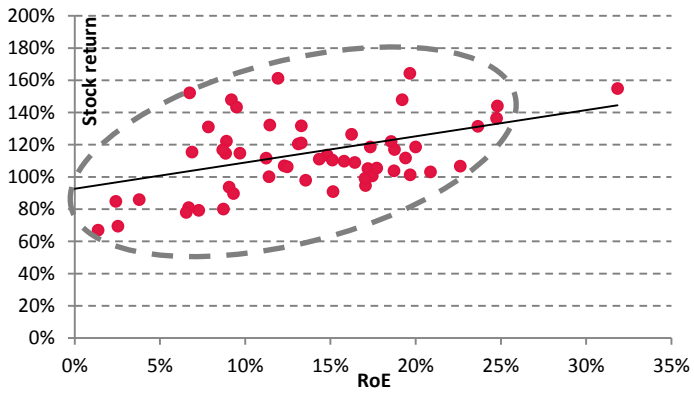


Figure 21: RoE explained 30% of return variability in 2010-11



Source: Bloomberg, Aton estimates

We believe this demonstrates that **after the crisis the market became (or was forced to become) more focused on fundamental factors, such as efficiency in creating shareholder value.** This was an obvious lesson because banks with strong fundamentals survived and even prospered during the downturn. In turn, banks that were riding on market fancy and paper profit were more likely to face serious difficulties (including default) and many of them have not yet recovered.

Not All RoEs are Created Equal

Having established that RoE is an important tool for explaining banking stock returns, we nevertheless believe it is too imprecise for gauging banks. RoE is a function of many variables – some of them reflect the fundamental strength of a bank whereas others are paper-based, transitory or easily malleable – and this is why they have

little to do with fundamental value. To separate 'fundamental sheep' from 'non-fundamental goats' we decomposed RoE into its constituent drivers. As a starting point we used the classic DuPont model for companies and modified it to reflect banking realities. In the end we arrived at five components:

- Taxation
- Provisioning policy
- Cost efficiency
- Earning power of assets
- Capitalisation and funding structure

A step-by-step derivation can be found in Appendix I. This decomposition allows us to separate 'good' fundamental factors (we label them further Core Efficiency Factors, CEF) from 'bad' non-fundamental factors (non-CEF). The list of **CEF**s includes:

- **A thinner cost structure** because this is a fundamental competitive advantage for any entity and improvements in cost efficiency are long-term and recurring.
- **Higher NIM** because it reflects a bank's ability to earn higher income on interest-earning assets, *ceteris paribus*. We also note that NIM captures interest-driven income, which is recurring, as the core source of income for commercial banks and omits non-recurring income.
- **A higher share of interest-earning assets (IEA) in total assets** because this reflects a lower share of idle assets and therefore a better ability to earn interest income using the same amount of assets.
- We also added the **share of net non-interest income (NNII) in total revenue** to CEFs, but **with certain remarks**. On the one hand, NNII includes fee and commission income (F&CI), which provides stable, recurring and generally more profitable income vs regular interest income. On the other hand, NNII includes volatile and non-recurring income, for example from securities trading and FX. It also contains so-called 'other income', which is frequently one-off in nature and is usually difficult to predict, and thus non-recurring by definition. Further in the report we label income from trading and 'other income' jointly as non-recurring income (NRI). Because F&CI is 'good quality' income while NRI is 'bad quality' income, we have concerns about calling the share of NNII in total revenue a true CEF.

Turning to **non-CEF**s, we came up with the following items:

- **Tax rate** because it is an exogenous factor and the bank has little power over it. Of course, accounting policy provides a certain scope for influencing the effective tax rate and associated cash outflows in a particular year but the bank cannot manipulate the tax rate permanently.
- **Provisioning policy** as it is a reflection of a bank's accounting policy and to a lesser extent the regulatory environment it operates in. Provisioning can be easily manipulated by management, for example in order to boost profits by releasing provisions or by under-provisioning. Provisions are paper-based, short-term and non-recurring and therefore cannot be a CEF, which reflects a bank's fundamental strength.
- **Leverage** because of its 'double-edged sword' nature. On the one hand, higher leverage means a higher volume of assets which can earn income with the same level of capital. On the other hand, higher leverage exposes the bank to increased business risks because of lower capital loss absorption capacity and the need to inject more capital in the future to support asset growth.

By and large, the division between CEF and non-CEF is far from being strict and well-defined. Nevertheless, it is useful for assessing the quality of earnings and the ability of a bank to withstand external shocks. What is also good is that it works well on real data.

What Does the Real Market Think about CEFs and non-CEFs?

After separating the wheat from the chaff, we can test our hypothesis. We formulated it as follows: the market distinguishes between fundamental and non-fundamental factors and is ready to offer a better stock performance to banks with stronger fundamentals. We calculated annual stock returns for the same 66 GEM banks for the period from Apr-May 2010 to Apr-May 2011. We chose this period because it is the most recent and it was free of the market frenzy observed in 2009-10. We chose the starting months because this is when the GEM banks usually publish their full-year accounts. Using our model, we then decomposed the RoE of these banks into five components (and eight sub-components) based on published annual accounts. A regression of returns on RoE components gave the following results:

Figure 22: Econometric test of RoE decomposition model

Variable	Coefficient	t-statistic	Probability
Intercept	-0.95	-1.76	8.5%
Tax rate	0.04	1.70	9.5%
Provisioning	-0.00	-0.77	44.7%
Cost efficiency	0.11	3.39	0.1%
NIM	0.42	3.96	0.0%
Share of IEA in TA	1.06	2.63	1.1%
Share of F&CI in NNII	0.29	1.57	12.3%
Share of NRI in NNII	-0.00	-1.04	30.4%
Leverage	0.13	0.58	56.1%

Source: Bloomberg, Aton estimates

In plain terms this means that:

- **Fundamental factors such as a thinner cost structure, higher NIM and higher interest-earning power of assets (share of IEA) really matter to the market. The banks with stronger CEFs demonstrated significantly better returns when compared to banks with weaker CEFs**.
- The share of NNII in total revenue is a statistically significant variable that is positively correlated with stock return. However, the market tends to pay less attention to this factor vs the CEFs because of the mixed effects of 'good quality' F&CI and 'bad quality' NRI. When separating these two types of income, we can see that **the market is ready to pay more for a higher share of stable F&CI in total revenue but is not ready to compensate for investing in banks that derive a large portion of profit from NRI**.
- Banks whose net profit growth is driven by provisioning do not tend to demonstrate a better stock price performance over the chosen period. We find this logical because income from a reversal of provisions is non-CEF in nature.
- In terms of stock price performance, the market does not seem to pay much attention to leverage and tax rate. This was expected because their influence is not straightforward and they are non-CEF.
- Finally, our **model's set of CEFs and non-CEFs explains a significant portion of stock price variability – jointly more than 50%**. At the same time, there are other complex factors which are not accounted for in this simple model. These include stock liquidity, market sentiment towards a particular name (which can sometimes be irrational) and global risk appetite.

To sum up, the test shows that **the market pays more attention to fundamentals and tends to ignore non-fundamental factors. More importantly the market is ready to compensate for investing in banks with stronger fundamentals while it is not ready to compensate for growth based on non-fundamental factors**.

Applying RoE Decomposition Model to Russian Banks – Quality of Earnings

We can now apply our model to study the first red flag – quality of earnings – seen among Russian banks. Quality of earnings is a very broad concept. In this section we examine volatility, resilience to a crisis, current growth potential and the quality of RoE drivers. We present graphs of CEFs and non-CEFs which are rebased to 2007 levels (i.e. 2007 = 100%) to allow dynamic comparisons and smooth model-specific scale disproportions. For Sberbank, VTB, BSPB and VZRZ we used quarterly IFRS financials. For NOMOS and BKM we were forced to use annual and semi-annual IFRS figures because these banks did not disclose quarterly figures for 2008-10.

Figure 23: Sberbank

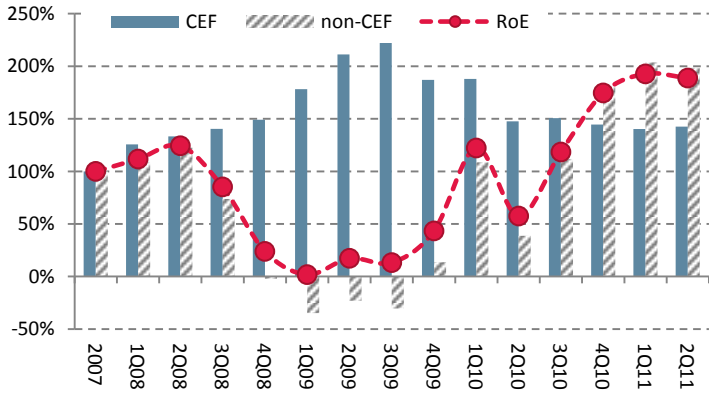
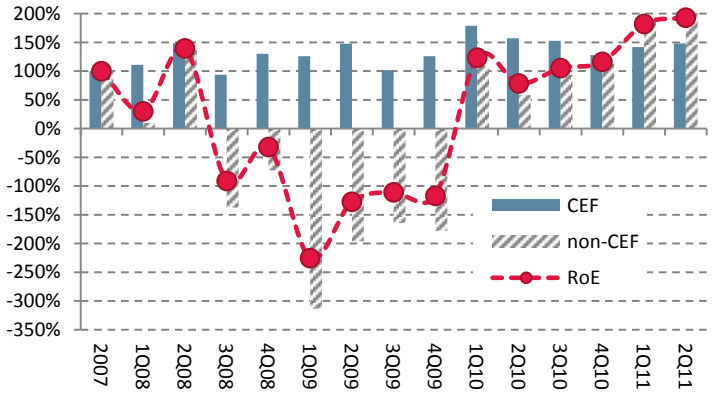


Figure 24: VTB



Source: IFRS financials, Aton estimates

Figure 25: BSPB

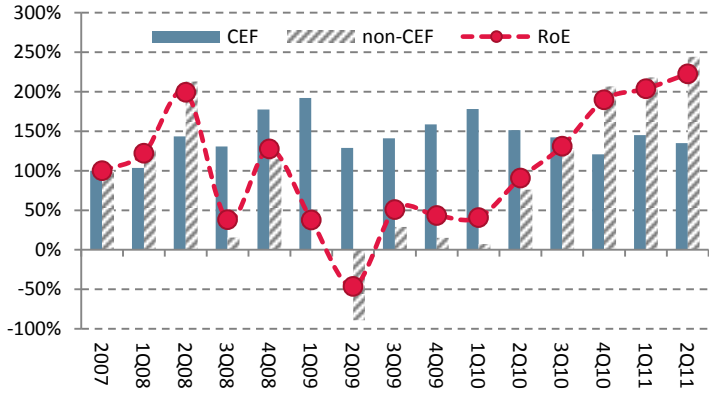
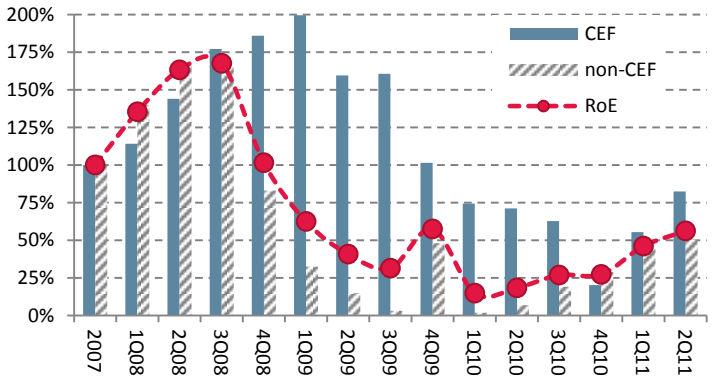


Figure 26: VZRZ



Source: IFRS financials, Aton estimates

Figure 27: NOMOS

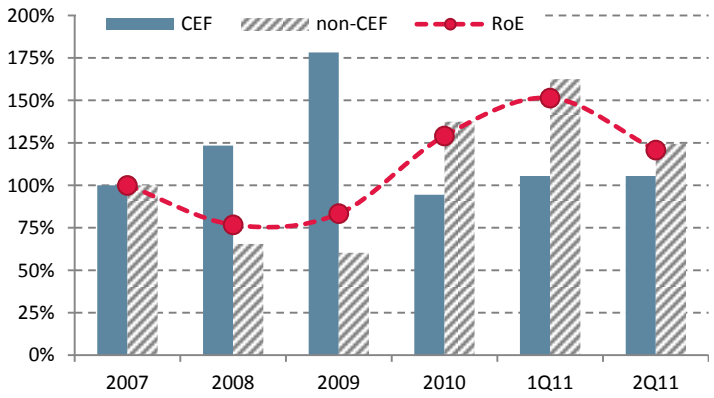
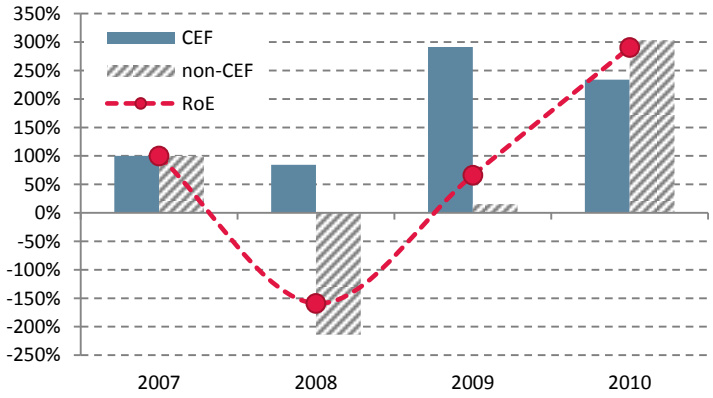


Figure 28: BKM



Source: IFRS financials, Aton estimates

Our key takeaways include:

- **Sberbank**. Throughout the cycle the CEF component remained strong and this protected RoE from turning negative quite well. Recent dynamics show that CEFs have stopped declining. **Comparing current CEF levels with the peaks achieved in 2009, we can see that Sberbank has strong potential to boost RoE through the CEF component**. The non-CEF component is quite volatile but in the first months of the 2008 crisis it did not fall considerably and returned to positive territory quite quickly. In the last several quarters, growth in RoE was driven by peaking non-CEF components. This forms an unstable base for further growth and we can expect RoE to revert to the levels observed pre-crisis and in 2010 unless Sberbank strengthens the fundamental component of its earnings.
- **VTB**. The CEF component is relatively stable but there seems to be little room for boosting RoE in the future via fundamental growth. There is no clear trend in the CEF component and we expect it to remain at around the same levels going forward. **The non-CEF component is the weakest link in VTB's case and relative CEF strength is insufficient to compensate for non-CEF weakness**. Firstly, its non-CEFs are very volatile – they fell very sharply in 3Q08 and reached the bottom only in 1Q09. Secondly, its non-CEFs were very slow to recover – RoE returned to positive territory only in 1Q10 despite a good upswing in CEFs in 3Q09-1Q10. RoE growth since 2Q10 has rested on improvements in the non-CEF components and therefore the base for further expansion is unstable.
- **BSPB**. The bank's CEFs are less stable than in the previous cases. There is no clear trend for the CEF component but there is some room for boosting RoE by strengthening the fundamental component. The non-CEF component is very volatile and falls sharply when a crisis comes. However, it does not fall deeply and returns to positive territory quite quickly. **Since the beginning of 2010 RoE has been driven solely by non-fundamental growth so the grounds for future expansion are highly unstable**.
- **VZRZ** demonstrated the most unstable CEF component – it has been falling for eight quarters in a row and started picking up only in 4Q10. **However, we believe that VZRZ has the largest potential to boost its RoE by strengthening fundamentals**. The non-CEF component is volatile as well but it did not fall very deeply and RoE remained positive throughout the cycle. In the last several quarters RoE was driven by growth in fundamental factors and the basis for future growth looks quite solid.
- **NOMOS**. The CEF component was quite volatile but it stabilised around the current levels in 2010-1H11. We therefore do not expect NOMOS to show higher RoE driven by the strengthening of fundamental return factors. The non-CEF component has been quite stable. It was the key driver of RoE in 2010-1H11 and thus the base for future RoE growth is quite unstable. It is important to note that these results do not consolidate **BKM, which appears much worse than NOMOS in terms of quality of earnings**.

To summarise, we believe that the **earnings of Sberbank and VZRZ are the most resilient to a potential crisis. VTB looks the most vulnerable and we think it could easily show negative RoE in the first quarter of a crisis**. **BSPB would be the second-hardest hit,** although we expect its earnings to remain positive throughout a downturn. Based on scarce historical data **NOMOS should fall somewhere in the middle. However, we think the next crisis could have a stronger impact than 2008, because BKM (which is now consolidated in NOMOS's financials) contains a highly volatile non-CEF component.**

Figure 29: Volatility* of RoE components

	SBER	VTBR	BSPB	VZRZ	Average	NMOS	BKM
CEF	20%	17%	17%	52%	**27%**	32%	46%
non-CEF	93%	481%	106%	154%	**208%**	36%	1666%
RoE	68%	248%	76%	103%	**123%**	26%	339%

*Volatility is measured as historical standard deviation divided by the median to normalise the result

Source: IFRS financials, Aton estimates

Figure 29 shows that the CEF component is much less volatile than the non-CEF component and the key source of earnings volatility is non-fundamental factors.

- Since the beginning of 2008 **Sberbank** and **BSPB** have demonstrated the lowest volatilities in both their CEF and non-CEF components, translating into a smaller dispersion of net profit.
- **VTB** has a relatively stable CEF component but extremely high instability in its non-CEF component, which makes net profit extremely sensitive to market conditions - it falls deeply in crisis times and grows sharply in a bull market. Overall, **VTB does not appear to be the bank for a conservative investor who is focused on fundamentals**.
- In turn, **VZRZ** demonstrates above-average volatility of CEFs and non-CEFs. However, because they compensate for each other at certain intervals the bottom-line dispersion is lower than what is seen for VTB.
- In the cases of **NOMOS** and **BKM** we were forced to use annual financial statements for 2007-10 as quarterly figures are only available for 2011. Therefore, volatility appears to be lower because of the smaller number of data points. Nevertheless, the CEF volatilities for both NOMOS and BKM are already above the peer average, which means that implied quarterly standard deviations would be above average as well. The non-CEF volatility (and therefore RoE volatility) of the combined NOMOS and BKM is likely to be very high. This is because BKM's non-CEF component is extremely sensitive to market conditions, perhaps even more sensitive than VTB. That said, **NOMOS, like VTB, does not appear to be a bank for conservative investors focused on fundamentals**.

The final aspect of quality of earnings is the quality of drivers behind it. We use our model to decompose RoE for the banks under coverage as well as their satellite banks. Below are average IFRS figures for the last four quarters (LFQ), except for NOMOS and BKM (average for 2010 and 1H11) and BoM (2010 only). As explained in Appendix I, the taxation figure below equals one minus the tax rate and represents the share of pre-tax earnings retained after paying taxes. The asset quality and provisions number represents the share of pre-provisioning profit retained after creating provisioning for the period. The cost efficiency component equals one minus the C/I ratio, or the share of income retained after incurring operating costs. The subcomponents of NIM and the earnings structure of assets are fairly standard. The last component equals total assets divided by equity, representing the leverage ratio.

Figure 30: RoE drivers for individual banks

Components	CEF	SBER	VTB	BoM	BSPB	VZRZ	NMOS	BKM	Adjusted average
Taxation	non-CEF	80%	77%	78%	83%	84%	79%	80%	**80%**
Asset quality and provisions	non-CEF	94%	71%	-497%	88%	55%	81%	93%	**78%**
Cost efficiency	CEF	55%	55%	50%	66%	26%	54%	44%	**52%**
NIM and earning structure of assets									
NIM	CEF	6.7%	4.8%	5.1%	5.1%	3.9%	4.7%	4.0%	**4.7%**
IEA/Assets	CEF	90%	87%	91%	91%	89%	92%	91%	**91%**
F&CI/Assets	CEF	1.5%	0.7%	0.6%	0.7%	2.6%	0.9%	1.0%	**1.0%**
NRI/Assets	non-CEF	0.7%	1.3%	-1.1%	0.1%	0.3%	0.9%	0.8%	**0.5%**
Capitalisation and funding structure	non-CEF	8.4	7.4	21.2	9.3	9.8	8.9	7.7	**8.8**
RoE		28%	14%	-169%	25%	6%	19%	14%	**16%**

Source: IFRS financials, Aton estimates

We can now identify the drivers of RoE and assess their quality in each case.

- **Sberbank's RoE is driven by above-average interest-earning efficiency (NIM) and a more stable and profitable core revenue structure (the share of fee and commission income) among CEFs, as well as non-CEFs like lower provisioning and an above-average share of NRI in revenue**. If the reliance of RoE on under-provisioning is rather harmless, the reliance on non-recurring income can be really damaging because NRI can turn negative quickly, driving RoE down significantly.
- This is more pronounced in **VTB**'s case, which **reveals a very strong and dangerous skew towards NRI in its revenue structure, instead of more stable and safer F&CI**. In all other respects VTB does not differ materially from the peers except in terms of leverage. It has the lowest leverage ratio (total assets/equity) in our sample which means that it has significant potential to increase its asset base in order to increase earnings. However, econometric tests show that higher leverage does not directly translate into higher stock returns. Another issue related to VTB is its new subsidiary BoM. Leaving aside the political and corporate governance issues, **BoM is the weakest bank in the sample based on its FY10 financials**. Going forward we believe that BoM will bring little value to VTB in terms of strengthening the group's fundamentals.
- **BSPB's RoE is based on higher cost efficiency among CEFs and lower provisioning among non-CEFs**. It also has one of the lowest shares of F&CI in revenue which suggests it is less prepared for a crisis than its peers. However, the contribution of NRI income to RoE is the smallest among the five banks, which offsets the F&CI-related drawback.
- **VZRZ** is a special case. **It has a very strong F&CI component but lags its peers in terms of cost efficiency and NIM**. The pressure on RoE is aggravated by high provisioning. Furthermore, VZRZ has the highest equity ratio which means that its asset growth potential is quite constrained.
- **NOMOS's NNII structure is slanted towards NRI rather than F&CI which exposes it to the same risks as VTB**. In all other respects it is on par with its sample peers. Going forward we expect the quality of NOMOS's earnings to decline because the influence of BKM on the joint income statement will become more pronounced. BKM is below-average in terms of cost efficiency and interest-earning power and has a NNII structure skewed towards non-recurring income.

Summing up, **we believe that Sberbank demonstrates the best quality of earnings among its peers**. Its RoE appears to be the best positioned to withstand the negative effect of a potential crisis due to low earnings volatility, strong resilience to external shocks and the high quality of the drivers behind it. **At the other end of the spectrum we see VTB** with very volatile earnings, a strong sensitivity to market conditions and below-average quality of RoE drivers.

Then and Now: The Five Banks

We will now continue to examine the red flags identified at the sector level and attempt to assess the crisis-readiness of the five banks under coverage. To structure our discussion we used the classic CAMEL model but decided to put the asset quality section first as we believe this is the weakest link for all five banks. We will discuss qualitative issues such as corporate governance and state support separately at the end of this section.

Asset Quality

The issue of asset quality has been important since YE08. In the wake of recent market turbulence and with the clear potential for a new crisis it becomes crucial. We think that a good way to assess the quality of assets and identify the key weaknesses is to stress test a balance sheet.

Stress test – the doomsday scenario

A stress test is not merely about calculating the impact on earnings: it is more about calculating the impact on capital. This is because a bank's ability to withstand crisis-induced losses is determined by its loss-absorption capacity (LAC). LAC is composed of two things – loan loss reserves (LLR), the amount of capital which was earmarked in advance that could be used to absorb losses, and capital, the core cushion used to absorb unforeseen losses. Our quantitative assumptions for a stress test are as follows:

- Debt and equity markets experience sizeable downfalls: the prices of fixed income instruments decline by 15-35% and equities by 50% (the RTS Index fell by around 70% and the Russia 30 sovereign eurobond declined around 30% in early Sep to late Oct 2008)
- Existing NPLs (90+ days overdue) become irrecoverable and are written-off
- Delinquency rates on restructured loans rise to 50% (from 30-35% now)
- The quality of loans to highly cyclical sectors deteriorates rapidly and a significant share of loans to the financial, real estate and transportation sectors become NPLs and require 100% provisioning
- The value of non-core assets is written down heavily due to a significant drop in their market prices.

(When we started writing this report in September, we described these assumptions as a doomsday scenario. In observing how the situation has developed since then, this scenario does not seem to be particularly apocalyptic and the reality of several months from today could turn out to be much worse than our theoretical scenario.)

