

An Analysis of Russian Equity Capital Markets

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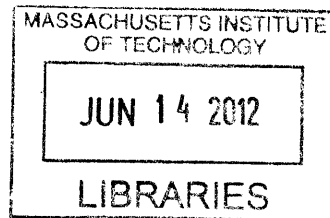
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ABSTRACT

This paper begins with the assumption that stock market development has a positive and causal relationship with long run economic growth. It thus takes the view that developing the equity market is an important policy objective for the Russian government. Through a series of interviews, data collection and a review of the literature, it is found that the Russian equity market is rather underdeveloped as measured by its liquidity, free float capitalization and industry concentration. In order to stimulate the development of the market, the paper focuses on the attraction of long term capital to sustainably increase the size and liquidity of the market and reduce volatility. A set of viable reforms are suggested to achieve this goal including: 1) the upgrade of market infrastructure primarily through the creation of a Central Settlement Depository and relaxation of prefunding requirements, 2) corporate governance improvements through a reduced government participation, increased board independence and the introduction of a minimum free float requirement and 3) Incentives for the pooling of long term domestic capital, in particular through the diversification of risk using cross-country swaps.

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INTRODUCTION

In an oft cited empirical study on the subject Levine and Zervos (1996) attempt to “assess whether stock markets are merely burgeoning casinos where more and more players are coming to place bets or whether stock markets are importantly linked to economic growth” (p2). Their conclusion is that there is a positive and significant correlation between stock market development and long run growth. In a follow up study (1998) they find that in particular stock market liquidity is “a robust predictor of real per capita gross domestic product growth, physical capital growth and productivity growth.” Greenwood and Smith (1996) also show that larger stock markets can lower the cost of mobilizing savings and thereby facilitate investment in the most productive technologies.

This paper does not aim to engage in the debate over the link between stock markets and long run growth¹. Rather, it accepts the position that Levine (1