To evaluate a bank's strength in the face of such a scenario, we calculated the **doomsday ratio (DDR)** in a way similar to the dead-bank ratio (DBR) used in credit analysis. The DDR is **the ratio of equity and provisions to the potential asset haircut induced by the doomsday scenario**. **It measures the capacity of a bank to absorb the losses induced by a crisis**. By design, DDR is a coverage ratio and a value above 100% means that the cushion is sufficient to accommodate the estimated losses.

The **doomsday haircut** represents the fair recognition of all credit and market-related losses, i.e. it **is the maximum amount of losses and write-offs a bank can recognise in its financials if it follows the true spirit of accounting principles**. Unfortunately, this never happens in reality. For instance, non-core assets such as investment property are unlikely to be marked-to-market while promissory notes can be booked at almost arbitrary valuations. To accommodate this tendency to hide losses, we introduced another measure called **recognised doomsday ratio (RDDR)**. It is similar to DDR but the asset haircuts are softened to the extent that the banks may recognise smaller losses in their income statements. For example, the haircuts on

non-core assets and promissory notes are decreased to 0-10% because we believe that the banks are often able to persuade auditors not to recognise the associated negative revaluations in net profit.

The difference between DDR and RDDR haircuts can be treated as unrealised losses. While they are not immediately recognised, the bank indirectly owns them in the sense that should the need arise to sell associated assets, the bank will be able to sell them only at large discounts and these discounts will be close to the unrealised losses. So, the share of capital which corresponds to unrealised losses (on the asset side of the balance sheet) will remain 'locked', i.e. incapable of absorbing any other losses. Hence, **we believe that one should look at both DDR and RDDR to clearly understand a bank's ability to withstand losses**.

Figure 31: DDR and RDDR at 1H11 and YE07 – less prepared now to withstand losses

	Haircut						
RUBmn, as of 1H11	**DDR**	**RDDR**	**SBER**	**VTB**	**BSPB**	**VZRZ**	**NOMOS**
Total securities portfolio			1,508,769	636,200	54,950	14,209	83,315
Sovereign/subfed bonds	20%	15%	927,140	63,100	10,467	8,327	10,517
Foreign government bonds	15%	15%	23,237	44,000	0	0	1,839
Corporate bonds	35%	25%	445,927	337,500	38,110	5,234	43,043
Equities	50%	25%	112,465	138,500	6,373	470	2,915
Promissory notes	75%	10%	0	600	0	178	18,276
Other securities	75%	0%	0	52,500	0	0	6,725
Reported NPLs (90+)	100%	100%	445,160	252,329	9,395	8,497	8,749
Restructured loans	50%	15%	547,250	256,400	16,764	8,096	40,712
Gross loans to highly cyclical sectors			1,110,149	1,294,147	88,594	34,296	184,508
Real estate	25%	15%	519,168	422,336	53,548	21,292	89,305
Financial sector	35%	25%	317,047	595,740	25,246	8,910	79,797
Transport and other	15%	5%	273,934	276,072	9,800	4,094	15,407
Non-core assets			49,924	187,700	4,622	3,584	3,179
Investment property	75%	10%	6,606	126,100	4,576	601	2,146
Other non-core assets	75%	0%	43,318	61,600	46	2,983	1,033
Total assets			9,078,889	4,720,000	292,056	174,264	572,176
Total equity			1,132,860	597,500	32,269	17,566	69,684
Loan loss reserves (LLR)			659,874	280,400	19,614	12,070	16,260
LLR/loss absorption cushion			37%	32%	38%	41%	19%
Doomsday haircut			**1,439,297**	**1,123,228**	**63,555**	**28,155**	**121,708**
as % of assets			16%	24%	22%	16%	21%
as % of equity			127%	188%	197%	160%	175%
DDR at 1H11			**125%**	**78%**	**82%**	**105%**	**71%**
DDR at YE07			240%	119%	103%	142%	90%
Recognised doomsday haircut			**980,896**	**664,613**	**39,892**	**18,091**	**64,356**
as % of assets			11%	14%	14%	10%	11%
as % of equity			87%	111%	124%	103%	92%
RDDR at 1H11			**183%**	**132%**	**130%**	**164%**	**134%**
RDDR at YE07			371%	221%	160%	241%	145%

Source: IFRS financials, Aton estimates

Our calculations show that **both DDRs and RDDRs are significantly lower today as compared to YE07 for all five banks**. This means that **all five banks are less prepared to withstand a crisis today than before the turmoil in 2008**. Why is this so?

- First of all, the asset quality problems that appeared after the last crisis have not been resolved. The banks still report a significant amount of NPLs on their balance sheets. Apart from disclosed NPLs, there are hidden NPLs such as restructured loans and non-core assets.
- Next, the banks have become more exposed to the securities markets. This is manifested in larger securities holdings and a larger proportion of riskier instruments (e.g. more equities than bonds), which tend to fall more in crisis times.

- The banks today still have high lending exposure to highly cyclical sectors.

Speaking of each bank individually, we draw attention to the following:

- **Sberbank** has the strongest loss absorption capacity. Sberbank and **VZRZ** are the only banks to have DDRs above 100% today.
- **BSPB**'s doomsday haircut is almost two times its capital while its recognised doomsday haircut (relative to assets /equity) is the largest among peers. The large haircut is explained by the bank's high lending exposure to cyclical sectors and securities markets (predominantly via corporate bonds).
- One of the lowest DDRs belongs to **VTB** due to its high exposure to cyclical sectors and the significant burden of its non-core assets. We note that the calculations in Figure 31 are based on VTB's 1H11 IFRS financials which do not consolidate BoM, while the combined pro-forma accounts should produce an even gloomier picture.
- For **NOMOS,** RDDR looks relatively strong (134% vs the peer average of 149%), but if we look at DDR (71% vs the peer average of 92%), we see that it is likely to be the most heavily impacted by the next crisis. Its DDR – the lowest among the five banks under coverage – is explained by the bank's very high exposure to the securities market (NOMOS Group is the largest holder of promissory notes among the five), hidden NPLs in the form of restructured loans and loans to highly cyclical sectors (especially to financial and real estate companies).

Despite dangerously low DDRs, we do not believe the five banks will be allowed to go bankrupt even if the crisis comes in its ugliest form. In our view, this is because the CBR intends to avoid bad publicity before the presidential elections in Mar 2012; additionally, each of these banks enjoys a relatively strong political lobby. At the same time, even a mild form of the doomsday scenario would imply a significant deterioration of financial metrics, further negative expectations stemming from the overhang of unrealised losses, a sharp market reaction to negative news and a substantially lower 'comfort level' for holding the banks' shares among investors.

Securities portfolios and market risk

Securities holdings, which walk the fine line between being quasi-liquid assets while still adding to the revenue stream, expose banks to market risk. As such the size and quality of a bank's securities portfolio are important aspects of its overall asset quality.

In line with the general market trend, Sberbank and BSPB have increased their holdings of securities starting since YE07. Their securities portfolios today exceed 15% of total assets. For the other three banks the share of securities in total assets has changed immaterially since that time.

Figure 32: Securities portfolio (as % of assets)

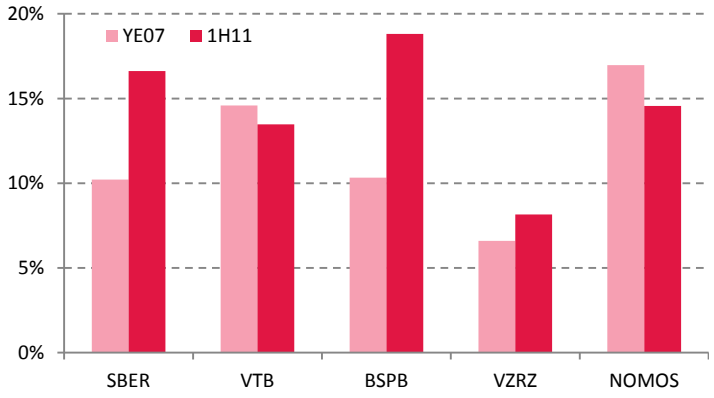
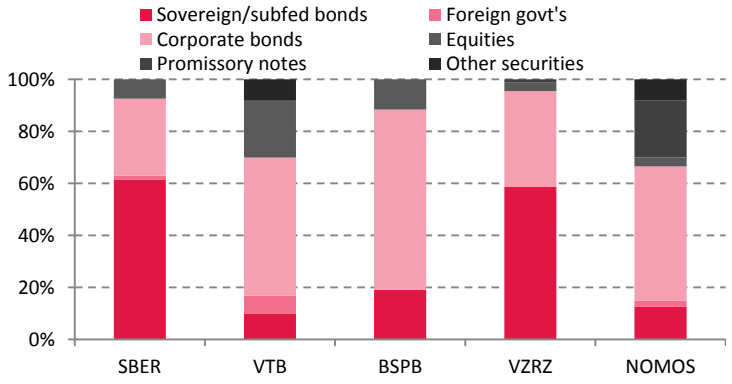


Figure 33: Securities portfolio decomposition, 1H11



Source: IFRS financials, Aton estimates

The composition and therefore the quality of these securities portfolios vary greatly across the board.

- The securities holdings of **Sberbank** and **VZRZ** look safer to us because sovereign/subfederal bonds comprise the dominant share of their portfolios with the remainder represented mostly by corporate bonds. Higher-quality bonds are more liquid, more robust in terms of price declines during a crisis and have smaller haircuts for direct REPO operations with the CBR.
- The next in terms of quality is **BSPB** which holds mainly corporate bonds followed by sovereign/subfederal fixed-income instruments. However, the share of equities in BSPB's portfolio is quite substantial (12%), which exposes it to greater market risk.
- **VTB** and **NOMOS** have the worst-quality portfolios in terms of market risk. These banks are the most exposed to equities and promissory notes. These kinds of securities are quite illiquid and tend to fall the most during a crisis. Apart from these drawbacks the promissory notes (PNs) held by NOMOS have a dubious reputation as financial instruments among bankers and regulators, so we think it is worth saying a few words about them.

A couple of words on promissory notes

Because the issuance and turnover of PNs is only loosely regulated in Russia and control over the related OTC market is poor, PNs have been widely used in a variety of financial schemes. For a long time Russian banks used PNs for boosting capital, asset-stripping, hiding NPLs and other bad business practices. Banks heavily engaged in PN operations tended to have a poor reputation on the market. The list includes IIB, Globex, Russian Capital Bank and other institutions which defaulted or were recently subjected to financial rehabilitation. NOMOS Group, including BKM, is the largest holder of PNs among all Russian banks, but we have not found any convincing evidence to suggest that NOMOS is engaged in any kind of questionable business practices using PNs. Nevertheless, taking into account NOMOS's limited disclosure on the issue, we believe there is still an element of risk here.

In any case, if NOMOS and BKM are using PNs solely as an investment instrument or as a means of payment, the associated risks do not go away. This is because PNs are usually very illiquid and there is no organised market for this kind of instrument. As a result, banks book promissory notes on their balance sheets at 'fair value' which is impossible to estimate, i.e. any estimate will do for the auditors. Apart from liquidity, the other risk is that long-term PNs are almost exclusively used as a means of payment in complex transactions with related parties. This means they are 'locked' on the balance sheets of the banks. In the case of NOMOS and BKM, the combined amount of long-term PNs reached RUB3.8bn as of 1 Sep 2011, or 22% of aggregate PN holdings and 5% of combined equity, according to RAS financials.

Real NPLs: non-performing and delinquent restructured loans

We now turn to the quality of loan portfolios. As noted before, the reported headline NPL numbers do not correctly describe the quality of a loan book. Apart from the fact that reported NPLs reflect only the tip of the iceberg, there are other practical obstacles such as inconsistent or incomplete disclosure on this topic. For example, Sberbank reports NPLs using the 90+ days overdue definition, while VZRZ and BSPB rely on a 1+ day overdue definition. Also, VTB reports NPLs as loans which are both impaired and 90+ days overdue, while loans that are not impaired but still 90+ days overdue are left out for some reason.

To gain a more realistic and uniform measure of loan book quality, we use the **real NPL** measure. **This is defined as the sum of all loans which are overdue for more than 90 days and 35% of disclosed restructured/renegotiated loans**. The first summand unifies the definition of the overdue portion while the second reflects

hidden NPLs. Real NPLs are higher than reported/disclosed NPLs but are still below the true amount, which encompasses all other forms of hidden bad loans. We did not include other forms of bad assets in our definition of real NPL because it is frequently impossible to identify them correctly using public accounts. The dynamics of real NPLs for the five banks are produced below.

Figure 34: Real NPL growth (YE07 = 100%)

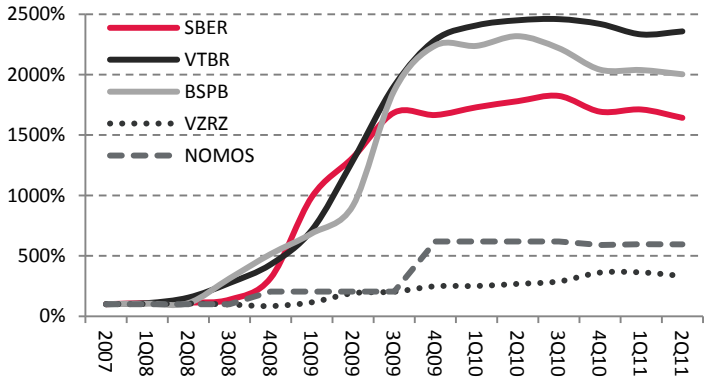
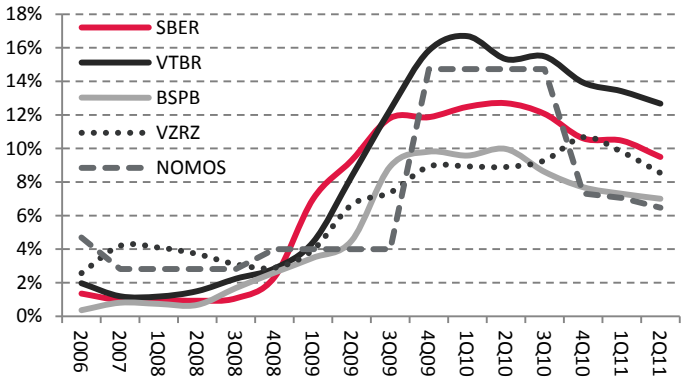


Figure 35: Real NPL ratios



Source: IFRS financials, Aton estimates

Figure 34 shows that real NPLs started to increase in 3Q08 and have not yet returned to pre-crisis levels. For example, the absolute amount of real NPLs has grown by 23.6x for **VTB** and 16.4x for **Sberbank** since YE07. The strikingly low growth rates of real NPLs for **VZRZ** and **NOMOS** are explained by the fact that their real NPLs ratios were already around 3-4% at YE07, much higher than those of the other three banks. Looking at real NPL ratios we can see that after a period of exponential growth they peaked in 1H10 and have been declining ever since. However, one should bear in mind that real NPL ratios have been decreasing because of growth in the denominator, the size of the gross loan book, rather than a decline in the numerator, the absolute amount of real NPLs.

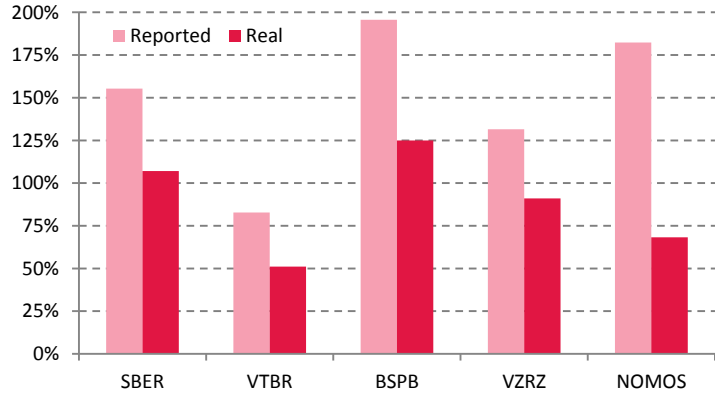
Figure 35 shows that **VTB**'s real NPL ratio remains the highest across the traded Russian banks and stood at 12.7% at the end of 2Q11. We note that this figure does not include BoM's loan portfolio. If we use VTB management's estimate of BoM's problem loans (RUB335bn), the combined real NPL ratio jumps to 19.4%. The lowest real NPL ratio of 6.5% is demonstrated by **NOMOS** at the end of 1H11. The ratio fell sharply from 14.7% at YE09 to 7.3% at YE10. Apart from the fact that BKM's loan book was consolidated on a net basis, we believe there are three more reasons for this dramatic improvement in reported financials:

- Firstly, in its FY10 financials NOMOS ceased disclosing the amount of renegotiated loans (in fact, it is the only traded Russian bank that does not disclose this figure). Hence, we had to rely on estimates derived from the bank's 9M10 financials and those taken from BKM's IFRS figures to get at a combined figure. Recalling the unpleasant case of NOMOS's loan to Russian real estate developer PIK (which raised questions about the accuracy of its financial statements), we believe the old estimates may significantly underestimate the real volume of restructured loans on NOMOS's balance sheet.
- Secondly, FY10 financials were used as the basis for the bank's IPO in Apr 2011. We believe it was natural for management to make the financial metrics look as bright as possible in order to improve investor sentiment.
- Finally, the 7.3% figure does not take into account reverse REPO loans to brokerage companies. At the end of 1H11 these loans totalled RUB49bn (14% of the conventional loan portfolio and 8.5% of total assets). In its statements, the bank recognises them as high-quality loans and does not create any

provisions for them. We do not share this optimistic view and believe the loans to brokerage companies are of worse quality than the bank presents in its financials. Furthermore, loans to financial companies would likely be the first to show impairments in a crisis.

We can also draw interesting conclusions by comparing reserve coverage ratios under two definitions of NPL – reported (90+) and real. By dividing the earmarked loan loss reserves by reported NPLs we gain a fairly solid picture – four of the five banks have coverage above 100%, while VTB is close to the threshold with coverage of 83% at YE10. If we use the more correct real NPL definition we see that only two banks, **Sberbank** and **BSPB**, have reserve coverage metrics above 100%. The other three banks lag significantly behind. The coverage ratio of **NOMOS** drops 2.7x to just 68% while that of **VTB** shrinks by 1.6x to a worrying 51%.

Figure 36: Reported (90+) and real reserve coverage ratios (YE10)



Source: IFRS financials, Aton estimates

Exposure to cyclical sectors

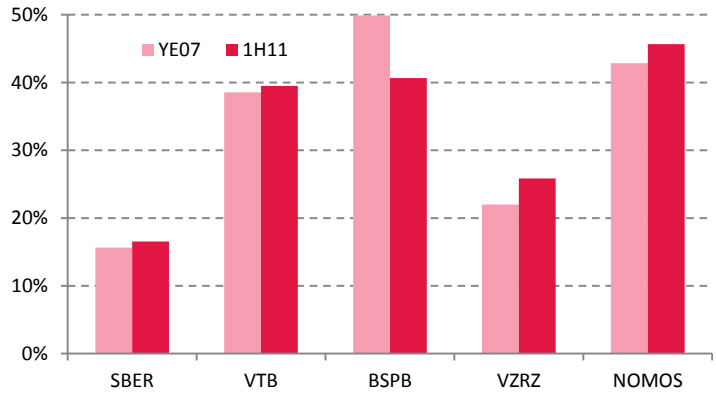
The industry composition of a bank's loan book is highly important in assessing the quality of the book and this importance increases on the verge of a crisis. This is because companies in highly cyclical industries such as real estate, financial services and transport tend to service their debt very poorly when the economic cycle enters the recession phase. For banks this means an increased potential for NPL growth.

Across the five traded banks, exposure to highly cyclical industries has not changed much since early 2008, with the sole exception of BSPB, which has reduced the share of risky loans by 9 ppts since then (see Figure 37). We see two reasons for this stability. Firstly, the banks continue to lend to these sectors extensively because the companies in highly-cyclical sectors are ready to pay higher rates. The second reason involves 'legacy NPLs'. The proportion of non-performing borrowers in these sectors was one of the highest after mid-2008 and as a result their proportion of restructured loans was one of the highest as well. Once restructured, the loan tends to stay in the bank's portfolio for several more years and the banks are bound to cooperate with the same borrower for a longer period.

In our view, **NOMOS**, **BSPB** and **VTB** are positioned outside the comfort zone because their share of loans to highly cyclical sectors in total gross loans either approaches or exceeds 40%. In spite of BSPB's efforts to diversify the industry structure of its loan book and distance itself from highly cyclical industries, the bank is still out of its depth. VTB and NOMOS, on the other hand, have increased the share of cycle-sensitive borrowers in their loan portfolios. We think that in VTB's case the share was driven up mostly by voluntary and default-induced restructuring. For NOMOS the main factor appears to be its willingness to boost margins at the expense of higher portfolio risk. Since YE07, NOMOS has nearly doubled its lending to brokerage

companies, which can demonstrate good credit quality in a stable environment but are likely to be the first to demonstrate a credit quality decline when the economy heads into recession and markets tumble. The same is true for real estate companies.

Figure 37: Loans to highly cyclical sectors (as % of total gross loans)



Source: IFRS financials, Aton estimates

Non-core assets

Non-core assets (NCA) are another class of hidden NPLs though we did not include them in our definition of real NPL because for formal reasons they cannot be classified as loans. NCA are usually composed of collateral seized on defaulted loans which the bank refused to restructure. The seized collateral is mainly composed of real estate or specialised fixed assets such as plants and production lines.

We have seen many cases where banks found it difficult and even impossible to find buyers for NCA. On many occasions this was because of the specialised nature of the asset or that the NCA was an uncompleted real estate development project. For this reason, an NCA should be treated as a 'frozen asset' which the banks must hold long term. If an NCA is an uncompleted real estate project, it is not just a 'frozen asset' but a drain on cash too. A bank must continue investing in the project until completion if it ever hopes to sell the asset.

There are two more issues regarding NCA:

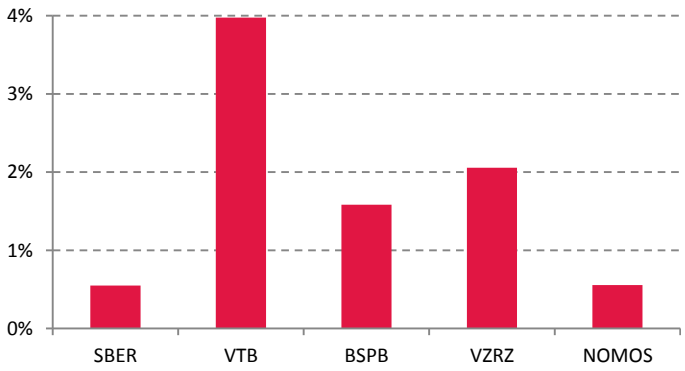
- Firstly, these assets are usually recognised on the balance sheet at the historical cost derived prior to the 2008 crisis. This places its value much higher than the current net realisable value, meaning that in case of disposal a bank must sell the NCA at a deep discount, taking a hit on net profit.
- Secondly, the CBR has introduced Directive #2612-U regarding NCA. To discourage banks from holding such assets on their balance sheets, the regulator now requires financial institutions to create sizeable provisions against them. The provisioning rate equals no less than 10% of the book value if the NCA is held for at least one year, 20% if held for more than two years, 35% for three years, 50% for four years and 75% if held for more than five years. For more details on Directive #2612-U (and other regulatory initiatives of the CBR), please see our note *Changes in Banking Regulation: Obey the Rules, If There's No Other Choice* released 17 Aug.

How big is the NCA problem? Based on the 1H11 RAS financials of more than 950 Russian banks, we have estimated the aggregate value of NCA in the sector at around RUB580bn, of 1.7% of total sector assets. Because of shortcomings in local accounting standards and the desire of the banks to hide NCA, this estimate is likely only the tip of the iceberg. In late 2010 the CBR came up with an estimate of

aggregate NCA amounting to RUB2trn. This translates into almost 6% of the sector's total assets and seems to be a more realistic figure, in our view.

For our five traded banks, the scope of the NCA problem is smaller but still significant: the average NCA holding is around 1.7% of total assets. Based on limited public disclosures, we believe NCA for these banks are usually composed of real estate (completed and uncompleted projects) and specialised fixed assets. We have used IFRS accounts to estimate the current holdings of NCA by the traded banks.

Figure 38: Non-core assets (as % of total assets)



Source: IFRS financials, Aton estimates

VTB is the undisputed leader in this respect – its NCA holdings (even excluding BoM) represent almost 4.0% of its total assets. Most of its NCA is likely composed of uncompleted real estate projects because VTB was actively lending to developers prior to the 2008 crisis. This 4% is effectively locked on the balance sheet and if VTB decides to dispose of these assets it will likely have to incur substantial losses. On the other side of the spectrum is **Sberbank** which has only 0.5% of its total assets 'frozen' by NCA. The NCA burden of **BSPB** and **VZRZ** ranges from 1-2% – a minor problem, in our view. NOMOS reported NCA of 0.6% at YE10, which we take positively.

Capitalisation

We now turn to the next red flag – capitalisation. It is easy to overlook its importance, particularly in the expansionary economic phase. In a bull market equity investors focus on earnings and margins while high capital adequacy is likely to be perceived negatively because 'too much capital' reduces leverage, thereby limiting RoE growth potential. When a banking share price is on the rise, the going-concern assumption is not questioned and is treated as an axiom. But today when the next crisis is around the corner, we believe that equity investors should look at capitalisation from a different point of view – that of a credit analyst. In credit research capitalisation is one of the cornerstones of bank analysis because capital provides the cushion against crisis losses. The strength of a bank's capital thus becomes a theorem which needs to be constantly tested. Below we analyse the issues of capital strength and the quality of capital for our five traded banks.

Basel capital adequacy ratios

At the end of 1H11 all five banks demonstrated rather strong Basel capital adequacy ratios (CAR). The minimum Tier I CAR of 9.7% and Total CAR of 12.5% would be the envy of most Western banks even if recalculated following the Basel III requirements.

Figure 39: Basel capital adequacy ratios, 1H11

	SBER	VTB	BSPB	VZRZ	NOMOS
Tier I	13.3%	12.0%	9.7%	11.8%	12.8%
Tier II	4.6%	2.1%	2.8%	1.8%	4.1%
Total	**17.9%**	**14.1%**	**12.5%**	**13.6%**	**16.9%**
Share of Tier I in total	74%	85%	77%	87%	76%
Share of Tier II in total	26%	15%	23%	13%	24%

Source: IFRS financials, Aton estimates

Sberbank has the highest Tier I and Total CAR of 13.3% and 17.9%, respectively. This should provide a good cushion against losses and allow Sberbank to keep growing at a rapid pace long term. The next in terms of capital strength is **NOMOS** with a Total CAR of 16.9%. For these two banks, Tier I CAR is close to 13% while the remaining portion is made up of Tier II capital in the form of long-term subordinated debt. **VTB** and **VZRZ** follow at a notable distance, demonstrating a Tier I CAR of 12% and smaller contributions from subordinated capital. **BSPB** is the least capitalised at the moment. Its Tier I CAR is below 10%, which we consider low for a Russian bank in the current environment. We note, however, that the EBRD has recently converted its $78mn subordinated loan with BSPB into Tier I capital. At the same time, total CAR will remain unchanged, positioning BSPB as the least capitalised to withstand losses.

Loss absorption capacity

Basel CARs tell only part of the story about capital loss absorption capacity (LAC). As we explained in the section on asset quality, LAC also includes loan loss reserves (LLR) because these are the first shield against losses, while capital is the last line of defence. Taking this into account, we suggest using the **dead-bank ratio** (DBR) to measure the capital strength of a bank. Like DDR, this is **calculated as the sum of capital and LLR divided by the amount of non-performing loans**. Its interpretation is similar as well: the larger the ratio, the higher the ability to absorb losses. For our calculations we use real NPLs in the denominator to account for a certain portion of hidden NPLs. This is why we call the resulting ratio the **real dead-bank ratio** (RDBR). The following table summarises RDBRs for Russian banks in 1H08 and 1H11.

Figure 40: Real dead bank ratios

	1H08	1H11	Change
Sberbank	18.7	2.8	-85%
VTB	16.6	2.1	-87%
BSPB	23.9	3.4	-86%
VZRZ	4.6	2.6	-44%
NOMOS	8.0*	3.7	-54%
Average	**14.4**	**2.9**	**-80%**

*YE07

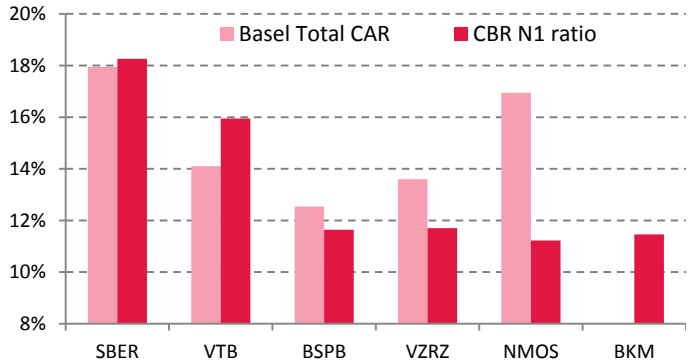
Source: IFRS financials, Aton estimates

Since 1H08 RDBRs have fallen by 80% on average. This implies that **the capacity of the five banks to withstand credit-related losses has fallen dramatically**, which underscores our view on the sector as a whole. Another sad conclusion is that none of the five banks has an RDBR above 4.0x which is the minimum comfortable threshold under current conditions, in our view. The lowest RDBR is demonstrated by **VTB** (2.1x) while the consolidation of BoM will reduce the bank's LAC even further, on our estimates. We deem VTB's standalone ability to withstand crisis losses as the weakest among its peers. **Sberbank,** which experienced the same fall in RDBR from 1H08 as VTB, has a slightly higher ratio of 2.8x, though this is still low. The lesser declines in **VZRZ**'s and **NOMOS**'s ratios are due to the smaller relative increases in their real NPLs since 1H08. However, as noted previously, there are other explanations in the case of NOMOS.

Russian regulatory capital

In addition to Basel adequacy ratios, Russian banks must conform to the CBR's capital adequacy regulations. N1, the CBR's capital adequacy ratio based on local accounting standards, is one of the most important indicators that the regulator monitors quite closely. According to the law, large Russian banks must have an N1 ratio of no less than 10% or they risk losing their licences. Practically, banks with an N1 approaching 10% receive closer CBR attention and in certain cases the regulator introduces restrictions on day-to-day operations as well as M&A plans and other activities.

Figure 41: CBR N1 ratio and Basel Total CAR *



* N1 ratios as of 1 Sep 2011; Basel Total CAR for 1H11 (VTB – YE10; BKM – unavailable)

Source: CBR, IFRS financials, Aton estimates

Because Basel's approach to calculating capital differs from the CBR's method and they are based on different accounting standards, there is a material difference between Basel CARs and CBR N1 ratios. For example, **VZRZ**, **BSPB**, **NOMOS** and **BKM** have N1 ratios below 12%, i.e. fairly close to the minimum regulatory threshold. As noted earlier, new directives issued by the CBR are likely to reduce the N1 ratio for BSPB, NOMOS and BKM by 0.7-0.9 ppts, on our estimates, moving them closer to the minimum level and limiting their room to manoeuvre. For example, because NOMOS has an N1 of 11.2% under local standards (compared to 16.9% under Basel), it will find it difficult to acquire the remaining 44% stake in BKM to consolidate full control. To circumvent this difficulty at the group level, the majority shareholder of NOMOS, IST Group, plans to buy the stake from the government of Khanty-Mansiysk and sell it to NOMOS when the bank's capital adequacy allows it to make the purchase.

Profitability and Efficiency

In our Methodological Comment I, we introduced the RoE decomposition model which allowed us to separate fundamental factors from the non-fundamental. When using it to study the quality of earnings we were forced to use rebased values of CEF and non-CEF because of the different scales of components in the RoE model. However, it is also important to compare banks in terms of absolute RoE and its components. In order to allow absolute-value comparisons we suggest using the following representation of a bank's income statement.

Figure 42: Representation of a bank's income statement

	Core revenues (NII + F&CI)
	Net interest income (NII)
	Net fee and commission income (F&CI)
-	Operating expenses
	SEBPT = Sustainable Earnings Before Provisioning and Taxes
+	NRI = Non-recurring Income
	EBPT = Earnings Before Provisioning and Taxes
-	Provisioning
	Pre-tax profit
-	Income tax
	Net profit

Source: Aton estimates

In this representation we introduce two useful new measures – **EBPT** and **SEBPT**. For banks, EBPT is a better measure of earnings power than net income. This is because by ignoring the influence of provisioning policy, which has the largest scope for management manipulation, EBPT is less prone to 'window dressing'. At the same time, EBPT can be quite volatile as it includes NRI, non-recurring income from securities and FX trading as well as 'other' operations. Subtracting the volatile NRI from EBPT gives us an even more stable measure called SEBPT.

Returning to the concept of core efficiency factors, **SEBPT is an income statement measure of CEF**. SEBPT reflects the cost structure, NIM and the share of interest-earning assets in total assets (through interest income) and the share of NNII in revenue (through F&CI, a 'good quality' component of non-interest income). Non-CEFs are represented by NRI, taxes and provisioning. Hence, by using only income statement measures we can decompose RoE into the sum of four returns on equity: **RoE = SEBPT return + NRI return + Provisioning return + Tax return**. This breakdown reveals the true drivers behind RoE and allows for insightful absolute-value comparisons across the board. That is, SEBPT return represents the power of the core (or recurring), sustainable part of earnings, whereas NRI and provisioning returns reflect more non-recurring and easily malleable components. The tax component can be dropped because it is quite similar across all banks.

Figure 43: Sberbank

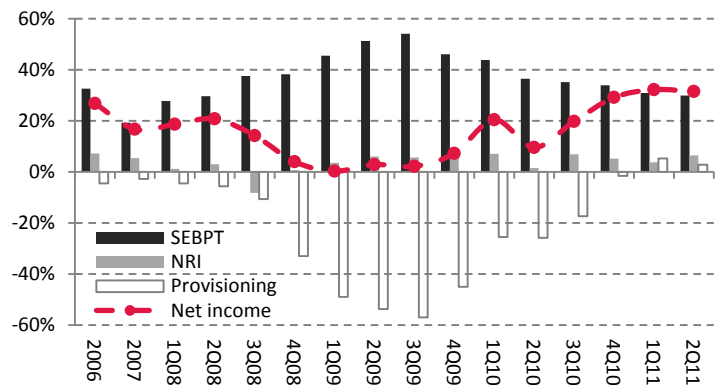
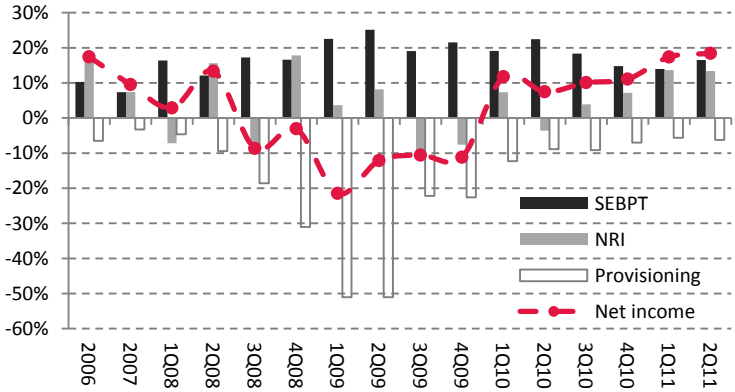


Figure 44: VTB



Source: IFRS financials, Aton estimates

Figure 45: BSPB

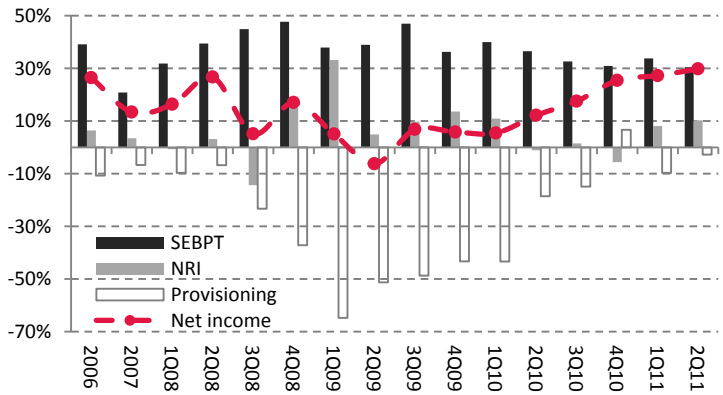
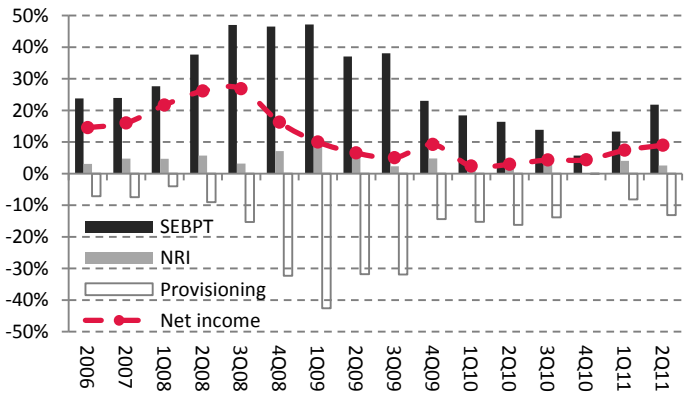


Figure 46: VZRZ



Source: IFRS financials, Aton estimates

Figure 47: NOMOS

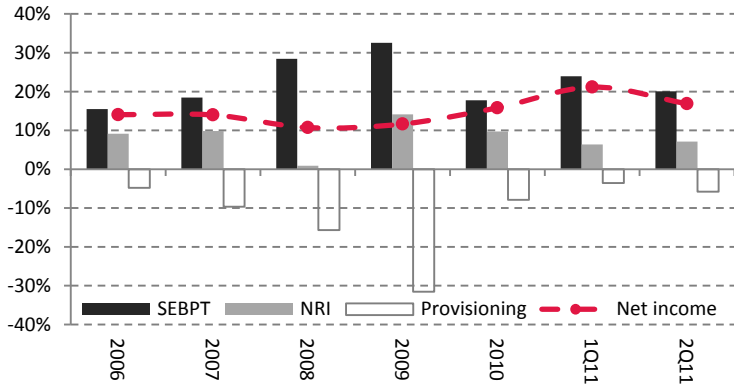
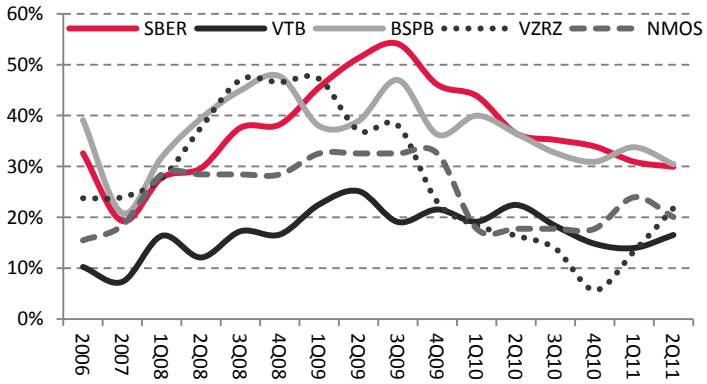


Figure 48: SEBPT returns



Source: IFRS financials, Aton estimates

These conclusions are common for all banks:

- SEBPT return behaves like a true CEF – it is recurring and predictable.
- Growth of SEBPT returns in 2009 was due to SEBPT growing faster than equity.
- Since YE09 SEBPT returns have been contracting as NIMs have been falling and the banks seemingly switched out of crisis mode in terms of operating costs.
- Improvements in RoE in 2010-1H11 were predominantly due to a decrease in provisioning rather than stronger fundamentals. We believe this kind of growth is unsustainable.

In terms of individual banks we point to the following:

- **Sberbank has very strong returns from its core business and these have always been sufficient to prevent RoE from moving into negative territory even when annualised provisioning exceeded 50% of equity**. Since YE07 Sberbank has reported an average SEBPT return of 39% vs the very modest 18% at VTB. Sberbank's non-core business is relatively small and stable. NRI return is usually positive; the only occasion when it turned negative (-8.2%) was in 3Q08 when the stock market collapsed.
- **VTB's SEBPT return has been consistently lower than that of its peers which supports our view that VTB's commercial banking operations are the least efficient among the traded peers**. VTB's NRI return is very volatile and reacts acutely to a crisis. In 3Q08 NRI return dropped to -7.0% from 15.6% in the previous quarter. Unlike other banks, there were occasions when quarterly NRI return turned negative in 2009 and 2010 as well. Due to low SEBPT returns and a high proportion of earnings derived from investment banking operations, net income is the most volatile among the five peers. Another negative earnings factor is VTB's poor asset quality which necessitates the creation of higher provisions in crisis times. Along with the NRI skew, this kept RoE in negative territory for six quarters in a row.
- **BSPB** can boast the most stable and one of the highest SEBPT returns across the board. Similarly to Sberbank, its average SEBPT return since YE07 has been close to 40%. This SEBPT return cushion was enough to withstand the impact of high provisions created in 4Q08-1Q10, while quarterly RoE turned negative only once (in 2Q09). Its non-core business is relatively small though the NRI return tends to fall deeply when a crisis comes (in 3Q08 it fell to -14.3% from 3.2% in the previous quarter).
- **VZRZ** has been reporting single-digit RoE since early 2009, which is explained by falling SEBPT return and high (though declining) provisioning. However, we believe that the trend of falling SEBPT return was reversed in 1Q11 and VZRZ can continue to demonstrate increases in the efficiency of its core business. The

NRI return is usually small and steadily positive which reflects the bank's conservative securities and FX trading policy.

- **NOMOS**. Once again, we were forced to use annual figures for 2008-10 which blurred our findings. The bank's SEBPT return has been higher than VTB's but it is an average 10% less than the returns of the other three banks. In fact, the efficiency of NOMOS's commercial banking operations was close to that of VZRZ which has been growing very slowly since mid-2009. NRI accounts for a substantial share of the bank's revenues and tends to contract considerably in crisis years: NRI return fell from 10% in FY07 to 1% in FY08. Another interesting fact is that NOMOS seems to follow a relaxed provisioning policy. NOMOS's provisioning return in 2009 amounted to -32% vs -52% for Sberbank and BSPB and -37% for VTB. NOMOS says this can be explained by the high quality of its assets and the consequent absence of a strong need to create more provisions. At the same time, we fear that NOMOS's asset quality might not be as good as the bank claims in its financials.

Below we produce a table summarising volatilities, average values and the growth potential of RoE components.

Figure 49: Historical summary of returns on equity

Volatility	SBER	VTB	BSPB	VZRZ	NOMOS	Average
SEBPT	22%	20%	15%	50%	25%	**26%**
NRI	113%	242%	175%	61%	63%	**131%**
Provisioning	-95%	-85%	-82%	-69%	-88%	**-84%**
Net income (RoE)	73%	711%	78%	78%	28%	**193%**
Averages (1Q08-2Q11)						
SEBPT	39%	18%	38%	28%	25%	**29%**
NRI	3.6%	3.9%	6.3%	4.3%	7.6%	**5.2%**
Provisioning	-23%	-19%	-26%	-18%	-13%	**-20%**
Net income (RoE)	15.2%	1.8%	13.9%	10.9%	15.2%	**11.4%**
Averages (3Q08-2Q09) *						
SEBPT	43%	20%	42%	44%	33%	**37%**
NRI	0.5%	5.7%	9.7%	6.8%	14.1%	**7.4%**
Provisioning	-37%	-38%	-44%	-31%	-32%	**-36%**
Net income (RoE)	5.4%	-11.3%	5.3%	14.9%	11.6%	**5.2%**
2Q11 as % of min-max**						
SEBPT	8%	34%	19%	39%	16%	**23%**
NRI	91%	84%	47%	24%	47%	**59%**
Provisioning	4%	3%	23%	31%	8%	**86%**

* FY09 for NOMOS

** Relative position of current value assuming minimum = 0 and maximum = 1

Source: IFRS financials, Aton estimates

In terms of volatilities, the figures confirm the findings of our earnings quality analysis. Due to overly volatile NRI return and the low absolute value of SEBPT, **VTB** exhibits very high net income volatility. The lowest volatility is exhibited by **NOMOS** but the results in the table are not directly comparable because in its case we used annual figures for 2008-10. Furthermore, NOMOS's FY11 income statement will include all 12 months of operations for BKM, which has a very unstable NRI return.

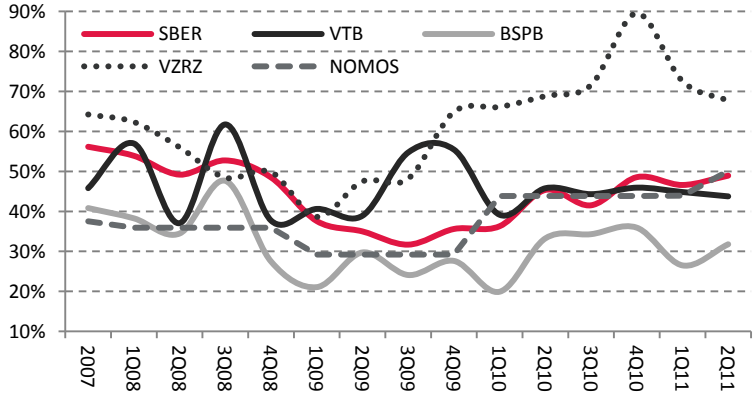
In terms of average values it is interesting to note that **VTB** has the lowest SEBPT return in both crisis and post-crisis quarters while NRI return is consistently below average as well. We note that **NOMOS** has a low SEBPT return but high (though unstable) NRI return and a relaxed provisioning policy, which allows it to achieve average RoE comparable to that of **Sberbank**. In the last crisis (3Q08-2Q09) NOMOS demonstrated one of the highest RoE rates because of the very strong contribution of NRI return. Strong non-core business is a positive factor but we have concerns about its ability to perform equally well in the next downturn.

By comparing the RoE components' current levels (based on 2Q11 figures) with the minimum and maximum values recorded since YE07, we can analyse the growth potential of these RoE components.

- **Sberbank**'s SEBPT return is only a notch above its minimum value. While Sberbank already exhibits the highest efficiency of commercial banking operations among the five banks there is a clear unrealised potential to boost it even further, in our view. The same is true for the other banks but to a smaller extent and subject to the fact that the maximums for SEBPT returns are capped for **VTB** (25%) and **NOMOS** (33%), as suggested by historical values.
- We observe that NRI growth potential is limited for **Sberbank** and **VTB**. This is not a major issue for Sberbank because it relies almost exclusively on its core business, while it could be a problem for VTB which relies much more heavily on its non-core business. For the other three banks NRI growth potential is higher but boosting net profit via non-recurring components is unlikely to bring better market valuations for a bank, as our real data test has shown.
- Looking at the relative value of provisioning for each bank we can see that Sberbank and VTB have switched into post-crisis mode and created few provisions while Sberbank is the only one to have released LLRs recently. NOMOS also seems to be in post-crisis mode but we have concerns that current provisioning might be inadequate for the bank's true asset quality and NOMOS might have been under-provisioning in order to boost its earnings prior to its planned SPO. **BSPB** and **VZRZ** are still in crisis mode in terms of LLR creation. This could mean that either their asset quality has not stabilised yet or they are accumulating LAC for a rainy day.

Another aspect of profitability is cost efficiency. In this respect the picture has not changed much since mid-2008. As before, **VZRZ** remains the least cost efficient of the five. The thinnest cost structure is demonstrated by **BSPB**. In our view, this can be explained by its low exposure to the cost-intensive retail business (the share of retail loans in the loan book is just 7%) and strong regional focus.

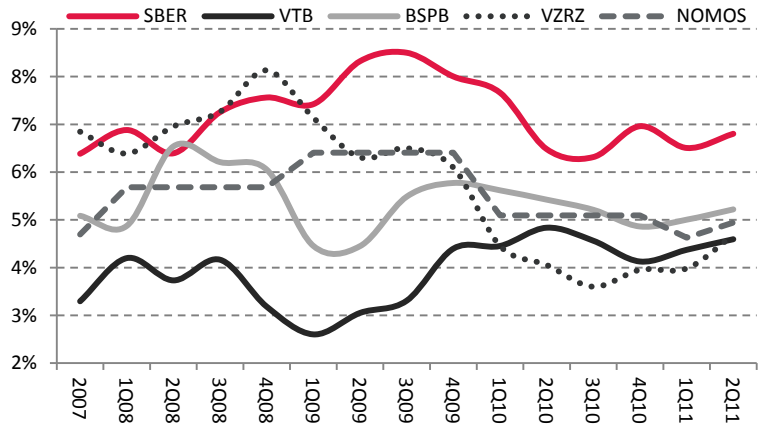
Figure 50: Cost efficiency – the picture remains the same



Source: IFRS financials, Aton estimates

The final aspect we would like to explore is deals with interest spreads. Because the dynamics of net interest margin are similar to those for net interest spread (NIS, defined as the average yield on assets less the average cost of liabilities) and NIS is a more illustrative concept, we prefer to use NIS when analysing interest spreads for financial institutions.

Figure 51: NIS – Sberbank remains the leader



Source: IFRS financials, Aton estimates

Sberbank retains its leading position in terms of NIS: it is close to 7% today and has not fallen below 6% since YE07. On the contrary, Sberbank managed to widen NIS to an impressive 8.5% in late 2009. **VZRZ**, which shared first place with Sberbank before the crisis, failed to retain its position and joined the cohort of other banks with NIS around 5%. VZRZ demonstrated the largest fall in NIS since 1H08 though we believe the bank's profitability trend is heading northeast. The most recent financial results from VZRZ bolster our view. **VTB** demonstrated the largest widening of the spread (+52 bpts) but the potential for further widening is limited, in our view, because of its increasing focus on investment banking and the relatively limited growth potential of its SEBPT return. On the other hand, VTB will be consolidating **BoM** in its financials which will make the picture gloomier in many respects, including profitability.

Our key conclusions regarding earnings and profitability are as follows:

- **Sberbank** is the best prepared to withstand a crisis from the point of view of profitability. Its core business generates solid margins and strong return on equity which provides a good cushion against market risk and credit-related losses. In addition Sberbank does not rely on non-recurring sources of income such as trading in securities and FX, which is positive in our view.
- **VTB** demonstrates the opposite case. Russia's second-largest bank, it has the least efficient commercial banking business and relies heavily on non-recurring investment banking operations which tend to depress its long-term profitability and reduce the quality of earnings.
- We believe that **BSPB** is the second-best prepared due to the high efficiency of its core business, its thin cost structure and lower reliance on NRI.
- **VZRZ** suffers from depressed RoE due to high operating costs, which drive it into fourth place. We believe that VZRZ can rise in the rankings if it supports growth in SEBPT return through tighter cost control, supports a widening of NIS and improves its asset quality to alleviate its provisioning burden.
- Based on the scarce historical data available for **NOMOS** we believe it should occupy third place. The bank's core operations are not particularly effective (although its non-core business is reasonably profitable) and it follows a relaxed provisioning policy. At the same time, we have concerns about the longer-term sustainability of NRI return, while the long-run effect of BKM's consolidation on joint SEBPT return has yet to be seen.

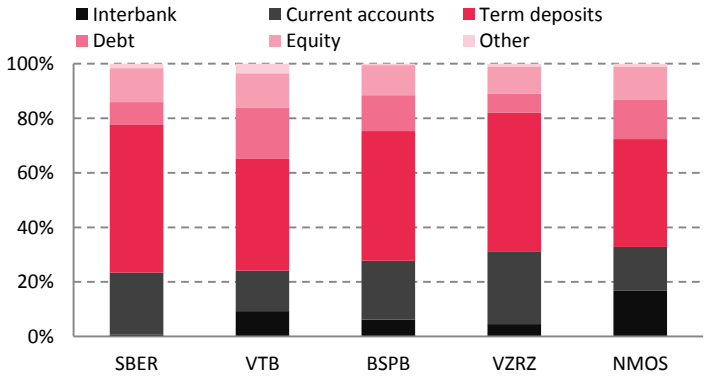
Liquidity

We now consider the last quantitative red flag identified at sector level – liquidity. Much like capitalisation, liquidity receives particularly close attention from investors in tough times. In any crisis, customers withdraw their funds, debt markets are closed and interbank facilities are unavailable. Therefore, a prudent bank keeps enough liquidity on hand to meet withdrawals, service debt, continue operations and fuel growth. Hence, when analysing the 'crisis-readiness' of a bank from the liquidity standpoint both sides of the balance sheet matter – the volume of liquid/quasi-liquid assets that are immediately available and the extent to which its funding structure is prone to withdrawals.

Funding structure

We see interbank funding as the most risky in the current pre-crisis conditions because this source can vanish so quickly in hard times. We have already witnessed a certain amount of tension in the interbank market recently. Another point of concern is current accounts. This kind of funding is positive in normal times because it is nearly free but it becomes highly volatile and can be withdrawn quickly when the situation deteriorates. We would reiterate that under the Russian Civil Code all retail deposits and a certain proportion of corporate deposits can be withdrawn in full at the first notice, even if they are classified and treated as term deposits (we note that overall, term deposits tend to be much stickier than true on-demand deposits).

Figure 52: Funding structures, 1H11



Source: IFRS financials, Aton estimates

Regarding particular banks, we draw attention to the following issues:

- **Sberbank**'s funding structure appears to be the most balanced, in our view. The share of interbank funding is minimal (1%) while the share of current accounts is 23%, most of which contain the funds of state-owned companies or loyal private firms. Term deposits come predominantly from individuals and though they are *de facto* on-demand this is not a problem in the case of Sberbank, in our view. This is because Sberbank boasts the highest brand recognition and the strongest loyalty and trust from individuals (as revealed by numerous sociological polls, e.g. those conducted by ROMIR and NAFI). Sberbank's debt maturities are predominantly long term and the associated risks are quite low, in our view.
- **VTB**'s funding mix is slightly more risky, in our view. Funding from the interbank market accounts for 9% of total assets while debt funds account for 19%. Public debt is long term but the group faces maturities and interest payments of around $3bn, as well as put option execution dates on six bonds with a face value of $1.6bn, in 2012. In the worst case this would imply an outflow of over 26% of liquid assets. Finally, the share of term deposits is lower than in the case of Sberbank.

- **BSPB's** profile is similar to VTB's: significant interbank and debt funding (19% jointly) and a higher skew towards current deposits.
- We believe **VZRZ**'s funding structure is the second-most stable after Sberbank. Its position is slightly worse as VZRZ relies more on interbank funding and has a larger share of assets financed by current accounts, both of which are unstable. At the same time more than half of its assets are financed by term deposits which are less prone to withdrawals during a crisis.
- The funding mix of **NOMOS** is the most fragile, in our view. The group relies too heavily on interbank (17%) and has the lowest share of funding coming from term deposits (only 40%). Furthermore, the bank was active in financing its growth via debt (14%) which brings significant risks. In 2012, NOMOS will face the maturity of its $200mn NOMOS 12 eurobond, interest payments of $124mn and put option execution dates on three rouble bonds totalling RUB15bn. In the worst case this could mean an outflow of over 32% of all highly liquid assets in 1H11.

Liquidity cushion

A bank's liquidity cushion is comprised of highly liquid assets (cash and equivalents on hand and deposited with the CBR and other banks) and quasi-liquid assets which can be converted into cash fairly quickly. The latter is represented by the bank's securities portfolio.

Figure 53: Liquidity ratios, 1H11 (% of total assets)

	SBER	VTB	BSPB	VZRZ	NOMOS	Average
Highly liquid assets	11%	12%	7%	18%	14%	12%
Highly and quasi-liquid assets	28%	25%	26%	26%	28%	27%

Source: IFRS financials, Aton estimates

All five banks have a very similar joint share of highly and quasi-liquid assets in total assets at about 27%. However, things look vastly different if we exclude securities and consider only highly liquid assets. Of course, large holdings of securities are positive for the liquidity cushion, but as noted before, when it becomes necessary to liquidate them a bank might be forced to accept huge discounts. Among the five traded banks, **BSPB** has the lowest liquid assets ratio (7%) which signals the potential for liquidity problems. At the other end is **VZRZ** with 18%. This is in line with its conservative risk-management policy which pushed it to maintain more liquid assets even at the expense of having more idle assets and lower profitability. The other three banks have liquidity ratios close to the average and we see no particular risks in their case. However, we would warn investors that for **NOMOS** the liquid asset ratio is more informative because of the lower liquidity of its securities portfolio.

Deposit coverage

Now that we know the risks associated with the funding mix and the size of the liquid and quasi-liquid cushions, we can compare them. We start with deposit coverage because a run on deposits is a significant risk in Russia due to the public's low trust in banks and the early withdrawal option set forth in the Civil Code.

Figure 54: Deposit coverage ratios, 1H11

	SBER	VTB	BSPB	VZRZ	NOMOS	Average
Liquid assets/total deposits	14%	18%	9%	21%	19%	16%
Quasi-liquid assets/total deposits	36%	39%	34%	31%	39%	36%
Liquid assets/retail deposits	20%	65%	27%	36%	63%	42%
Liquid assets/short deposits*	55%	61%	45%	57%	43%	52%

*Short is defined as a contractual maturity of less than 30 days

Source: IFRS financials, Aton estimates

When examining the liquidity coverage of total deposits (i.e. corporate and retail deposits and interbank borrowing) we can see that the banks do not differ much if we use the aggregate liquidity cushion. However, if we include only highly liquid assets the picture changes considerably. As before, **BSPB** can cover only 9% of total deposits immediately, which exposes it to significant risks in case of deposit flight. As before, **VZRZ** looks to be the safest in terms of liquid asset deposit coverage. The highest propensity to withdraw is usually exhibited by retail depositors, who react acutely and almost instantaneously to negative news or rumours about a bank in crisis times. This is why we decided to look at retail deposit coverage separately. The rule of thumb, which dates back to the early 1990s, says that a typical Russian bank should have enough highly liquid assets to withstand a run by one-third of retail depositors in a crisis. There are only two banks which fail to comply with this rule – **BSPB** and **Sberbank**. BSPB is close to the rule-of-thumb threshold of 33% and the potential liquidity risk should only materialise in case of a truly massive run. For Sberbank, the risk of a retail deposit run is minimal, in our view, because of the public's very high level of trust in the state-owned bank. In fact Sberbank is the last bank in Russia we would expect to experience a massive deposit run.

Interbank funding

Another risk area is interbank funding. When a crisis comes interbank funding becomes seriously constrained or even totally unavailable but banks must still honour their own interbank obligations. Therefore, banks which rely on interbank funding too heavily, i.e. those which are deep net borrowers, are likely to find themselves in trouble in a crisis. Below we produce a table summarising the net interbank position of the five banks.

Figure 55: Net interbank assets (RUBmn)

	SBER	VTB	BSPB	VZRZ	NOMOS
Interbank assets*	410,048	383,000	8,585	18,192	47,267
Interbank liabilities	63,252	436,900	18,043	7,865	95,702
Net interbank position	346,796	-53,900	-9,459	10,327	-48,435
as % of assets	3.8%	-1.1%	-3.2%	5.9%	-8.5%
as % of equity	31%	-9%	-29%	59%	-70%
as % of cash**	59%	-30%	-130%	83%	-201%

*All placements with other banks excluding the CBR
** Readily-available cash and equivalents including those placed with the CBR

Source: IFRS financials, Aton estimates

The table shows that VTB, BSPB and NOMOS are net borrowers on the interbank market. **VTB**'s interbank funding gap looks manageable (just 1.1% of assets), while **BSPB** and especially **NOMOS** are at risk. BSPB's gap amounts to 3.3% of assets or 1.3x its readily-available cash and equivalents (C&E). In terms of absolute size the excess over C&E is insignificant for BSPB and can be covered through the REPO of less than one-fifth of its securities portfolio. For NOMOS the situation is much more complicated. The gap is 8.5% of assets or 2.0x its readily-available C&E and significant in absolute size. In order to cover this via REPO with the CBR, the bank would have to use 74% of its securities portfolio (excluding promissory notes that are illiquid or not eligible for REPO). This could be very difficult to accomplish in crisis times, in our view.

Asset-liability mismatches

We see one more factor linked to liquidity which is quite separate on its own – asset-liability mismatches (ALM). If a bank's assets and liabilities do not match in terms of currencies and maturities, its stability could be at serious risk. This issue is especially important in crisis times. Next we analyse the ALMs of the five traded banks in terms of currencies and maturities.

In our view, **Sberbank** and **VZRZ** exhibit the least risky **currency ALMs** among the five traded peers. Both demonstrate noteworthy positive gaps in roubles (the operating currency of the banks) and easily manageable negative gaps in dollars and euros on a non-hedged basis.

Figure 56: Currency ALMs, 1H11 (RUBmn)

	Net monetary assets – without hedge				With hedge			
	RUB	USD	EUR	Other	RUB	USD	EUR	Other
Sberbank	511,741	199,689	-43,377	665	630,433	61,818	-16,178	-5,458
VTB*	n/a	n/a	n/a	n/a	n/a	-8,200	-2,400	35,700
BSPB	20,293	5,757	-10,399	-118	15,052	-193	1,004	35
VZRZ	10,746	-567	-146	18	10,746	-477	-146	18
NOMOS	-9,267	78,734	-9,747	-13,480	56,112	-778	-1,747	-7,347
	as % of equity							
Sberbank	45%	18%	-4%	0%	56%	5%	-1%	0%
VTB	n/a	n/a	n/a	n/a	n/a	-1%	0%	6%
BSPB	63%	18%	-32%	0%	47%	-1%	3%	0%
VZRZ	61%	-3%	-1%	0%	61%	-3%	-1%	0%
NOMOS	-13%	113%	-14%	-19%	81%	-1%	-3%	-11%

*YE10

Source: IFRS financials, Aton estimates

BSPB demonstrates wider gaps in dollars and euros although we think these are manageable. **NOMOS** shows a negative gap in roubles (its operating currency) of 13%, which we find worrisome. The bank also has a positive gap in dollars exceeding 1.1x its capital on a non-hedged basis. The picture looks more balanced when hedges are taken into account. **VTB** is the only bank that does not disclose ALM gaps on a non-hedged basis, but its hedged position looks balanced and strong (except for its net rouble position which is not disclosed).

With that said, we have strong concerns regarding the fairness of hedge recognition in the banks' financial statements because the associated accounting standard is too vague and can be manipulated by management. Also, there is a problem regarding the quality of the hedge, i.e. the counterparty of an agent who provides insurance, especially if it is a distressed European bank.

We now turn to the more interesting issue of **maturity ALM**. This arises when a bank funds long assets with short money, which is quite common among Russian banks as we will see later. In their group-level IFRS financials the banks disclose the following maturity ALMs.

Figure 57: IFRS maturity ALM, 1H11 (as % of assets)

	SBER	VTB*	BSPB	VZRZ	NMOS
Demand and less than one month	5%	-11%	-5%	-3%	-3%
1-6 months	-1%	-2%	-8%	5%	-4%
6-12 months	5%	-3%	2%	5%	1%
Over 12 months	3%	16%	23%	0%	19%

*YE10

Source: IFRS financials, Aton estimates

As before, **Sberbank** looks the strongest in terms of maturity ALM. It is the only bank among the five to have a positive gap for maturities below one month and one of two banks with a positive cumulative gap for maturities below one year. **VZRZ** also has more short-term assets than short-term liabilities but it looks riskier than Sberbank because of the gap in maturities below one month. An even riskier picture is provided by **NOMOS** which has more liabilities than assets for the next six months because its assets are predominantly long-term while liabilities are short-term. The same is true to an even greater extent for **BSPB** which has a negative gap of 13% for maturities below six months. The most imbalanced picture is shown by **VTB**. It has

the largest gap for maturities below 30 days (11% of assets) and for maturities below one year (16% of assets, i.e. 1.2x capital). VTB is exposed to significant maturity ALM risk and potential problems with liquidity could be serious. Of course, DIA's loan should alleviate the situation, but we remain concerned.

Summing up, we believe that:

- **Sberbank** is the strongest of the five in terms of its liquidity profile. It has the most balanced funding structure and solid liquidity cushion. It is also the least exposed to the risk of bank runs, which outweighs its below-average deposit coverage metrics. Finally, it is a net lender on the interbank market and exhibits the most balanced asset-liability structure in terms of currencies and maturities.
- **VZRZ** is the second-best prepared for a crisis with a stable funding mix, strong liquidity cushion (which looks sufficient to withstand a potential bank run), a net lender position on the interbank market and small ALM gaps.

The other three banks fall into the high-risk category.

- **BSPB** is under high risk due to its limited cushion of highly liquid assets, imbalanced interbank market position and material ALMs, especially in terms of maturity.
- **NOMOS's** liquidity profile and funding mix look very fragile due to its highly imbalanced interbank position and significant currency and maturity ALMs.
- For **VTB** the most serious drawback is its deeply negative ALM for all maturities below one year. This weakness is partially compensated by a relatively stable funding base, manageable interbank position and good currency balance as well as DIA's loan which is not yet consolidated in its financials.

Qualitative Factors – Corporate Governance and State Support

In addition to the quantitative factors discussed above, qualitative issues play an equally or sometimes even more important role in determining a bank's ability to withstand the impact of a crisis. These factors also play an important role in determining a bank's attractiveness for investors. In this section we discuss two key qualitative issues: corporate governance and state support.

Corporate governance

Corporate governance (CG) has always been the Achilles heel of Russian companies and banks are no exception. This is an important issue because deficiencies in CG systems have caused many defaults worldwide. It becomes even more important on the verge of a crisis because history shows that corporate governance standards tend to deteriorate when a firm faces harsh operating conditions. We believe that the shareholders of a bank which demonstrates poor CG standards today are facing a double risk if and when we face recession.

To assess the quality of corporate governance standards we followed the methodology developed by Standard & Poor's. This was first known as the Corporate Governance Score and later transformed into GAMMA. It employs an in-depth, multifaceted analytical and scoring model which rests on four pillars (each of which is further broken down into three components):

- ownership structure and external influence
- shareholder rights and stakeholder relations
- transparency, disclosure and audit
- board structure and effectiveness

S&P's methodology presumes the extensive use of non-public information which is collected through a series of interviews with top management and board members and by studying confidential internal documents. As external analysts we do not have access to privileged data and we were forced to use only public information, including materials published by the banks and found in other trusted sources. The proper discussion of corporate governance presumes a very detailed analysis of many aspects of a bank's operations and its full description deserves a separate, voluminous report. To maintain our focus on the key theme of this report – readiness for the next crisis – we omitted a lengthy discussion and limited ourselves to a summary table with a brief discussion of the most important topics.

Figure 58: Corporate governance scores (10 = highest score)

	Weight	SBER	VTB	BSPB	VZRZ	NOMOS*
Ownership structure and external influences	**30%**	**6.1**	**5.6**	**6.4**	**7.2**	**7.1**
Transparency of ownership structure		8.0	8.0	8.5	7.0	8.5
Concentration and influence of ownership		6.0	5.0	5.5	7.0	6.5
Influence of external stakeholders		5.0	5.0	6.5	7.5	7.0
Shareholder rights and stakeholder relations	**15%**	**6.8**	**6.3**	**6.9**	**6.9**	**6.8**
Shareholder meeting and voting procedures		6.5	6.5	6.5	6.5	6.5
Ownership rights and takeover defences		7.0	6.0	7.5	7.5	7.0
Shareholder relations		7.0	7.0	6.0	6.0	7.0
Transparency, disclosure and audit	**20%**	**6.9**	**5.1**	**6.3**	**6.5**	**5.9**
Content of public disclosures		7.5	5.5	6.5	6.5	7.0
Timing of and access to public disclosures		7.5	6.5	6.5	6.5	7.5
Audit process		6.0	4.0	6.0	6.5	4.0
Board structure and effectiveness	**35%**	**6.1**	**4.3**	**5.2**	**6.2**	**7.0**
Board structure and independence		5.5	5.0	4.0	5.0	7.0
Role and effectiveness of the board		6.5	4.0	5.5	7.0	7.0
Director and senior executive compensation		6.5	3.5	7.0	7.0	7.0
Corporate governance score		**6.4**	**5.1**	**6.0**	**6.7**	**6.8**

*Excluding BKM

Source: S&P, Banks' data, Aton estimates

Our analysis based on public information shows that CG standards are moderate across the board with significant room for improvement. Even the banks with the highest scores, VZRZ and NOMOS, fall into the category characterised by "weaknesses in several of the major areas of governance analysis", according to S&P's guidelines. Sberbank and BSPB are rated a notch lower and fall into the same category. In our view, VTB has the weakest corporate governance profile for a number of good reasons which we explain later in this report.

VZRZ has the most balanced governance profile with none of the sub-scores falling below 5.0, which we deem the red-flag threshold. The bank has a relatively transparent ownership structure, balanced influence of shareholders and stakeholders and reasonably good information disclosure. It demonstrates solid board processes thanks to the presence of shareholders on the board. However, we have concerns regarding the board's composition – certain independent directors appear to have a low competence level in relation to the banking business.

BSPB has exhibited good ownership disclosure as well. However, the balance of influence seems to be poor because the bank is owed by managers and the control exercised by the board of directors – which should represent the interests of all shareholders, including minorities – is inadequate, in our view. In general we think that BSPB's board plays a nominal rubber-stamping role as judged by the low average competence of its non-executive directors and the weak structure and composition of its committees. In all other respects we believe that BSPB is not materially different from the average level.

For **Sberbank** we point to strengths such as good ownership disclosure and the high level of information transparency. At the same time the concentration of ownership is high (the CBR owns more than 60%) and the influence of this key shareholder and other stakeholders is disproportional. As a state-owned entity Sberbank has a strong political component in its decision-making and on certain important occasions the political agenda can trump economic rationality. This imbalance is not compensated by adequate checks-and-balances of the board's processes. The board is dominated by state officials and the independence of certain non-executive directors is questionable because they are elected by the government's votes. Furthermore, their actual involvement is often limited as they sit on a large number of other boards. As far as we understand, the board's audit committee seems to be playing a rather nominal role and its focus is on the formal control of cash flows in state-owned enterprises such as Sberbank, rather than on fundamental issues like the quality of financial reporting and internal controls.

In the case of **NOMOS** alone (i.e. without BKM) we believe it is less exposed to imbalanced influence of shareholders as it is dominated by two main forces: IST Group (which owns more than 50%) and PPF Group (which holds a blocking stake). We believe the interests of PPF, which acts more as a financial investor, coincide with those of minority shareholders since both groups are interested in maximising the market value of the bank. However, there is a chance that PPF might follow the example of ex-shareholder Roman Korbachka and exit the bank's capital in the next year or so. If PPF leaves the balance of decision-making power would tilt towards IST Group, the strategic owner. We believe IST Group might pursue goals other than maximising the bank's market value and ensuring that shareholder value is fairly distributed. Nevertheless, the balance seems quite stable today due to good board processes. The board's composition is balanced, director competence is high and the board's capacity to control and direct management seems to be strong. Our key concerns for NOMOS include the audit process and the quality of its financial statements. Among the associated red flags we point to:

- NOMOS has not changed its auditor, Deloitte, in more than 10 years. This practice is discouraged because experience shows that over a long period friendships can form with clients, casting doubts on the auditor's independence. One of the alarm signals here is that Deloitte has always issued unqualified opinions on NOMOS's financial statements.
- Pre-IPO financials for FY10, which were published a month earlier than usual (March vs April-May), reflected dramatic improvements in the size and quality of the bank. Although NOMOS's capital and assets were reportedly growing unusually fast in the year preceding the IPO (+41% vs -3% a year before for assets; +28% vs +3% for equity; all RAS-based), the bank followed a relaxed provisioning policy in its FY10 IFRS financials. We believe the scope for under-provisioning could be severe.

To illustrate our concerns we present the worrying example of **NOMOS's loan to real estate developer PIK**. In early Aug 2011, media reports suggested that NOMOS had engaged in pre-IPO window-dressing. The claims were related to earlier reports concerning NOMOS's loan to PIK.

- NOMOS acquired VEB's RUB7.0bn loan to PIK in Dec 2009, just prior to its maturity. PIK was having serious financial problems and its ability to service its debt was in question by the market. For NOMOS – a commercial bank which never specialised in distressed debt – this was a bold move, in our view.
- The loan was not repaid on time. NOMOS immediately sued PIK and the case lasted until Feb 2011, around 14 months in total. News on the trial appeared quite regularly in the press and NOMOS seemed to be experiencing significant problems in trying to seize the loan's collateral (a 12.5% stake in PIK owned by one of its founders).

- According to NOMOS, while it was suing PIK, the latter serviced the debt by paying the interest although the principal was not redeemed on maturity. More interestingly, NOMOS (as well as its auditors) considered regular interest payments as sufficient grounds to classify the loan as performing in its FY10 financials.
- In Feb 2011, several months before NOMOS's IPO, PIK redeemed the loan in full and NOMOS immediately withdrew its legal claims. According to press reports, the loan was partially refinanced by Otkritie Bank.
- In Apr 2011, 10 days after the IPO, NOMOS bought the RUB4.0bn loan to PIK back from Otkritie. NOMOS says this occurred after PIK approached NOMOS and asked to refinance at a lower rate.

There are several issues here that we find perturbing:

- Despite more than a year of litigation with PIK and considerable problems associated with the legal case, the bank created zero provisions against the PIK loan, both before and after the IPO date.
- Moreover, NOMOS apparently decided that PIK was a good client just two months after the end of litigation.
- NOMOS agreed to refinance the loan to PIK just days after the IPO and refinanced it via a loan from Otkritie.
- One of the board members at KMB, a NOMOS subsidiary, is also a board member at PIK.

On its own, the loan to PIK is of little importance for NOMOS (RUB4bn, or 1.3% of the joint NOMOS/BKM gross loan book), but it casts doubts on the quality of the bank's other loans and the adequacy of its provisioning.

We now turn to **VTB**, which we believe has the lowest corporate governance standards among the five traded banks. As with Sberbank, ownership concentration is high and the political influence of the key shareholder is excessive. VTB's board seems to have more independent directors than Sberbank, but given their close affiliation with government bodies or top politicians their independence is doubtful, in our view. Similarly to Sberbank, committees at VTB play a rather formal role. For example, the audit committee does not include any professional auditors while two of its members are state officials who usually demonstrate low involvement and have questionable fiduciary responsibilities. In general, we believe the effectiveness of VTB's board is low and its ability to force management to equally represent the interests of all shareholders is weak. In addition, we are concerned about the audit process and issues related to the compensation of senior executives. Two stories that illustrate these issues are presented below.

VTB and the accounting treatment of BoM. After examining the accounting treatment of BoM in VTB's financials, we concluded that VTB applied accounting principles in an inconsistent and selective manner in order to window-dress its accounts.

In Feb 2011, VTB acquired a 46% stake in BoM. In May it gained a majority on BoM's board of directors and appointed VTB senior executives as the top managers of BoM. IFRS defines this kind of relationship as control and requires the consolidation of the subsidiary into the accounts of the parent company. This is what VTB did when it consolidated Transcreditbank (where it had a control relationship similar to the case of BoM) in its FY10 financials. However, for BoM it followed a different logic. We think this inconsistency can be explained in the following way:

- If VTB had recognised all of the losses in BoM's FY10 financials (around RUB250bn in provisions against RUB335bn in problem loans) and consolidated them, it would have ruined its own balance sheet and triggered the early

redemption of the outstanding public debt of both banks (with an aggregate face value of several billion dollars).

- Instead, VTB decided to recognise the losses related to the BoM acquisition in stages, spreading them out over several periods. A certain proportion of provisions (RUB105bn) was backdated to FY10 while the remainder should be recognised in BoM's 3Q11 financials after it receives a RUB295bn loan from DIA. If we decline to question this unusual accounting practice, the combined FY10 income statement for VTB and BoM would look like this:

Figure 59: Combined income statement, FY10 (RUBmn)

	VTB	BoM	VTB+BoM
Core revenues (NII + F&C)	**195,800**	**45,148**	**240,948**
Net interest income	171,100	39,660	210,760
Net fee and commission income	24,700	5,488	30,188
Operating expenses	-95,100	-17,850	-112,950
SEBPT	**100,700**	**27,299**	**127,999**
NRI	20,600	-9,710	10,890
EBPT	**121,300**	**17,589**	**138,889**
Provisioning	-50,200	-104,957	-155,157
Pre-tax profit	**71,100**	**-87,368**	**-16,268**
Income tax	-16,300	19,123	2,823
Net income	**54,800**	**-68,245**	**-13,445**

Source: IFRS financials, Aton estimates

This reveals that the back-dated consolidation of only a portion of BoM's credit losses would have turned VTB's FY10 profit of RUB55bn into a loss of RUB13bn.

- If VTB had decided not to consolidate BoM in its statements, it should have revalued its investment in BoM's shares in accordance with IFRS. The stake in BoM was recognised as an 'investment in associates' so its carrying value should be checked in VTB's 1H11 financials. The carrying value was the price VTB paid for the 46.5% stake – RUB 93bn, which corresponds to a 1.7x P/B valuation based on BoM's equity in 9M10. By the time VTB published its 1H11 financials, BoM had already released its FY10 results where its book value stood at RUB40bn (down from RUB117bn in 9M10). Hence, the value of the BoM stake needed to be revaluated in VTB's financials. We estimate the minimum revaluation at RUB36bn (calculated as 46.5% multiplied by the fall in BoM's book value, or RUB77bn), ignoring any write-downs of goodwill. This would have reduced VTB's 1H11 net income to RUB18bn vs the RUB54bn posted by the bank.

The next step will be the consolidation of BoM (because VTB now owns more than 50%+1 share) with losses accruing to 2011 covered by an IFRS 39-based paper profit from 'fair recognition' of the RUB295bn loan from DIA. The remaining RUB105bn in provisions recognised in BoM's FY10 financials will be consolidated in VTB's past financials which we suspect will be overlooked by the market. In the end, we found that accounting tricks made the BoM acquisition look better than the reality.

The second story deals with **executive compensation at VTB**. We believe that corporate governance standards related to executive compensation and the board's ability to control management are very weak at VTB. This conclusion is based on our analysis of transactions disclosed in the notes of the bank's IFRS financials. VTB used to own 100% of Cyprus-based Russian Commercial Bank (RCB), but in 1Q09 RCB conducted an additional share issue and VTB's stake contracted to 60%. The remaining 40% was acquired by a private company owned by "the key management personnel of the Group", as disclosed in the notes to VTB Group's 1Q09 IFRS statement. The price of the stake reached $39mn implying RCB's valuation at 0.8x

P/B (based on its book value at YE08), which could be considered high given that the crisis was underway. However, this investment turned out to be very profitable. In Sep 2009, RCB declared interim dividends of $130mn of which the non-controlling shareholders (i.e. VTB Group's top managers) received $52mn. In July 2011 RCB declared an interim dividend of $100mn, of which minorities received $40mn. The IRR on this investment is close to 120%, on our calculations. Furthermore, the book value of RCB increased to $392mn by YE10, and thus the value of the 40% stake increased 4.0x to $157mn (using 1.0x P/B) in less than three years.

To sum up, the selective and inconsistent application of accounting standards and weak control over management are the key reasons for VTB's low scores in the components related to audit and board effectiveness. This drove its overall score down to 5.1. **In general, we believe that VTB's decision-making process is frequently dominated by the political agenda with the task of creating shareholder value taking second place**. Throughout the last cycle (YE07-1H11) VTB's net profit, which is a proxy for shareholder value created, was very low. If we consolidate BoM's results, we find that VTB in fact destroyed shareholder value.

Figure 60: Across-the-cycle shareholder value, YE07-1H11 (RUBmn)

	SBER	VTB	BSPB	VZRZ	NMOS
Cumulative net income	481,848	53,400	12,024	5,647	24,372
Equity, YE07	637,197	405,935	15,005	11,890	24,482
Annualised RoE	22%	4%	25%	14%	28%

Source: IFRS financials, Aton estimates

VTB's cumulative net profit of RUB53.4bn is just 4.4x higher than the RUB12.0bn profit generated by BSPB, a bank whose equity was 27 times smaller than VTB's at YE07. In line with our previous findings VTB's annualised RoE shows that it is the least efficient in creating shareholder value among peers. Another result worth mentioning is that NOMOS appears to be the leader with 28% annualised RoE. However, this result is due to its under-provisioning in 2010 and if NOMOS had used a credit charge of 5.0% in 2010 (it would be below 6.4% in 2009), annualised RoE would have fallen to 22%. If it used the same credit charge as in 2009, annualised RoE would fall to 18%.

State support

The issues we discussed above determine the standalone crisis-readiness of a bank, i.e. how strong it is without government support. In Russia the government plays a very important and special role in the sector and any investment thesis which misses this factor is incomplete and perhaps even misleading.

Among our five banks, we believe that **Sberbank** and **VTB** enjoy the highest probability of state support in case of a crisis. This comes down to four reasons, in our view. The first and most evident is their **status as state-owned banks**. The government as a majority shareholder and key decision-maker has a strong balance sheet and is likely to bail out the banks that it owns. The privatisation of stakes in Sberbank and VTB is unlikely to reduce the probability of support, in our view, because the state will remain a controlling shareholder in both cases. The second reason is **systemic importance** – Sberbank and VTB are the largest banks in Russia and the default of one of them would have near-catastrophic consequences for the entire sector. More importantly, perturbations in the banking sector would spill over into the general economy, which is definitely not what the government wants. Apart from the harsh economic consequences, the default of one of these banks would have **reputational consequences**, which we deem to be the third reason. The failure of one of these banks would undermine the reputation of Russia's banking sector and the country as a whole, with dire consequences for investor sentiment. Past mistakes have taught the government that it takes a very long time to restore reputation and

we believe it would prefer to spend money on a bailout than spend years on regaining investor confidence. However, history suggests that the government cares only about its reputation among foreign investors. This is because foreign investors have far more funds to invest in Russia and the government cannot use its administrative power to persuade them to change their views, as it can in the case of domestic investors. Finally, last but not least is the strong **political lobby** of both banks which rests on the robust political connections of top managers and board members. The first three factors secure state support while the political lobby helps to determine the size and terms of this support, in our view. The power of this asset should not be underestimated in any market circumstances, both good and bad.

For **BSPB**, **VZRZ** and **NOMOS** the first two factors are not applicable because all three are privately owned and none of them is systemically important. Nevertheless, the other two factors are still valid though to a lesser extent. Regarding the reputational issue, all three banks have publicly traded instruments – equity (BSPB and VZRZ have a domestic listing and NOMOS has an international listing) and debt (BSPB and NOMOS have outstanding domestic bonds and eurobonds) – and many foreign investors own them. This provides the groundwork for potential government support, in our view. However, the ground may not be solid as suggested by the default of IIB, one of Russia's top-30 banks at the time, and FLC, a leasing company controlled by a state-owned aviation holding. Both cases resonated strongly in the markets but the government did not step in to protect its reputation. The political lobby factor is much stronger for BSPB, VZRZ and NOMOS. This is because all three enjoy influential political patrons: BSPB has a close relationship with St Petersburg's former governor and current Federation Council speaker Valentina Matvienko; VZRZ – with ex-finance minister Alexey Kudrin; and NOMOS – with Prime Minister Vladimir Putin through his reported close friend Alexander Nesis, the owner of IST Group. We believe the political lobbying factor is the strongest for BSPB and NOMOS while it is slightly weaker for VZRZ because Kudrin was forced to leave office in October.

Summary and Crisis-Readiness Scores

In this section we summarise our findings by assigning a **crisis-readiness score** (CRS) to each bank. CRS is useful for two reasons: it allows us to rank the banks in different dimensions and it serves as an important input for our cost of equity model.

Figure 61: Crisis-readiness scores

	Weight	SBER	VTB	BSPB	VZRZ	NOMOS
Asset quality	**9**	**7.5**	**5.1**	**5.9**	**7.3**	**5.8**
Ability to withstand doomsday		8.0	5.0	4.7	7.3	5.8
Market risk		7.0	6.5	6.5	9.5	6.0
Loan quality		7.0	4.8	6.3	6.5	5.0
Non-core assets		9.0	4.0	7.0	6.0	8.5
Capitalisation	**8**	**6.9**	**5.7**	**6.3**	**5.7**	**6.7**
Capital adequacy		8.3	7.3	5.5	6.3	6.3
Capital loss-absorption capacity		5.5	4.0	7.0	5.0	7.0
Profitability and efficiency	**6**	**7.8**	**6.0**	**7.7**	**5.5**	**6.9**
Profitability and RoE quality		8.3	5.9	7.7	5.9	7.2
Cost efficiency		6.0	6.0	8.0	4.0	6.0
Spread and margins		9.0	6.5	7.0	6.5	7.0
Liquidity	**10**	**7.6**	**6.8**	**5.9**	**8.3**	**6.0**
Quality of funding structure		8.0	7.0	7.0	7.5	6.0
Liquidity cushion		6.0	6.5	5.0	9.0	7.0
Deposit coverage		7.0	8.0	6.0	8.5	8.0
Interbank position		8.0	7.0	6.0	8.5	3.0
Asset-liability mismatch		8.8	6.0	5.5	8.0	6.8
CRS based on financial metrics		**7.4**	**5.9**	**6.3**	**6.9**	**6.3**
Corporate governance score	**7**	**6.4**	**5.1**	**6.0**	**6.7**	**6.8**
Standalone CRS		**7.2**	**5.8**	**6.3**	**6.8**	**6.4**
Government support factor		2.5	3.0	1.0	0.5	1.0
Overall CRS		**9.7**	**8.8**	**7.3**	**7.3**	**7.4**

Source: Aton estimates

We believe that **Sberbank** is the best prepared for a new crisis, both on a standalone basis and when taking government support into account. This is due to its above-average asset quality, good capitalisation, excellent profitability and decent liquidity. If we include the government support factor, the second-best prepared is **VTB**. However, VTB turns out to be the least prepared on a standalone basis due to its poor asset quality, low earnings quality and weak corporate governance standards.

Among privately owned banks **VZRZ** demonstrates the strongest liquidity profile, the safest asset quality and good corporate governance standards. However, its capital LAC, poor cost efficiency and low probability of state support outweigh these strengths and place it on par with the other two small-cap banks. Nonetheless, VZRZ does not exhibit weaknesses such as poor ability to withstand shocks (like **BSPB**) or a fragile interbank position (NOMOS). **NOMOS** seems to be on par with the other small-cap banks but its CRS does not take BKM into account. The overall crisis-readiness score for the combined NOMOS Group is likely to be the lowest among its peers.

Methodological Comment II – Three Heads are Better than Two

Before proceeding to the next chapter we would like to pause and discuss another issue related to bank analysis – the quality of multiples used for valuation.

P/E and P/B – Two Old Soldiers No Longer Ready for Battle

Investors tend to rely on two standard multiples – P/E and P/B – when analysing banks and picking banking stocks for their portfolios. This approach worked relatively well before the 2008 crisis but it has failed on many occasions thereafter. To a certain extent this is because the markets are now more focused on fundamentals while standard valuation ratios do not always reflect fundamental value. Below we discuss how these old soldiers can be trained to better reflect fundamentals.

Of the two ratios we particularly dislike P/E and feel it is not very useful for picking banking stocks today. We see three reasons for this:

- In crisis and post-crisis environments, banks invariably try to window-dress their financials by applying accounting standards in a selective manner. The most popular area for manipulation is provisioning policy. A bank can follow a prudent accounting policy which obliges it to reflect all potential credit losses and create adequate (i.e. high) loan loss reserves to provide a cushion against future losses. This kind of bank would have a net profit considerably lower than one which sets aside the minimum required LLR. Quite often the second category includes banks with traded equity or vested management options. By adjusting their provisioning policies these banks can beat market expectations, supporting growth in their stock price.
- Apart from inconsistent application of accounting standards, net income measurements can suffer from low quality of earnings. NRI has become a significant source of net income for many banks since the crisis. This makes net earnings more volatile and therefore less predictable for the market. Furthermore, it makes direct comparison of earnings across banks less meaningful. In our view, one dollar of net income coming from a solid interest-earning franchise and stable F&CI is worth more than a dollar coming from securities and FX trading. This is because the first dollar is recurring and is likely to be the same dollar tomorrow, while the second one is non-recurring and can easily turn into a two-dollar loss in a downswing.
- Finally, since the crisis it has not been uncommon to see forecast or reported negative net profit figures. This complicates comparisons between banks with negative P/E and those with positive P/E as a negative P/E ratio hold little meaning.

The drawbacks of the P/B ratio stem from the fact that equity is tied to net profit. Due to the inconsistent application of accounting rules for net income and generally low quality of earnings, the comparability and quality of book value are also low. At the same time, these drawbacks are less pronounced in the case of P/B.

Two New Friends

As outlined above, P/E has three drawbacks and we think the first one is the most serious. As we show further on, by designing a new multiple without these drawbacks we can obtain a better tool for comparing banks and picking banking shares.

We can change a multiple's denominator or numerator. Changing the former is not a good choice because there is no real alternative for market cap in the case of banks.

The concept of enterprise value, which is widely used for industrial companies, bears little meaning for banks because of the net debt definition. If we define gross debt as all interest-bearing liabilities (as logic prompts us) then net debt turns out to be a very strange and rather meaningless concept.

Nevertheless, there are two good candidates for the denominator – EBPT and SEBPT. As a measure of a bank's fundamental strength, EBPT does not have the 'provisioning window-dressing' drawback because it essentially ignores provisioning policy. Moreover, fewer banks have a negative EBPT, which simplifies comparisons across the board. At the same time, EBPT is still subject to the second drawback – recurring and non-recurring income are treated equally – because EBPT includes NRI. This can be corrected by using a SEBPT-based multiple, which is free of all the drawbacks of P/E, at least in theory.

A Real Data Test

We ran a series of real data tests to compare the old multiples, P/E and P/B, with our new multiples, P/EBPT and P/SEBPT. The goal was to discover which ratio does a better job in predicting returns for a long-term investor with a passive investment strategy. We excluded NOMOS from the test because of its short trading history (since Apr 2011).

Initially we constructed four portfolios, each based on the use of a different multiple. The first portfolio included stocks which were undervalued (i.e. traded at a discount to the median of the four banks) based on P/B. In a similar manner the other portfolios picked undervalued stocks based on P/E, P/EBPT and P/SEBPT. In each case we used the latest reported financials and the last stock price to calculate multiples and then picked undervalued stocks. For income statement figures (such as net income, EBPT and SEBPT) we used the last reported quarterly figure and annualised it, multiplying by four. We treated small-cap banks (BSPB and VZRZ) as undervalued if they traded at a discount to the four-bank median. For large-cap banks (Sberbank and VTB) we used 20% and 15% premiums to the median, respectively, to reflect their higher stock liquidity. There were also two approaches to weighting the stocks in portfolios – equal weights and proportional weights (more undervalued stocks received a larger weighting).

We then formed 13 sets of multiple-based portfolios at different points in time, from mid-1Q08 to mid-1Q11, and calculated their returns until the end of Sep 2011. Each quarter when new IFRS financials were released, the composition of each portfolio was rebalanced following the usual procedure (picking undervalued stocks based on the respective multiple). As a control group we used a 'monkey portfolio', i.e. the simplest portfolio consisting of all four stocks with identical weights regardless of their relative value. The annualised returns are produced below.

Figure 62: Equal weights*

	Portfolio incepted in												
	1Q08	**2Q08**	**3Q08**	**4Q08**	**1Q09**	**2Q09**	**3Q09**	**4Q09**	**1Q10**	**2Q10**	**3Q10**	**4Q10**	**1Q11**
P/B	**17%**	18%	**36%**	**155%**	258%	132%	95%	27%	15%	18%	19%	-25%	-68%
P/E	5%	6%	19%	118%	222%	80%	37%	11%	13%	15%	22%	-10%	**-37%**
P/EBPT	15%	**19%**	34%	153%	**282%**	**152%**	**97%**	**36%**	**24%**	**34%**	**40%**	**-7%**	-40%
P/SEBPT	11%	12%	26%	127%	238%	125%	70%	34%	22%	32%	38%	-10%	**-37%**
Monkey	4%	6%	17%	111%	199%	106%	70%	21%	10%	20%	22%	-19%	-54%

*The best performing multiple-based strategies are highlighted in bold

Source: Bloomberg, Aton estimates

Figure 63: Proportional weights*

	Portfolio incepted in												
	1Q08	**2Q08**	**3Q08**	**4Q08**	**1Q09**	**2Q09**	**3Q09**	**4Q09**	**1Q10**	**2Q10**	**3Q10**	**4Q10**	**1Q11**
P/B	**134%**	**198%**	**550%**	**748%**	**337%**	**214%**	48%	27%	25%	21%	-16%	-22%	-11%
P/E	9%	41%	266%	471%	148%	58%	11%	11%	9%	11%	-10%	-18%	**-10%**
P/EBPT	67%	120%	403%	670%	314%	163%	**52%**	**30%**	**32%**	**28%**	**-9%**	**-15%**	-11%
P/SEBPT	48%	98%	359%	618%	246%	120%	47%	25%	27%	23%	-11%	-19%	**-10%**
Monkey	6%	33%	240%	394%	182%	100%	19%	1%	8%	5%	-19%	-22%	-10%

*The best performing multiple-based strategies are highlighted in bold

Source: Bloomberg, Aton estimates

Our key takeaways include the following:

- P/B outperformed the other strategies for portfolios formed at pre-crisis maximums.
- P/B and P/EBPT seem to be the best instruments for picking stocks at the bottom. The former demonstrates better results in cases of proportional weighting, while the latter was best in cases of equal weighting.
- P/EBPT seems to have the highest prognostic power when a market rebound starts levelling off and enters the gradual recovery phase.
- On average P/SEBPT demonstrated the second-best results starting from late 2009, outperforming P/B.
- P/E has the weakest prognostic power – it demonstrated the best returns only once (portfolio formed in 1Q11) and shared first place with P/SEBPT.

To conclude, we believe that three multiples – P/EBPT, P/SEBPT and P/B – all have strong predictive powers regardless of the market phase. If we were to use only one, we would prefer P/EBPT, followed by P/SEBPT.

Sector Model

In this section we present our sector model which serves as the basis for producing our models for the individual banks. Along with other valuation techniques these models are then used to produce target prices and stock ratings.

Our experience shows that forecasting banks' performance at least one year ahead is always a questionable exercise which required very stable conditions and clear visibility on trends in the economy. In the current turbulent climate there are too many fast-moving parts and unpredictable swings against a background of fairly shaky economic fundamentals. This makes any forecast imprecise and unreliable today. Understanding these limitations, rather than forecasting, we decided to test the sector's and the banks' fundamentals against potentially highly demanding economic conditions. Regardless of whether a particular scenario is realised or not, this exercise at least offers some insight into the ability of the banking stocks to hold their value in an adverse environment. **Our model is less a prediction and more of an illustration**.

While many could argue that our dramatic scenario is far-fetched, we note that this is, perhaps, the only way to show where the fundamental value of the stocks would lie if the situation deteriorates, even if it does not deteriorate to the extent described in our banking sector model. Furthermore, we still believe that reality has a chance of coming close to our model.

Figure 64: Banking sector balance sheet (RUBmn)

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Cash and equivalents	2,209,700	4,146,800	3,390,200	3,575,200	2,713,161	2,887,131	2,953,823	3,032,820	3,116,205
Interbank loans	1,418,100	2,501,200	2,725,900	2,921,100	3,505,320	3,505,320	3,505,320	3,505,320	3,505,320
Securities	2,554,700	2,365,200	4,309,400	5,829,000	5,562,757	4,700,506	5,101,683	5,425,462	5,796,772
Loan portfolio, net	12,287,100	16,526,900	16,115,500	18,147,700	21,700,222	19,121,720	20,496,498	22,255,933	24,489,868
Premises and equipment	434,800	544,100	790,700	864,600	899,184	935,151	995,936	1,050,713	1,103,248
Other assets	1,220,900	1,938,200	2,098,400	2,467,000	2,610,358	2,883,300	2,579,597	2,390,308	1,915,920
Total assets	**20,125,300**	**28,022,400**	**29,430,100**	**33,804,600**	**36,991,002**	**34,033,129**	**35,632,857**	**37,660,556**	**39,927,334**
Interbank liabilities	3,035,800	7,356,000	4,813,500	4,336,300	4,771,820	4,993,244	5,096,341	5,233,906	5,401,800
Customer accounts	12,252,300	14,748,500	17,131,400	21,080,900	23,047,463	19,867,471	20,812,640	22,061,398	23,385,082
Domestic debt issued	1,112,400	1,131,600	1,161,300	1,335,200	1,415,885	1,354,454	1,404,459	1,463,351	1,525,015
Other liabilities	915,300	1,677,000	2,557,400	2,713,000	2,848,650	2,991,083	3,140,637	3,297,668	3,462,552
Total liabilities	**17,315,800**	**24,913,100**	**25,663,600**	**29,465,400**	**32,083,818**	**29,206,252**	**30,454,076**	**32,056,323**	**33,774,448**
Equity	**2,809,500**	**3,109,300**	**3,766,500**	**4,339,200**	**4,907,184**	**4,826,877**	**5,178,781**	**5,604,233**	**6,152,886**

Source: CBR, Aton estimates

Figure 65: Banking sector income statement (RUBmn)

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Core revenues (NII + F&C)	**1,232,900**	**1,480,100**	**1,869,200**	**1,863,500**	**1,718,705**	**1,603,781**	**1,685,341**	**1,762,977**	**1,950,679**
Net interest income	890,000	1,043,800	1,452,500	1,411,500	1,185,694	1,070,771	1,099,029	1,123,897	1,260,472
Net fee and commission income	342,900	436,300	416,700	452,000	533,011	533,011	586,312	639,080	690,206
Operating expenses	-485,800	-670,200	-621,500	-719,900	-863,880	-794,770	-850,403	-901,428	-946,499
SEBPT	**747,100**	**809,900**	**1,247,700**	**1,143,600**	**854,825**	**809,012**	**834,937**	**861,549**	**1,004,180**
NRI	46,475	168,925	60,275	-183,500	-66,580	100,000	50,000	50,000	50,000
EBPT	**793,575**	**978,825**	**1,307,975**	**960,100**	**788,245**	**909,012**	**884,937**	**911,549**	**1,054,180**
Provisioning, net	-158,700	-455,700	-1,050,600	-233,600	760	-1,020,549	-396,182	-320,643	-292,161
Pre-tax profit	**634,875**	**523,125**	**257,375**	**726,500**	**789,005**	**-111,537**	**488,755**	**590,906**	**762,018**
Income tax	-126,975	-104,625	-51,475	-145,300	-157,801	22,307	-97,751	-118,181	-152,404
Net income	**507,900**	**418,500**	**205,900**	**581,200**	**631,204**	**-89,229**	**391,004**	**472,725**	**609,615**

Source: CBR, Aton estimates

Figure 66: Banking sector profitability metrics

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
RoAA	3.0%	1.7%	0.7%	1.8%	1.8%	-0.3%	1.1%	1.3%	1.6%
RoAE	22.1%	14.1%	6.0%	14.3%	13.7%	-1.8%	7.8%	8.8%	10.4%
Cost/Income	38%	39%	31%	38%	52%	47%	49%	50%	47%
Credit charge	1.6%	3.2%	6.4%	1.4%	0.0%	5.0%	2.0%	1.5%	1.3%
Loan book gross yield	12.8%	14.0%	15.2%	13.0%	11.2%	12.1%	11.7%	10.8%	10.5%
Customer accounts cost of funding	5.8%	7.2%	8.8%	6.1%	5.2%	7.0%	6.3%	5.8%	5.5%
Net interest spread (NIS)	7.0%	6.8%	6.4%	6.8%	6.0%	5.1%	5.4%	5.0%	5.0%

Source: CBR, Aton estimates

Figure 67: Banking sector growth rates

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Loans	53%	35%	-2%	13%	20%	-12%	7%	9%	10%
Assets	44%	39%	5%	15%	9%	-8%	5%	6%	6%
Deposits	42%	20%	16%	23%	9%	-14%	5%	6%	6%
Core revenues	n/a	20%	26%	0%	-8%	-7%	5%	5%	11%
SEBPT	n/a	8%	54%	-8%	-25%	-5%	3%	3%	17%
Net profit	n/a	-18%	-51%	182%	9%	-114%	-538%	21%	29%

Source: CBR, Aton estimates

Our sector model is based on the following assumptions:

- Deterioration of the European debt crisis, a significant slowdown in the US and Chinese economies as well as other triggers which plunge key countries into recession. This spreads quickly to EM countries with Russia hit especially hard, as is often the case.
- A quickly deepening recession and very high uncertainty forces borrowers to reduce demand for credit and the net loan book contracts by 12% YoY. The confidence of retail borrowers falls sharply so they contain spending and refrain from taking on more debt, especially long-term automobile and mortgage loans. Numerous layoffs and salary cuts impair the creditworthiness of retail borrowers and banks halt retail lending to avoid a spike in NPLs. High uncertainty pushes corporates to freeze long-term and sizeable investment projects and set aside allocated cash until better times. Furthermore, the potential demand for corporate credit is smaller because companies created material cash cushions in advance and extended the maturities of debt portfolios in 2009-2011 so demand for refinancing of maturing loans is small.
- A decline in securities prices along with contraction of credit demand push sector assets down by 8% YoY in 2012. The size of interbank assets remains the same because of two offsetting effects – lack of trust demotivates banks to lend to each other but state-owned banks acting as government agents inject much-needed liquidity into the sector. The latter explains growing interbank lending.
- The CBR, MoF and other government agencies pump liquidity into the sector but the key channel for liquidity injections is direct REPO operations of the CBR, which use the large existing cushion of securities. Nevertheless, the agencies provide the banks with uncollateralised loans thereby increasing the share of highly liquid assets even further.
- The key change on the funding side is deposit flight driven by corporates which gobble up their accumulated cash cushions to support operations and do not refill them because of lower borrowing and smaller profits. An additional factor is capital flight which is likely to be high in crisis times. More granular retail deposits supported by higher interest rates turn out to be more stable.
- Net interest income compresses because a fall in loan book size and more costly funding outweigh the positive effect of increased lending rates. In an attempt to protect margins the banks start cutting operating expenses but banking costs are sticky and painless cuts cannot be significant. Deteriorating economic conditions, elevated uncertainty and the large amount of hidden

asset quality problems make banks create large loan loss provisions comparable to those seen in 2009. As a result, the sector posts negative net earnings.

We believe the next downturn will be a sovereign debt crisis. In our view, this means that economies and markets may fall deeper and take longer to recover than in 2008. We also expect credit demand and securities prices to recover more slowly than in 2009-11. A prolonged pace of recovery also means a slower resolution of the asset quality problem which implies a greater need to create provisions.

For the banking sector, the future post-crisis reality will likely feature lower yields on interest-earning assets. The key reason will be the same as before – excess liquidity. In our view, there are strong chances that the CBR and MoF will repeat their previous mistake and flood the sector with liquidity, essentially for political reasons. The consequences of this mistake are well known – increased investments into securities as well as depressed lending rates and profitability margins. We believe the effect of these two mistakes, made one after the other, will be much greater than the outcome of a single mistake. We calculate that the next banking cycle will be characterised by NIS of 5.0% – in our view, NIS of 7.0% is history.

Thinner interest spreads, greater provisioning needs and rigid operating costs mean lower net income and thus lower RoE. They also mean that RoE recovery is likely to be slow in 2013-15 and in the long-run we see fair RoE at just above 10%.

Valuation

Our models for the individual banks are based on our sector model adjusted for bank-specific features. For this reason they share many traits in common, including:

- Loan book contracts in 2012 with a recovery from 2013 driven by retail lending
- NIS remains below the current levels and falls gradually
- Operating costs decline only slightly in 2012 and resume their growth thereafter
- A significant credit charge in 2012 which fades away in the following years
- RoE plummets next year and starts recovering from 2013 though at a slower pace than in 2010

The table below summarises the bank-specific features which we introduced on top of our sector model.

Figure 68: Bank-specific features

	Sberbank	VTB	BSPB	VZRZ	NOMOS
Loan book growth	On par with the sector, with above-average growth in retail lending	On par with the sector, with above-average growth in retail lending	On par with the sector, with below-average growth in retail lending	On par	On par
NIS	Highest in the sector due to the cheapest funding but lower than before	Lower than the sector, lower than before	On par with the sector, lower than before	On par with the sector, lower than before	On par with the sector, lower than before
C/I	On par	On par	Growing closer to the sector average	Remains the highest among peers but below 2010 historical high	On par
SEBPT return	Strongest in sector due to the highest NIS but below pre-crisis levels	Among the weakest in the sector	On par	On par	Among the weakest in the sector
NRI return	Among the lowest in the sector	Slightly above sector average	On par	Among the lowest in the sector	Highest in the sector due to large share of precious metals operations
Credit charge	Below sector average in 2012 due to better asset quality (as reflected by DDR)	On par	On par	Below sector average in 2012 due to better asset quality (as reflected by DDR)	On par
RoE	Highest in the sector due to the highest SEBPT return	Among the lowest in the sector due to low SEBPT return	On par	Below average	On par

Source: Aton estimates

We expect **Sberbank** to continue demonstrating the highest profitability among its peers on the back of above-average NIS. The bank should retain its focus on commercial banking operations and derive most of its earnings from the core business. We also forecast that SEBPT return will remain the highest in the sector. Finally, Sberbank's loan book growth should outpace the sector when the market enters the recovery phase thanks to its huge branch network, which should allow it to aggressively expand high-margin retail lending.

VTB could also exploit the advantages of its branch network to grow faster than the market in the retail segment, in our view. However, we do not expect a larger share of the high-margin retail business to materially widen VTB's NIS and the spread will likely continue to be one of the thinnest in the sector, as it was before. We do not expect significant improvements in SEBPT return because the bank's focus on commercial banking is likely to remain insufficient. At the same time, we expect the efficiency of investment banking operations to improve and VTB's NRI return could be sustainably higher than the sector average.

We think that **BSPB** will maintain its focus on corporate banking and pay much less attention to the retail business, as was the case for the last several years. As a result its loan book growth may lag the sector. BSPB's C/I ratio is likely to gravitate upwards to the sector average because of rising fixed costs and deteriorating NRI. In other respects the bank is likely to follow the sector trend closely.

We forecast that **VZRZ** will retain the highest cost profile though C/I should gradually decrease in absolute terms. Similarly to Sberbank, VZRZ will likely maintain its focus on its core business thereby maintaining a good SEBPT return and the lowest NRI return among its peers. We also expect the bottom line to benefit from below-average provisioning requirements thanks to above-average asset quality.

Our earnings forecast for **NOMOS** assumes a relatively low SEBPT component and the highest NRI component in the group, driven by the profitable and relatively stable precious metals business, in line with the bank's historical performance. As a result its RoE should remain close to the sector average.

Cost of Equity

We model cost of equity (CoE) for each bank as the sum of common base CoE and the bank-specific risk premium. Base CoE is composed of the risk-free rate, an equity risk premium and a country risk premium.

Figure 69: Base CoE decomposition

Risk-free rate	4.5%
Standard equity risk premium	4.0%
Country-specific risk premium	3.2%
Base CoE	**11.7%**

Source: Bloomberg, Aton estimates

The bank-specific risk premium is broken down into four components:

- A stock liquidity risk premium ranging from zero for the most liquid stock, Sberbank, to 2.5% for the least liquid names such as BSPB and VZRZ
- A crisis-readiness premium which ranges from zero for Sberbank to 0.7% for VTB depending on the financial metric CRS of a bank
- A corporate governance risk premium (from 0.4% for VZRZ to 1.2% for VTB) based on the bank's CGS
- A state support risk discount, which reflects our estimate of the probability of state support for each particular bank. The discount ranges from 0.1% for small-cap banks to 0.4% for VTB.

Figure 70: CoE decomposition

	SBER	VTB	BSPB	VZRZ	NMOS
Base cost of equity	11.7%	11.7%	11.7%	11.7%	11.7%
Stock liquidity risk premium	0.0%	0.1%	2.5%	2.5%	2.0%
CRS premium	0.0%	0.7%	0.5%	0.2%	0.6%
Corporate governance risk premium	0.6%	1.2%	0.7%	0.4%	0.6%
State support risk discount	-0.3%	-0.4%	-0.1%	-0.1%	-0.1%
CoE	**11.9%**	**13.3%**	**15.3%**	**14.8%**	**14.7%**

Source: Aton estimates

The resulting CoE varies greatly across the board. Sberbank boasts the lowest CoE of 11.9% on the back of its high probability of state support. VTB's CoE is 1.4 ppt higher: while it enjoys the highest probability of state support this does not outweigh its poor corporate governance and certain weaknesses reducing its ability to withstand

a crisis. Discount factors for smaller banks range from 14.7% for NOMOS to 15.3% for BSPB mainly due to their materially lower stock liquidity vs the larger peers.

Valuation Approach

When choosing our valuation approach we tried to reflect the following issues:

- In the current circumstances of high uncertainty the predictive power and reliability of model-based forecasts is low. Therefore, model-based valuations should have a small weight when calculating the target price.
- A valuation based on peer multiples is unreliable because these multiples are based on old (i.e. non-adjusted) growth and earnings forecasts while our model incorporates new (i.e. adjusted) forecasts. Recent revisions suggest that the process of adjustment has already begun but it is still in the very early stages.
- The historical multiples approach should be based on ratios which have the highest and most-proven predictive power. The valuation approach should also take into account the fact that the market is now more focused on fundamentals than before.

With due consideration of all these factors, we ultimately chose an approach based on historical valuation ratios, the Edward-Bell-Ohlson (EBO) model and a target P/B variation of the Gordon model.

Historical multiple approach (HMA)

This approach assumes the market valuation of a stock correlates with the phase of the economic/market cycle and there are 'fair values' for multiples that correspond to each phase. For example, there is 'peak phase' P/B at which the market values banks at their peak. For Russia this value is around 2.7x, the sector-average P/B observed at the market peak in 2Q08-3Q08. On our estimates, 12 months from today the market should be in the early recovery phase, which was last seen in 2Q09-3Q09. The fair values of the multiples for the early recovery phase are produced below. When choosing these ratios we relied on those which had the highest predictive power in our earlier tests.

Figure 71: Historical multiples approach – early recovery (3Q12-4Q12)

	P/B	P/EBPT	P/SEBPT
Sberbank	1.00	2.75	3.25
VTB	0.75	2.50	3.00
BSPB	0.75	2.00	2.25
VZRZ	0.85	2.00	2.25
NOMOS	0.75	2.25	2.50

Source: Bloomberg, Aton estimates

In our view, in the next early recovery phase the small-cap banks should trade at an average discount of 25% to their strongest peer, Sberbank, due to their weaker fundamentals and lower stock liquidity. The fair discount of VTB to Sberbank should be around 15%, on our estimates.

The weighting of our multiple-based valuation is 60%, distributed evenly between three multiples.

Residual income model

The second approach is the EBO model. This is based on the concept of excess return (or residual income) which reflects a bank's ability to create value for shareholders in excess of the cost of equity. Residual income is calculated as the difference between earned income and required income with the latter measured as CoE multiplied by

equity. The financial forecasts for individual banks are presented in the *Company Pages*.

Target P/B multiple approach

As a reality check we used a target P/B variation of the Gordon model. This reflects the same idea of shareholder value creation as the EBO model but it is less sensitive to key model assumptions. The key inputs are a terminal RoE equal to the expected return on capital in 2015 and a terminal growth rate of 3.0%. The resulting target P/B multiple was multiplied by YE14 equity and discounted back to get the 12-month target price.

The joint weighting of our models-based approach is 40%: the EBO model approach receives 25% while the target P/B variation of the Gordon model claims 15%.

Valuation and Target Prices

The table below summarises the target prices implied by our different valuation methods. The resulting target price is the weighted-average 'fair' price under all five valuation approaches.

Figure 72: Summary valuation table

		Ordinary shares					Preferred shares *		
Valuation approach	**Weight**	**SBER03 RX**	**VTBR RX**	**BSPB RX**	**VZRZ RX**	**NMOS RX**	**SBERP03 RX**	**BSPBP RX**	**VZRZP RX**
P/EBPT	20%	43.5	0.0315	51.6	354	416			
P/SEBPT	20%	50.4	0.0344	56.1	389	422			
P/B	20%	56.1	0.0531	67.3	610	591			
EBO	25%	64.7	0.0104	50.5	247	277			
Target P/B	15%	61.3	0.0319	53.3	336	458			
12M target price (RUB)		**55.4**	**0.0312**	**55.6**	**383**	**424**	**42.5**	**68.6**	**153**
Current price (RUB)		82.4	0.0741	98.7	776	765	64.4	111	300
Upside/downside		-33%	-58%	-44%	-51%	-45%	-34%	-38%	-49%
			VTBR LI			**NMOS LI**			
12M target price ($)			**2.02**			**6.86**			
Current price ($)			4.82			12.4			
Upside/downside			-58%			-44%			
Rating		**SELL**	**SELL**	**SELL**	**SELL**	**SELL**	**SELL**	**SELL**	**SELL**

*Sberbank and VZRZ: historical 6M discount; BSPB: NPV of dividend cash flows and conversion option

Source: Bloomberg, Aton estimates

Based on our 12-month target prices, we assign SELL ratings to all five banks. Out of the five we prefer Sberbank because its price already reflects most of the recession risks. In addition, we believe Sberbank beats its peers in terms of financial strength, ability to withstand a crisis and its better focus on creating shareholder value.

We note that the individual bank models are based on a deep-recession forecast for the entire sector so **target prices based on the EBO approach should be viewed as the minimum price levels justified from a fundamental point of view**. That is, if the stock prices fall to these levels, the market would be pricing in a deep recession in line with our sector model, in our view. If the prices fall below the EBO-implied targets, the market would be pricing in a nearly catastrophic sector view, which should be viewed as a good point at which to buy the stock.

Could the market fall below our minimum justified levels? Judging by the stock performances seen in 2008-09, it is possible: when the market enters the panic-selling phase, fundamentals are ignored. What is more interesting is that prices could stay below fundamentally justified levels for some time after panic-selling is over.

The HMA-implied target prices are our estimate of where the market should be valuing these stocks in 12 months.

Figure 73: Downsides of EBO and HMA valuation approaches to current prices

Valuation approach	SBER03 RX	VTBR RX	BSPB RX	VZRZ RX	NMOS RX
EBO	-21%	-86%	-49%	-68%	-64%
HMA	-39%	-46%	-41%	-42%	-38%

Source: Bloomberg, Aton estimates

The discounts show that in the early recovery phase **the market tends to undervalue Sberbank and overvalue other banks, especially VTB, relative to fundamentally justified levels**. We believe the market's current focus on fundamentals will be sustained into the next recovery period and beyond, so VTB, BSPB and VZRZ could then see their valuations at lower levels vs last time. We expect the same to be true for NOMOS, which has a short trading history. This provides additional downside potential for all of the stocks except for Sberbank.

Another observation is that **current stock prices factor in different scenarios for the sector and for individual banks**. We built our individual bank models based on the same sector model, so our EBO model-implied targets are pricing in very similar scenarios for the banks (subject to the specifics of their businesses). But when comparing the discount of EBO-based targets to current prices we can see that the market is pricing in different scenarios for different banks. For example, in the case of VTB the EBO-based target price implies 86% downside to current levels, i.e. the market seems to be forecasting rosy times ahead for VTB. At the same time, the downside potential for Sberbank, which is fundamentally stronger than VTB, is only 21%, i.e. the market is pricing in deep stagnation for Sberbank.

Finally, **the downside risks are higher this time**. We believe that investor perceptions of Russia's banking sector are only as strong as its weakest link. That is, if one bank experiences serious problems, we expect it would undermine investor confidence not only in the affected bank but in the other banks and the entire sector as well. In difficult conditions, we doubt that investors would show any preference for strong systemically-important Sberbank over smaller and weaker NOMOS. A good example of this phenomenon is provided by Sberbank's SPO, which had to be postponed because investors were afraid that the BoM scenario might repeat itself. Since YE07 the crisis-readiness of all Russian banks has deteriorated and the weakest link is now even weaker. Therefore, the chances that the link will break are materially higher this time.

Relative Value

In Figure 74 we summarise the relative value of Russian banks benchmarked against their international peers. We did not use a peer valuation approach when deriving target prices because this is not an apple-with-apple comparison, in our view: we employ revised recession-scenario forecasts for Russian banks and non-updated forecasts for their peers. We also had to rely on standard P/B and P/E multiples for forward-looking comparisons because there are no consensus forecasts for P/EBPT and P/SEBPT, though these have better prognostic powers. Nevertheless, we provided trailing P/EBPT and P/SEBPT multiples for international peers and Russian banks.

The standard multiples and the new multiples show different pictures. Based on 2011E multiples (calculated at current prices), the P/B ratio suggests that Sberbank is fairly valued while the other four banks deserve a BUY recommendation. However, if we base our conclusions on the two new multiples (for a small sample of GEM banks, the median 2011E P/EBPT is 5.2x and P/SEBPT is 7.2x), only Sberbank and BSPB could

potentially deserve a BUY recommendation. A similar conclusion can be derived by using P/E but in this case the multiples must be adjusted for differences in RoE.

Figure 74: Relative valuation

	P/B				P/EBPT	P/SEBPT	P/E				RoAE			
	2010	2011E	2012E	2013E	2010	2010	2010	2011E	2012E	2013E	2010	2011E	2012E	2013E
Sberbank	1.9	1.5	1.5	1.3	4.9	5.5	10.3	6.5	32.4	10.9	21%	25%	5%	13%
VTB	1.5	1.0	1.0	1.0	7.2	8.7	16.0	10.7	-14.1	15.7	10%	10%	-7%	6%
BSPB	1.4	1.0	1.1	1.0	4.2	4.4	9.9	5.9	-21.9	9.7	15%	19%	-5%	11%
VZRZ	1.6	1.0	1.1	1.0	10.6	12.2	47.2	12.9	-21.3	15.0	4%	8%	-5%	7%
NOMOS	1.2	0.9	1.0	0.8	4.1	6.3	6.7	7.9	-60.8	8.6	17%	13%	-2%	10%
Russia	**1.5**	**1.0**	**1.1**	**1.0**	**4.9**	**6.3**	**10.3**	**7.9**	**-21.3**	**10.9**	**15%**	**13%**	**-5%**	**10%**
SECTOR														
BRICS ex. Russia	1.8	1.4	1.3	1.1	6.0	6.9	10.2	7.9	6.9	5.9	20%	19%	19%	19%
Premium/(discount)	-37%	-35%	-18%	-13%	-21%	-13%	-1%	-5%	nm	84%	4.9%	5.5%	23.5%	8.3%
CEE + Turkey	1.8	1.2	1.2	1.1	6.3	10.3	11.8	8.7	9.2	7.8	15%	14%	14%	14%
Premium/(discount)	-38%	-23%	-12%	-12%	-23%	-42%	-14%	-14%	nm	40%	-0.7%	0.7%	18.5%	3.6%
LatAm	2.5	1.9	1.6	1.2	5.5	7.5	13.7	11.5	9.8	8.4	27%	22%	23%	22%
Premium/(discount)	-54%	-50%	-37%	-18%	-12%	-20%	-26%	-35%	nm	30%	11.9%	8.6%	28.0%	11.7%
EM Asia	1.8	1.4	1.2	1.1	6.4	6.9	9.1	7.3	6.2	5.4	20%	19%	19%	18%
Premium/(discount)	-37%	-35%	-18%	-12%	-25%	-14%	11%	2%	nm	101%	4.4%	5.9%	23.5%	7.7%
GEM	1.9	1.5	1.3	1.1	6.1	7.7	11.2	8.7	8.0	7.1	18%	17%	17%	17%
Premium/(discount)	-39%	-35%	-19%	-13%	-21%	-22%	-10%	-14%	nm	54%	2.9%	3.7%	22.0%	7.0%
INDIVIDUAL BANKS														
BRICS ex. Russia	**2.0**	**1.5**	**1.3**	**1.1**	**6.0**	**6.9**	**10.0**	**8.3**	**7.1**	**5.8**	**20%**	**19%**	**18%**	**19%**
Sberbank	-5%	1%	13%	16%	-20%	-20%	3%	-22%	357%	88%	0%	6%	-14%	-6%
VTB	-24%	-35%	-20%	-13%	20%	27%	60%	29%	nm	170%	-10%	-9%	-25%	-12%
BSPB	-29%	-29%	-14%	-8%	-30%	-36%	-1%	-30%	nm	68%	-5%	0%	-23%	-8%
VZRZ	-18%	-30%	-17%	-10%	75%	78%	373%	55%	nm	158%	-17%	-11%	-23%	-12%
NOMOS	-40%	-36%	-26%	-25%	-32%	-8%	-33%	-5%	nm	48%	-3%	-6%	-20%	-8%
CEE + Turkey	**1.6**	**1.2**	**1.1**	**1.0**	**6.3**	**10.3**	**10.5**	**8.9**	**8.8**	**7.2**	**15%**	**14%**	**14%**	**14%**
Sberbank	15%	28%	34%	27%	-22%	-46%	-2%	-27%	267%	51%	6%	11%	-9%	-1%
VTB	-7%	-17%	-5%	-5%	16%	-15%	52%	21%	nm	117%	-4%	-4%	-21%	-7%
BSPB	-13%	-10%	2%	0%	-33%	-58%	-6%	-34%	nm	35%	1%	5%	-18%	-3%
VZRZ	-1%	-11%	-1%	-2%	69%	19%	350%	45%	nm	108%	-11%	-6%	-18%	-7%
NOMOS	-27%	-19%	-13%	-18%	-34%	-39%	-36%	-11%	nm	19%	2%	-1%	-15%	-3%
LatAm	**2.1**	**2.1**	**1.8**	**1.2**	**5.5**	**7.5**	**11.8**	**11.5**	**9.8**	**8.4**	**27%**	**22%**	**23%**	**22%**
Sberbank	-10%	-28%	-18%	9%	-11%	-26%	-13%	-43%	231%	29%	-7%	3%	-18%	-9%
VTB	-28%	-54%	-42%	-19%	32%	17%	35%	-7%	nm	86%	-17%	-12%	-30%	-16%
BSPB	-32%	-50%	-38%	-14%	-23%	-41%	-17%	-49%	nm	15%	-12%	-3%	-28%	-11%
VZRZ	-22%	-50%	-40%	-16%	93%	64%	299%	13%	nm	78%	-24%	-14%	-28%	-15%
NOMOS	-43%	-55%	-47%	-30%	-25%	-16%	-44%	-31%	nm	2%	-10%	-9%	-25%	-12%
EM Asia	**2.0**	**1.4**	**1.3**	**1.1**	**6.4**	**6.9**	**9.6**	**7.4**	**6.4**	**5.6**	**20%**	**19%**	**18%**	**18%**
Sberbank	-6%	5%	14%	20%	-24%	-20%	6%	-12%	406%	96%	1%	6%	-14%	-5%
VTB	-25%	-33%	-20%	-11%	13%	26%	66%	44%	nm	181%	-10%	-9%	-25%	-12%
BSPB	-29%	-27%	-13%	-6%	-34%	-37%	2%	-21%	nm	75%	-4%	0%	-23%	-7%
VZRZ	-19%	-28%	-16%	-7%	65%	77%	390%	74%	nm	169%	-16%	-11%	-23%	-11%
NOMOS	-40%	-34%	-26%	-23%	-36%	-9%	-31%	6%	nm	55%	-3%	-6%	-20%	-8%
GEM	**1.9**	**1.4**	**1.3**	**1.1**	**6.1**	**8.4**	**10.4**	**8.9**	**8.2**	**7.1**	**18%**	**17%**	**17%**	**17%**
Sberbank	-1%	5%	14%	16%	-20%	-34%	-1%	-27%	296%	54%	2%	8%	-12%	-4%
VTB	-20%	-32%	-20%	-13%	19%	4%	55%	21%	nm	122%	-8%	-7%	-24%	-10%
BSPB	-25%	-26%	-13%	-8%	-30%	-48%	-5%	-34%	nm	38%	-3%	2%	-22%	-6%
VZRZ	-14%	-27%	-16%	-10%	74%	46%	356%	45%	nm	112%	-15%	-9%	-22%	-10%
NOMOS	-37%	-34%	-26%	-25%	-32%	-25%	-36%	-11%	nm	22%	-1%	-4%	-19%	-6%

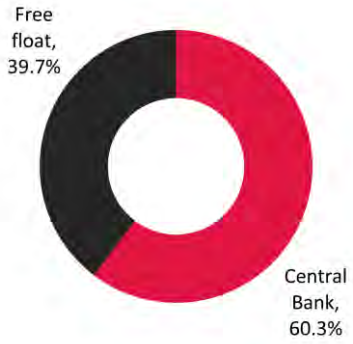
Source: Bloomberg, Aton estimates

SBERBANK

	Ord	Pref
	SELL	SELL
Target price (RUB)	55	42
Downside	-33%	-34%

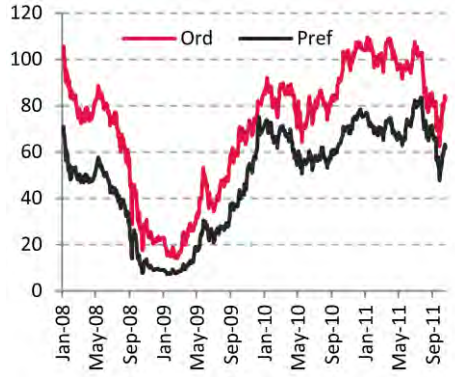
Bloomberg code	SBER03 RX
Reuters code	SBER.RTS
Price (ord, RUB)	82.4
Price (pref, RUB)	64.4
Shares/ADR ratio	4:1
Share data	
No. of ordinary shares (mn)	21,587
No. of preferred shares (mn)	1,100
Daily t/o ($mn)	720
Free float (%)	39.7%
Market capitalisation ($mn)	60,348

Shareholder structure



Source: Bank data, Aton

Share price performance (RUB)



Source: Bloomberg

Sberbank is Russia's largest bank with RUB9.1trn in assets in 1H11. It accounts for more than 25% of the sector's aggregate assets and capital. The bank operates the largest branch network in Europe comprising 20,000 offices located in all regions of Russia. Sberbank represents more than 30% of the total retail and corporate loans in the country and almost 50% of its retail deposits thanks to its very strong brand recognition and client loyalty.

Key bull points:

- Exceptionally strong ability to withstand the negative impact of a crisis (DDR of 125%) despite its moderate loss-absorption capacity (RDBR of 2.8x)
- High quality of earnings which makes profits resilient to a crisis
- Core operations are highly efficient with the potential for further improvements
- Decent asset quality thanks to relatively low lending exposure to highly cyclical sectors (17% of gross loan book), a below-average amount of non-core assets and solid reserve coverage of real NPLs (over 100%)
- Strong capitalisation with Basel total CAR of 17.9% (Tier I CAR of 13.3%)
- Rock-solid profitability (NIS of approximately 7%)
- Balanced funding structure dominated by term deposits (54% of funding) and a net lender interbank position
- Good liquidity profile (share of highly liquid assets: 11%) backed by strong brand loyalty which minimises the risk of runs on deposits
- Extremely high probability of state support

Key bear points:

- High absolute level of real NPLs (real NPL ratio of 9.5%)
- Excessive holding of securities (over 15% of total assets) though this is partially offset by the good quality of these securities
- Recent RoE growth based on non-recurring income which forms an unstable base for future profitability
- Below-average cost efficiency: C/I is around 50% and growing
- Insufficient deposit coverage metrics (liquid coverage of retail deposits: 20%), though this is compensated by strong brand loyalty
- Below-average corporate governance standards (imbalanced shareholder and stakeholder influence and poor board processes) but this is compensated by a clear focus on creating shareholder value

Sberbank: multiples and key metrics

	2009*	2010*	2011E	2012E	2013E
P/B	1.2	2.1	1.5	1.5	1.3
P/EBPT	2.9	4.6	5.2	5.2	5.4
P/SEBPT	3.1	5.2	5.4	5.3	5.6
RoAE	3.2%	20.6%	25.4%	4.6%	12.7%
SEBPT return	49.0%	38.1%	30.5%	27.8%	24.8%
NIS	6.9%	7.9%	6.9%	6.4%	6.0%
C/I	51%	35%	43%	50%	47%

*Average market cap for respective year divided by respective metric

Source: IFRS data, Bloomberg, Aton estimates

Sberbank: Balance sheet (RUBmn)

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Cash and equivalents	179,877	315,099	281,213	348,488	482,943	481,774	490,949	504,985	436,887
Interbank assets	124,215	499,049	495,099	434,680	554,613	606,484	646,139	647,116	626,183
Securities	503,339	493,678	1,064,135	1,823,648	1,458,918	1,240,081	1,351,688	1,446,306	1,533,084
Loan portfolio	3,921,546	5,077,882	4,864,031	5,489,387	6,652,136	5,898,121	6,308,762	6,847,843	7,560,762
Premises and equipment	146,850	251,478	249,881	283,756	283,756	283,756	297,944	312,841	325,355
Other assets	52,981	99,296	150,707	248,568	233,804	301,780	272,324	259,068	246,476
Total assets	**4,928,808**	**6,736,482**	**7,105,066**	**8,628,527**	**9,666,170**	**8,811,996**	**9,367,807**	**10,018,159**	**10,728,747**
Interbank liabilities	80,321	302,539	53,947	188,431	94,216	114,943	91,954	87,357	82,989
Customer accounts	3,877,620	4,795,232	5,438,871	6,651,131	7,431,935	6,630,837	6,997,910	7,463,943	7,993,305
Debt issued	300,916	834,203	758,873	693,704	757,579	735,483	777,466	823,647	859,207
Other liabilities	32,754	54,346	74,439	108,094	143,367	77,191	87,260	71,298	49,150
Total liabilities	**4,291,611**	**5,986,320**	**6,326,130**	**7,641,360**	**8,427,097**	**7,558,454**	**7,954,590**	**8,446,245**	**8,984,650**
Equity	**637,197**	**750,162**	**778,936**	**987,167**	**1,239,073**	**1,253,542**	**1,413,216**	**1,571,914**	**1,744,097**

Source: IFRS financials, Aton estimates

Sberbank: Income statement (RUBmn)

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Core revenues	**318,636**	**464,351**	**603,806**	**619,395**	**679,227**	**663,909**	**655,504**	**699,119**	**751,460**
Net interest income	252,761	378,157	502,717	495,821	542,141	518,603	500,299	534,290	577,640
Net fee and commission income	65,875	86,194	101,089	123,574	137,085	145,306	155,206	164,829	173,819
Operating expenses	-195,764	-230,603	-229,277	-282,619	-339,769	-317,077	-324,468	-345,002	-371,140
SEBPT	**122,872**	**233,748**	**374,529**	**336,776**	**339,458**	**346,832**	**331,036**	**354,116**	**380,319**
NRI	34,510	-5,946	44,267	47,168	17,751	7,000	7,350	7,718	8,103
EBPT	**157,382**	**227,802**	**418,796**	**383,944**	**357,209**	**353,832**	**338,386**	**361,834**	**388,422**
Provisioning	-17,633	-97,881	-388,932	-153,809	-4,083	-282,850	-127,166	-122,008	-120,091
Pre-tax profit	**139,749**	**129,921**	**29,864**	**230,135**	**353,126**	**70,982**	**211,220**	**239,826**	**268,332**
Income tax	-33,260	-32,175	-5,468	-48,487	-70,625	-14,196	-42,244	-47,965	-53,666
Net profit	**106,489**	**97,746**	**24,396**	**181,648**	**282,501**	**56,786**	**168,976**	**191,861**	**214,665**

Source: IFRS financials, Aton estimates

Sberbank: Key metrics

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Capitalisation									
Capitalisation ratio	12.9%	11.1%	11.0%	11.4%	12.8%	14.2%	15.1%	15.7%	16.3%
Asset quality									
Reported NPL ratio (90+)	0.7%	1.8%	8.4%	7.3%					
Reserve coverage	414%	214%	126%	155%					
Real NPL ratio (90+)	1.0%	2.3%	11.9%	10.6%					
Credit charge	0.5%	2.1%	7.3%	2.6%	0.1%	4.0%	1.8%	1.6%	1.4%
Profitability and efficiency									
RoAA	2.5%	1.7%	0.4%	2.3%	3.1%	0.6%	1.9%	2.0%	2.1%
RoAE	22.5%	14.1%	3.2%	20.6%	25.4%	4.6%	12.7%	12.9%	12.9%
SEBPT return	26.0%	33.7%	49.0%	38.1%	30.5%	27.8%	24.8%	23.7%	22.9%
NRI return	7.3%	-0.9%	5.8%	5.3%	1.6%	0.6%	0.6%	0.5%	0.5%
C/I	56%	51%	35%	43%	50%	47%	49%	49%	49%
NIS	6.4%	6.9%	7.9%	6.9%	6.4%	6.0%	5.9%	5.8%	5.8%
NIM	6.6%	7.1%	8.0%	7.0%	6.6%	6.3%	6.2%	6.2%	6.2%
Liquidity									
Liquid asset ratio	6.2%	12.1%	10.9%	9.1%	10.7%	12.3%	12.1%	11.5%	9.9%
Quasi-liquid asset ratio	16.4%	19.4%	25.9%	30.2%	25.8%	26.4%	26.6%	25.9%	24.2%
Growth rates									
Loans	55%	29%	-4%	13%	21%	-11%	7%	9%	10%
Assets	42%	37%	5%	21%	12%	-9%	6%	7%	7%
Deposits	37%	24%	13%	22%	12%	-11%	6%	7%	7%
Equity	107%	18%	4%	27%	26%	1%	13%	11%	11%
Core revenues	30%	46%	30%	3%	10%	-2%	-1%	7%	7%
SEBPT	22%	90%	60%	-10%	1%	2%	-5%	7%	7%
Net profit	29%	-8%	-75%	645%	56%	-80%	198%	14%	12%

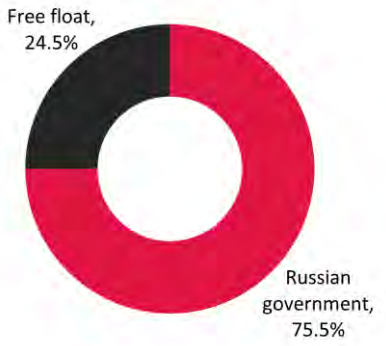
Source: IFRS financials, Aton estimates

VTB

	GDR
	SELL
Target price ($)	2.02
Downside	-58%

Bloomberg code	VTBR LI
Reuters code	VTBRq.L
Price (GDR , $)	4.82
Shares/GDR ratio	2000:1
Share data	
No. of ordinary shares (mn)	10,457,406
Daily t/o ($mn)	188
Free float (%)	24.5%
Market capitalisation ($mn)	25,202

Shareholder structure



Source: Bank data, Aton

Share price performance ($)

Source: Bloomberg

VTB Group is Russia's second-largest bank with assets totalling RUB4.7trn in 1H11. VTB is heavily focused on corporate banking (81% of total loans) but has been aggressively developing its retail arm (VTB 24) and investment-banking franchise (VTB Capital), which contribute an increasingly large share of revenue and profit. Since the 1990s the group's rapid growth has been aided by a string of major acquisitions including Transcreditbank and Bank of Moscow (BoM).

Key bull points:

- Very strong state support stemming from the bank's ownership structure, systemic importance and political lobby
- Stable fundamental earnings, although they are frequently insufficient to absorb NRI losses
- Relatively solid capitalisation with Basel total CAR of 14.1% and N1 of 16.0%
- Above-average cost efficiency with C/I stabilised around 45%
- The group should benefit from the unprecedented 10-year, RUB295bn, 0.51% interest loan from DIA (reflected in our model)

Key bear points:

- Commercial banking operations appear to be the least efficient as SEBPT return is consistently the lowest among the five traded peers
- VTB is the least efficient in terms of creating shareholder value: annualised cumulative RoE for YE07-1H11 stands at 4% vs the peer average of 18%
- Low quality of earnings due to extremely volatile non-CEF (which fell rapidly and deeply in 3Q08 and drove RoE into negative territory six quarters in a row)
- The base for future RoE growth is unstable as RoE has been driven recently by non-CEF factors (NRI comprised almost 50% of EBPT in 1H11)
- Worst corporate governance standards among traded Russian banks (CGS of 5.1 vs average of 6.2) due to:
  - Poor board effectiveness
  - Executive compensation issues (e.g. the case of Russian Commercial Bank)
  - Accounting treatment of the Bank of Moscow acquisition
- Worst asset quality among the five traded banks:
  - Real NPL ratio of 12.7% in 1H11, the highest among peers, with real reserve coverage of only 51%
  - Most burdened with non-core assets (4% of total assets)
  - Major lending exposure to highly cyclical sectors (almost 40% of loan book)
  - Below-average securities portfolio quality with the share of equities at 22%
- Highly imbalanced ALMs: below one-year maturities gap stands at 16% of assets

VTB: multiples and key metrics

	2009*	2010*	2011E	2012E	2013E
P/B	0.8	1.6	1.0	1.0	1.0
P/EBPT	4.3	8.5	6.1	5.9	5.8
P/SEBPT	4.5	8.9	8.1	6.5	6.4
RoAE	-13.3%	10.1%	10.4%	-7.0%	6.4%
SEBPT return	21.6%	18.6%	13.9%	15.5%	15.8%
NIS	3.8%	4.5%	4.0%	3.7%	3.8%
C/I	47%	44%	54%	51%	51%

*historical multiples: average market cap for respective year divided by respective metric

Source: IFRS data, Bloomberg, Aton estimates

VTB: Balance sheet (RUBmn)

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Cash and equivalents	51,194	60,200	76,200	96,500	172,075	141,359	141,993	142,104	142,896
Interbank assets	335,478	671,500	553,500	555,300	706,770	770,146	839,495	899,000	947,830
Securities	332,379	259,900	400,700	451,600	1,060,692	949,664	1,018,631	1,079,029	1,140,527
Loan portfolio	1,440,341	2,555,600	2,309,900	2,785,400	3,823,074	3,365,887	3,584,779	3,883,104	4,277,461
Premises and equipment	49,127	60,800	65,900	113,200	131,649	131,649	134,282	138,310	142,460
Other assets	69,718	89,400	204,600	288,900	366,843	469,060	469,060	447,274	426,851
Total assets	**2,278,237**	**3,697,400**	**3,610,800**	**4,290,900**	**6,261,104**	**5,827,764**	**6,188,238**	**6,588,822**	**7,078,024**
Interbank liabilities	363,941	388,700	287,000	397,300	577,751	751,076	751,076	751,076	751,076
Customer accounts	912,633	1,101,900	1,568,800	2,212,900	3,441,508	2,975,979	3,155,389	3,343,624	3,572,400
Debt issued	561,779	1,635,100	1,151,900	984,300	1,189,264	1,157,608	1,248,463	1,392,042	1,526,082
Other liabilities	33,949	179,600	98,200	118,200	248,576	203,135	242,285	255,201	312,699
Total liabilities	**1,872,302**	**3,305,300**	**3,105,900**	**3,712,700**	**5,457,099**	**5,087,798**	**5,397,213**	**5,741,942**	**6,162,257**
Equity	**405,935**	**392,100**	**504,900**	**578,200**	**804,005**	**739,966**	**791,025**	**846,880**	**915,768**

Source: IFRS financials, Aton estimates

VTB: Income statement (RUBmn)

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Core revenues	**79,592**	**129,900**	**173,200**	**195,800**	**240,326**	**254,864**	**261,112**	**277,231**	**300,594**
Net interest income	65,351	113,600	152,200	171,100	199,612	211,070	213,815	226,622	246,443
Net fee and commission income	14,241	16,300	21,000	24,700	40,713	43,794	47,298	50,609	54,151
Operating expenses	-49,806	-67,500	-76,400	-95,100	-144,557	-134,983	-140,428	-148,414	-156,947
SEBPT	**29,786**	**62,400**	**96,800**	**100,700**	**95,768**	**119,881**	**120,684**	**128,816**	**143,647**
NRI	30,042	18,900	-12,200	20,600	31,000	12,000	12,600	13,230	13,892
EBPT	**59,828**	**81,300**	**84,600**	**121,300**	**126,768**	**131,881**	**133,284**	**142,046**	**157,538**
Provisioning	-13,321	-63,200	-152,900	-50,200	-36,969	-199,891	-71,899	-68,758	-65,558
Pre-tax profit	**46,507**	**18,100**	**-68,300**	**71,100**	**89,799**	**-68,010**	**61,385**	**73,288**	**91,981**
Income tax	-7,798	-13,500	8,700	-16,300	-17,960	13,602	-12,277	-14,658	-18,396
Net profit	**38,709**	**4,600**	**-59,600**	**54,800**	**71,840**	**-54,408**	**49,108**	**58,631**	**73,584**

Source: IFRS financials, Aton estimates

VTB: Key metrics

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Capitalisation									
Capitalisation ratio	17.8%	10.6%	14.0%	13.5%	12.8%	12.7%	12.8%	12.9%	12.9%
Asset quality									
Reported NPL ratio (90+)	1.1%	1.9%	9.8%	8.6%					
Reserve coverage	220%	136%	79%	83%					
Real NPL ratio (90+)	1.2%	2.9%	15.8%	13.9%					
Credit charge	1.2%	3.1%	5.9%	1.8%	1.1%	5.0%	1.8%	1.6%	1.4%
Profitability and efficiency									
RoAA	2.1%	0.2%	-1.6%	1.4%	1.4%	-0.9%	0.8%	0.9%	1.1%
RoAE	13.1%	1.2%	-13.3%	10.1%	10.4%	-7.0%	6.4%	7.2%	8.3%
SEBPT return	10.1%	15.6%	21.6%	18.6%	13.9%	15.5%	15.8%	15.7%	16.3%
NRI return	10.2%	4.7%	-2.7%	3.8%	4.5%	1.6%	1.6%	1.6%	1.6%
C/I	46%	45%	47%	44%	54%	51%	51%	51%	50%
NIS	3.4%	3.5%	3.8%	4.5%	4.0%	3.7%	3.8%	3.8%	3.7%
NIM	3.9%	4.1%	4.5%	4.8%	4.3%	4.0%	4.1%	4.0%	4.0%
Liquidity									
Liquid asset ratio	17.0%	19.8%	17.4%	15.2%	14.0%	15.6%	15.9%	15.8%	15.4%
Quasi-liquid asset ratio	31.6%	26.8%	28.5%	25.7%	31.0%	31.9%	32.3%	32.2%	31.5%
Growth rates									
Loans	87%	77%	-10%	21%	37%	-12%	7%	8%	10%
Assets	65%	62%	-2%	19%	46%	-7%	6%	6%	7%
Deposits	73%	21%	42%	41%	56%	-14%	6%	6%	7%
Equity	121%	-3%	29%	15%	39%	-8%	7%	7%	8%
Core revenues	42%	63%	33%	13%	23%	6%	2%	6%	8%
SEBPT	58%	109%	55%	4%	-5%	25%	1%	7%	12%
Net profit	21%	-88%	nm	nm	31%	nm	nm	19%	26%

Source: IFRS financials, Aton estimates

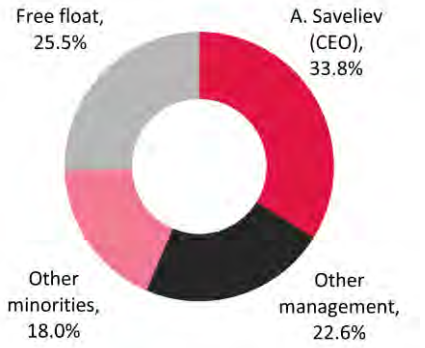
BANK ST PETERSBURG

	Ord	Conv Pref
	SELL	SELL
Target price (RUB)	56	69
Downside	-44%	-38%

Bloomberg code	BSPB RX
Reuters code	BSPB.MM
Price (ord, RUB)	98.7
Price (conv pref, RUB)	111
Shares/ADR ratio (x)	n/a
Share data	
No. of ordinary shares (mn)	282
No. of conv pref shares (mn)	65
Daily t/o ($mn)	0.2
Free float (%)	25.5%
Market capitalisation ($mn)	1,149

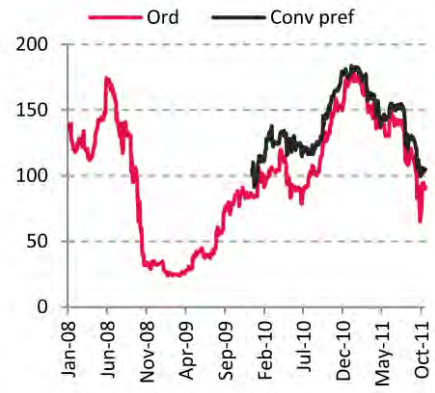
Source: Bank data, Bloomberg

Shareholder structure



Source: Bank data, Aton

Share price performance (RUB)



Source: Bloomberg

Bank St Petersburg is the 14th largest bank in Russia with assets totalling RUB292bn as of 1H11. It is mainly a regional bank with most of its business located in St Petersburg and the North-West region of Russia although its Moscow office has been successful recently in soliciting new clients. The bank has historically focused on corporate clients (93% of its loan book) and does not currently appear interested in expanding its retail franchise.

Key bull points:

- Strong core profitability: one of the highest and least volatile SEBPT returns (38% on average since YE07 vs peer average of 29%) among the five traded peers
- RoE is boosted by sector-best cost efficiency: the lowest C/I of 29% in 1H11 vs an average of 47%
- Relies mostly on core business as NRI is relatively small (albeit quite volatile): NRI contribution to RoE is the smallest among peers
- Prudent provisioning policy: real NPLs are 125% covered by reserves

Key bear points:

- One of the least prepared to withstand a new crisis due to poor asset quality (DDR of 82% and RDDR of 130%)
- Very large exposure to highly cyclical industries (40% of the loan book) mainly via real estate companies
- The largest exposure to market risk (securities portfolio represents 18% of total assets) with its mediocre portfolio comprised mostly of corporate bonds
- Recent impressive growth in RoE is unsustainable because it was driven by non-CEF factors, while CEFs remained relatively stable
- Low capitalisation: Basel Tier I is the lowest among peers at 9.7%; N1 is at a low 11.6%
- Significant potential for liquidity problems:
  - Sector-lowest cushion of highly liquid assets (7% of assets and 9% of total deposits)
  - Considerable net interbank borrower position: 3.3% of total assets
  - Large negative ALM gap of 13% of assets for maturities less than six months

Bank St Petersburg: multiples and key metrics

	2009*	2010*	2011E	2012E	2013E
P/B	0.7	1.2	0.8	0.9	0.8
P/EBPT	1.6	3.1	2.8	3.1	3.3
P/SEBPT	1.9	3.7	3.0	3.2	3.4
RoAE	2.9%	15.3%	19.2%	-4.9%	11.0%
SEBPT return	36.9%	34.5%	30.3%	26.8%	24.9%
NIS	4.9%	5.0%	4.8%	4.5%	4.5%
C/I	25%	30%	35%	38%	40%

*historical multiples: average market cap for respective year divided by respective metric

Source: IFRS data, Bloomberg, Aton estimates

Bank St Petersburg: Balance sheet (RUBmn)

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Cash and equivalents	4,021	6,239	5,560	5,842	8,401	10,823	10,501	10,117	9,728
Interbank assets	13,880	49,991	23,101	21,407	15,815	23,513	17,604	17,583	16,813
Securities	13,085	4,994	33,562	45,653	53,501	48,151	52,260	55,577	59,381
Loan portfolio	91,730	144,883	158,200	182,818	204,941	182,045	190,705	202,684	218,622
Premises and equipment	3,433	6,946	10,112	11,763	12,586	12,586	12,964	13,612	14,293
Other assets	506	2,662	5,071	5,126	7,259	9,578	9,578	8,088	7,126
Total assets	**126,656**	**215,715**	**235,606**	**272,609**	**302,502**	**286,697**	**293,612**	**307,661**	**325,961**
Interbank liabilities	677	32,320	16,002	11,326	20,388	40,775	33,436	27,584	22,757
Customer accounts	88,729	139,824	175,990	191,808	210,021	180,387	190,924	202,339	216,172
Debt issued	21,654	23,869	17,471	39,768	36,569	32,555	33,265	38,059	42,839
Other liabilities	591	897	859	1,142	1,774	1,648	1,915	1,620	1,651
Total liabilities	**111,651**	**196,911**	**210,322**	**244,044**	**268,751**	**255,365**	**259,539**	**269,602**	**283,418**
Equity	**15,005**	**18,805**	**25,285**	**28,564**	**33,750**	**31,332**	**34,072**	**38,059**	**42,543**

Source: IFRS financials, Aton estimates

Bank St Petersburg: Income statement (RUBmn)

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Core revenues	**5,557**	**10,889**	**11,911**	**13,740**	**14,898**	**14,157**	**13,878**	**14,662**	**15,384**
Net interest income	4,668	9,503	10,421	12,024	12,918	12,058	11,645	12,305	12,903
Net fee and commission income	889	1,386	1,489	1,715	1,981	2,099	2,233	2,357	2,481
Operating expenses	-2,429	-3,852	-3,773	-4,450	-5,463	-5,451	-5,739	-6,119	-6,460
SEBPT	**3,128**	**7,038**	**8,138**	**9,289**	**9,435**	**8,706**	**8,139**	**8,543**	**8,924**
NRI	517	203	3,135	333	610	300	315	331	347
EBPT	**3,645**	**7,241**	**11,273**	**9,622**	**10,045**	**9,006**	**8,454**	**8,873**	**9,271**
Provisioning	-1,007	-3,396	-10,512	-4,485	-2,572	-11,005	-3,954	-3,840	-3,615
Pre-tax profit	**2,638**	**3,845**	**761**	**5,137**	**7,474**	**-1,999**	**4,500**	**5,033**	**5,656**
Income tax	-629	-1,071	-121	-1,022	-1,495	400	-900	-1,007	-1,131
Net income	**2,009**	**2,774**	**640**	**4,115**	**5,979**	**-1,600**	**3,600**	**4,027**	**4,525**

Source: IFRS financials, Aton estimates

Bank St Petersburg: Key metrics

	2006	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Capitalisation										
Capitalisation ratio		11.8%	8.7%	10.7%	10.5%	11.2%	10.9%	11.6%	12.4%	13.1%
Asset quality										
Reported NPL ratio (90+)		0.2%	0.3%	6.4%	4.9%					
Reserve coverage		1124%	1210%	142%	196%					
Real NPL ratio (90+)		0.8%	2.6%	9.8%	7.7%					
Credit charge		1.5%	2.8%	6.5%	2.4%	1.2%	5.0%	1.8%	1.6%	1.4%
Profitability and efficiency										
RoAA		2.1%	1.6%	0.3%	1.6%	2.1%	-0.5%	1.2%	1.3%	1.4%
RoAE		20.6%	16.4%	2.9%	15.3%	19.2%	-4.9%	11.0%	11.2%	11.2%
SEBPT return		32.1%	41.6%	36.9%	34.5%	30.3%	26.8%	24.9%	23.7%	22.1%
NRI return		5.3%	1.2%	14.2%	1.2%	2.0%	0.9%	1.0%	0.9%	0.9%
Cost / Income		41%	35%	25%	30%	35%	38%	40%	41%	41%
Net interest spread (NIS)		5.1%	5.7%	4.9%	5.0%	4.8%	4.5%	4.5%	4.5%	4.3%
Net interest margin (NIM)		5.3%	6.0%	5.0%	5.2%	4.9%	4.6%	4.5%	4.6%	4.5%
Liquidity										
Liquid asset ratio		14.1%	26.1%	12.2%	10.0%	8.0%	12.0%	9.6%	9.0%	8.1%
Quasi-liquid asset ratio		24.5%	28.4%	26.4%	26.7%	25.7%	28.8%	27.4%	27.1%	26.4%
Growth rates										
Loans		131%	58%	9%	16%	12%	-11%	5%	6%	8%
Assets		109%	70%	9%	16%	11%	-5%	2%	5%	6%
Deposits		98%	58%	26%	9%	9%	-14%	6%	6%	7%
Equity		233%	25%	34%	13%	18%	-7%	9%	12%	12%
Core revenues		69%	96%	9%	15%	8%	-5%	-2%	6%	5%
SEBPT		77%	125%	16%	14%	2%	-8%	-7%	5%	4%
Net profit		68%	38%	-77%	543%	45%	nm	nm	12%	12%

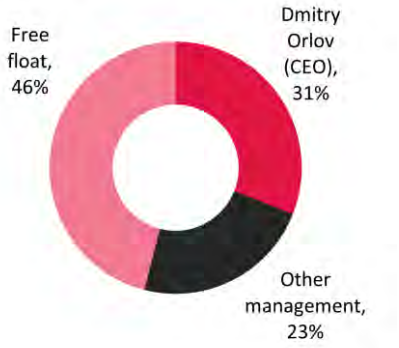
Source: IFRS financials, Aton estimates

BANK VOZROZHDENIE

	Ord	Pref
	SELL	SELL
Target price	383	153
Downside	-51%	-49%

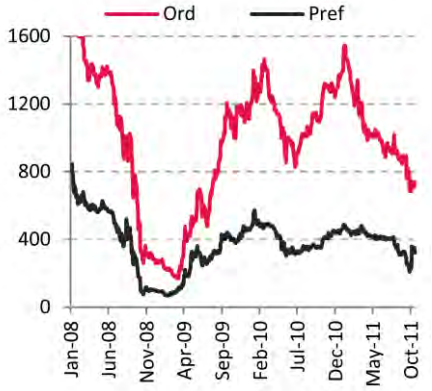
Bloomberg code	VZRZ RX
Reuters code	VZRZ.MM
Price (ord, RUB)	776
Price (pref, RUB)	300
Shares/ADR ratio (x)	n/a
Share data	
No. of ordinary shares (mn)	23.7
No. of preferred shares (mn)	1.3
Daily t/o ($mn)	0.2
Free float (%)	46%
Market capitalisation ($mn)	617

Shareholder structure



Source: Bank data, Aton estimates

Share price performance (RUB)



Source: Bloomberg

Bank Vozrozhdenie is the 25th-largest bank in Russia with assets of RUB175bn in 1H11. VZRZ operates predominantly in Moscow and the Moscow region with a focus on SME lending (58% of total loan book). The bank positions itself as a community bank and adheres to the classical banking model. VZRZ maintains a more conservative approach in its banking business vs the other traded Russian banks.

Key bull points:

- One of the best prepared among the five traded banks to withstand a doomsday scenario
- Good earnings quality due to higher resilience of the bottom line to crises and a high share of profitable and stable fee and commission business, though CEF is quite volatile
- Stable base for future RoE growth as net profit has been driven recently by the CEF component
- Very conservative liquidity profile with a highly liquid asset ratio of 18%
- Most balanced corporate governance profile among its peers with a CGS of 6.7 and none of its subcomponents falling below the red-flag threshold of 5.0
- Most balanced currency ALM

Key bear points:

- Low overall profitability with RoE in single digits since YE08
- NIS has declined dramatically from one of the strongest to the weakest among its peers since 2008 although its recovery potential is the highest
- Lowest cost efficiency with the highest C/I among its peers (70% vs 47% in 1H11)
- Relatively low capitalisation with Basel Total CAR of 13.6% (peer average: 15.0%) and a CBR N1 ratio of 11.7% (very close to the minimum regulatory requirement of 10%)

Vozrozhdenie's multiples and key metrics

	2009*	2010*	2011E	2012E	2013E
P/B	1.0	1.7	1.0	1.1	1.0
P/EBPT	2.5	5.9	4.9	4.3	4.6
P/SEBPT	2.9	6.9	5.2	4.4	4.7
RoAE	7.8%	3.5%	8.3%	-4.9%	7.0%
SEBPT return	36.6%	13.6%	20.2%	23.5%	21.6%
NIS	6.5%	4.1%	4.5%	4.3%	4.3%
C/I	49%	74%	69%	63%	66%

* historical multiples: average market cap for respective year divided by respective metric

Source: IFRS data, Bloomberg, Aton estimates

Bank Vozrozhdenie: Balance sheet (RUBmn)

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Cash and equivalents	7,546	9,123	10,510	11,864	9,434	8,238	8,728	8,619	8,552
Interbank assets	14,228	21,554	30,822	27,219	18,714	19,649	20,632	21,663	22,747
Securities	7,346	11,401	11,068	14,225	16,359	14,723	15,979	16,994	18,157
Loan portfolio	78,149	94,575	85,205	104,046	126,516	112,090	118,153	127,365	139,506
Premises and equipment	2,992	3,234	3,102	3,132	3,132	3,132	3,195	3,290	3,389
Other assets	1,143	1,324	4,896	5,672	5,672	7,657	7,657	7,121	6,623
Total assets	**111,404**	**141,211**	**145,603**	**166,158**	**179,826**	**165,489**	**174,344**	**185,052**	**198,973**
Interbank liabilities	4,845	21,360	4,368	7,772	10,104	15,155	14,398	14,398	14,830
Customer accounts	81,612	90,336	113,129	130,334	137,677	119,693	126,265	133,782	143,196
Debt issued	12,527	13,714	10,942	10,087	11,975	11,214	11,999	12,599	13,229
Other liabilities	530	736	878	1,105	1,757	2,011	3,026	3,886	5,339
Total liabilities	**99,514**	**126,146**	**129,317**	**149,298**	**161,512**	**148,074**	**155,688**	**164,665**	**176,594**
Equity	**11,890**	**15,065**	**16,286**	**16,860**	**18,314**	**17,415**	**18,657**	**20,388**	**22,379**

Source: IFRS financials, Aton estimates

Bank Vozrozhdenie: Income statement (RUBmn)

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Core revenues	**8,581**	**12,622**	**12,055**	**9,426**	**11,477**	**11,534**	**11,588**	**12,351**	**13,071**
Net interest income	5,570	8,494	8,326	5,491	6,815	6,665	6,476	6,982	7,434
Net fee and commission income	3,011	4,128	3,729	3,935	4,663	4,869	5,113	5,368	5,637
Operating expenses	-5,732	-7,043	-6,325	-7,180	-7,922	-7,335	-7,697	-8,038	-8,485
SEBPT	**2,849**	**5,579**	**5,730**	**2,246**	**3,555**	**4,199**	**3,892**	**4,313**	**4,586**
NRI	566	722	941	352	182	100	105	110	116
EBPT	**3,415**	**6,301**	**6,671**	**2,598**	**3,737**	**4,299**	**3,997**	**4,423**	**4,702**
Provisioning	-885	-2,199	-4,752	-1,872	-1,911	-5,404	-2,427	-2,241	-2,194
Pre-tax profit	**2,530**	**4,102**	**1,919**	**726**	**1,826**	**-1,105**	**1,570**	**2,182**	**2,508**
Income tax	-626	-965	-702	-145	-365	221	-314	-436	-502
Net profit	**1,904**	**3,137**	**1,217**	**581**	**1,460**	**-884**	**1,256**	**1,746**	**2,006**

Source: IFRS financials, Aton estimates

Bank Vozrozhdenie: Key metrics

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Capitalisation									
Capitalisation ratio	10.7%	10.7%	11.2%	10.1%	10.2%	10.5%	10.7%	11.0%	11.2%
Asset quality									
Reported NPL ratio (90+)	2.1%	2.1%	7.2%	7.4%					
Reserve coverage	168%	225%	138%	132%					
Real NPL ratio (90+)	4.2%	2.9%	8.9%	10.7%					
Credit charge	1.3%	2.4%	4.9%	1.8%	1.5%	4.0%	1.8%	1.6%	1.4%
Profitability and efficiency									
RoAA	2.1%	2.5%	0.8%	0.4%	0.8%	-0.5%	0.7%	1.0%	1.0%
RoAE	21.9%	23.3%	7.8%	3.5%	8.3%	-4.9%	7.0%	8.9%	9.4%
SEBPT return	32.7%	41.4%	36.6%	13.6%	20.2%	23.5%	21.6%	22.1%	21.4%
NRI return	6.5%	5.4%	6.0%	2.1%	1.0%	0.6%	0.6%	0.6%	0.5%
C/I	64%	53%	49%	74%	69%	63%	66%	65%	64%
NIS	6.8%	7.4%	6.5%	4.1%	4.5%	4.3%	4.3%	4.2%	4.1%
NIM	6.8%	7.5%	6.5%	4.0%	4.4%	4.3%	4.3%	4.4%	4.3%
Liquidity									
Liquid asset ratio	19.5%	21.7%	28.4%	23.5%	15.7%	16.9%	16.8%	16.4%	15.7%
Quasi-liquid asset ratio	26.1%	29.8%	36.0%	32.1%	24.7%	25.7%	26.0%	25.5%	24.9%
Growth rates									
Loans	49%	21%	-10%	22%	22%	-11%	5%	8%	10%
Assets	52%	27%	3%	14%	8%	-8%	5%	6%	8%
Deposits	35%	11%	25%	15%	6%	-13%	5%	6%	7%
Equity	116%	27%	8%	4%	9%	-5%	7%	9%	10%
Core revenues	55%	47%	-4%	-22%	22%	0%	0%	7%	6%
SEBPT	118%	96%	3%	-61%	58%	18%	-7%	11%	6%
Net profit	138%	65%	-61%	-52%	151%	nm	nm	39%	15%

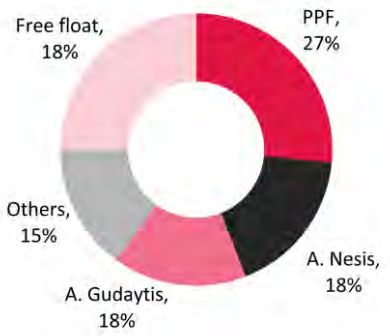
Source: IFRS financials, Aton estimates

NOMOS BANK

	GDR
	SELL
Target price	6.86
Downside	-44%

Bloomberg code	NMOS LI
Reuters code	NMOSq.L
Price (GDR , $)	12.4
Shares/GDR ratio (x)	1:2
Share data	
No. of ordinary shares (mn)	92.4
Daily t/o ($mn)	1.4
Free float (%)	18%
Market capitalisation ($mn)	2,283

Shareholder structure



Source: Bank data, Aton

Share price performance ($)

Source: Bloomberg

NOMOS Bank is Russia's ninth-largest banking group overall (and second-largest private banking group) with IFRS-based assets of RUB572bn as of 1H11. It combines NOMOS Bank and Bank Khanty-Mansiysk (BKM) along with several smaller institutions. The group operates one of the largest retail networks in Russia comprising 232 offices with Moscow and Tyumen as its core markets.

Key bull points:

- Good corporate governance standards (CGS of 6.8) though the inclusion of BKM could lead to a deterioration
- Solid NRI returns due to large share of stable precious metals operations
- Low NCA burden of less than 0.6% of total assets

Key bear points:

- Poor ability to withstand the impact of a deep recession due to its low-quality assets. In particular, NOMOS has:
  - Strong exposure to low-quality securities (15% of assets, mostly corporate bonds and illiquid promissory notes)
  - The largest lending exposure to highly cyclical sectors (46% of loan book), represented mainly by real estate (22%) and financial companies (20%)
  - Considerable amounts of hidden NPLs in the form of restructured loans
- Below-average earnings quality due to a volatile CEF component (with little growth potential) and skew towards NRI rather than stable F&CI. RoE has been driven recently by volatile non-CEF and the future growth base is unstable.
- Below-average efficiency of commercial banking operations with SEBPT an average 10% lower than the other traded banks (excluding VTB)
- Real reserve coverage is insufficient at only 68%
- Below-average capitalisation: its N1 ratio is 11.2%, very close to the statutory minimum of 10%
- The most fragile funding structure among peers, highlighted by the large share of interbank funding (17% of assets) and its net interbank borrower position (a negative gap of 8.5% of total assets)
- Corporate governance drawbacks including the quality of financial reporting
- Significant ALM gap of 7% of assets for maturities less than six months

NOMOS Bank: multiples and key metrics

	2009	2010	2011E	2012E	2013E
P/B	n/a	n/a	0.9	1.0	0.8
P/EBPT	n/a	n/a	4.6	4.1	4.2
P/SEBPT	n/a	n/a	4.8	4.5	4.6
RoAE	12.3%	16.8%	13.3%	-1.6%	10.4%
SEBPT return	34.5%	23.4%	21.9%	21.2%	19.5%
NIS	6.4%	5.1%	4.8%	4.6%	4.7%
C/I	29%	44%	53%	49%	51%

Source: IFRS data, Bloomberg, Aton estimates

NOMOS Bank: Balance sheet (RUBmn)

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Cash and equivalents	4,353	4,087	6,102	13,896	16,924	17,122	16,598	15,749	15,303
Interbank assets	21,150	29,444	35,980	70,988	74,570	77,676	78,724	79,786	82,474
Securities	34,323	38,857	59,203	82,137	93,200	80,617	87,498	93,051	99,419
Loan portfolio	132,162	187,721	162,650	339,302	416,119	369,003	388,552	415,119	450,019
Premises and equipment	4,388	5,198	6,021	10,976	10,976	10,976	11,305	11,644	11,994
Other assets	2,624	12,488	7,156	12,918	16,905	21,212	21,727	21,587	21,519
Total assets	**199,000**	**277,795**	**277,111**	**530,217**	**628,693**	**576,606**	**604,405**	**636,936**	**680,728**
Interbank liabilities	50,696	68,297	48,397	59,839	119,677	131,645	127,696	125,142	128,896
Customer accounts	85,230	116,071	134,204	313,376	338,481	285,374	301,783	321,399	343,897
Debt issued	35,851	56,704	55,115	94,670	92,527	83,217	89,303	94,735	100,503
Other liabilities	2,741	4,219	2,783	4,397	3,745	3,504	2,892	2,185	1,599
Total liabilities	**174,518**	**245,290**	**240,499**	**472,282**	**554,430**	**503,741**	**521,674**	**543,461**	**574,894**
Equity	**24,482**	**32,505**	**36,612**	**57,935**	**74,263**	**72,866**	**82,731**	**93,475**	**105,834**

Source: IFRS financials, Aton estimates

NOMOS Bank: Income statement (RUBmn)

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Core revenues	**8,745**	**14,802**	**19,272**	**24,316**	**31,860**	**31,917**	**32,317**	**33,745**	**36,290**
Net interest income	7,441	13,195	17,520	20,446	26,417	26,202	26,202	27,263	29,484
Net fee and commission income	1,304	1,606	1,753	3,870	5,443	5,715	6,115	6,482	6,806
Operating expenses	-4,231	-5,558	-7,356	-13,251	-17,356	-16,330	-17,119	-18,169	-19,131
SEBPT	**4,515**	**9,243**	**11,917**	**11,065**	**14,504**	**15,587**	**15,198**	**15,576**	**17,159**
NRI	2,408	291	5,172	5,903	685	1,500	1,575	1,654	1,720
EBPT	**6,923**	**9,535**	**17,089**	**16,968**	**15,189**	**17,087**	**16,773**	**17,230**	**18,879**
Provisioning	-2,365	-5,090	-11,549	-3,977	-4,162	-18,520	-6,657	-6,211	-6,206
Pre-tax profit	**4,557**	**4,444**	**5,540**	**12,991**	**11,026**	**-1,433**	**10,116**	**11,018**	**12,673**
Income tax	-1,138	-957	-1,279	-2,546	-2,205	287	-2,023	-2,204	-2,535
Net income	**3,419**	**3,487**	**4,261**	**10,445**	**8,821**	**-1,146**	**8,093**	**8,815**	**10,139**

Source: IFRS financials, Aton estimates

NOMOS Bank: Key metrics

	2007	2008	2009	2010	2011E	2012E	2013E	2014E	2015E
Capitalisation									
Capitalisation ratio	12.3%	11.7%	13.2%	10.9%	11.8%	12.6%	13.7%	14.7%	15.5%
Asset quality									
Reported NPL ratio (90+)	0.1%	1.6%	6.8%	2.7%					
Reserve coverage	0%	371%	153%	182%					
Real NPL ratio (90+)	2.8%	4.0%	14.7%	7.3%					
Credit charge	2.2%	3.0%	6.4%	1.7%	1.2%	5.0%	1.8%	1.6%	1.4%
Profitability and efficiency									
RoAA	2.2%	1.5%	1.5%	2.2%	1.5%	-0.2%	1.4%	1.4%	1.5%
RoAE	17.2%	12.2%	12.3%	16.8%	13.3%	-1.6%	10.4%	10.0%	10.2%
SEBPT return	22.7%	32.4%	34.5%	23.4%	21.9%	21.2%	19.5%	17.7%	17.2%
NRI return	12.1%	1.0%	15.0%	12.5%	1.0%	2.0%	2.0%	1.9%	1.7%
C/I	38%	36%	29%	44%	53%	49%	51%	51%	50%
NIS	4.7%	5.7%	6.4%	5.1%	4.8%	4.6%	4.7%	4.6%	4.6%
NIM	5.2%	6.0%	6.9%	5.5%	5.0%	4.8%	4.9%	4.9%	4.9%
Liquidity									
Liquid asset ratio	13.4%	13.3%	16.9%	16.9%	14.9%	16.9%	16.2%	15.5%	15.0%
Quasi-liquid asset ratio	30.6%	27.2%	38.2%	32.4%	29.7%	30.8%	30.7%	30.1%	29.6%
Growth rates									
Loans	80%	42%	-22%	104%	73%	-12%	5%	7%	9%
Assets	82%	40%	0%	91%	68%	-8%	5%	5%	7%
Deposits	76%	36%	16%	134%	61%	-16%	6%	7%	7%
Equity	59%	33%	13%	58%	58%	-2%	14%	13%	13%
Core revenues	73%	69%	30%	26%	31%	0%	1%	4%	8%
SEBPT	90%	105%	29%	-7%	31%	7%	-2%	2%	10%
Net income	58%	2%	22%	145%	19%	nm	nm	9%	15%

Source: IFRS financials, Aton estimates

Appendix I – Derivation of RoE Decomposition Model

Following the lines of the classic DuPont model for companies, we decomposed the RoE of a bank into five components in the following manner:

$$RoE = \frac{Net\ profit}{Pretax\ profit} \cdot \frac{Pretax\ profit}{EBPT} \cdot \frac{EBPT}{Revenue} \cdot \frac{Revenue}{Assets} \cdot \frac{Assets}{Equity}$$

We then simplified each of the five terms. The first component boils down to one minus the tax rate:

$$\frac{Net\ profit}{Pretax\ profit} = \frac{EAT}{EBT} = \frac{EBT - Tax}{EBT} = 1 - t$$

The second factor can be simplified in a similar way to single out provisioning:

$$\frac{EBT}{EBPT} = \frac{EBPT - Provisioning}{EBPT}$$

The numerator of the third multiplier can be expressed as the difference between revenue and operating expenses, which ultimately transforms it into one minus the cost-to-income ratio:

$$\frac{EBPT}{Revenue} = \frac{Revenue - Operating\ expenses}{Revenue} = 1 - {}^{C}/_{I}$$

The fourth factor required more operations. First, we break revenue into net interest income (NII) and net non-interest income (NNII). The latter can be further decomposed into income related to net fee and commission income (F&CI) and non-recurring income (NRI).

$$\frac{Revenue}{Assets} = \frac{NII + NNII}{Assets} = \frac{NII}{Assets} + \frac{F\&CI}{Assets} + \frac{NRI}{Assets}$$

Then, we divide the numerator and denominator of the first summand by interest-earning assets (IEA). This transforms the numerator into NIM and the denominator into the inverse of the share of IEA in total assets. This gives us the following expression:

$$\frac{NIM}{1/(IEA/Assets)} + \frac{F\&CI}{Assets} + \frac{NRI}{Assets}$$

The last component is already a standard leverage ratio, which is an inverse of the straight capitalisation ratio.

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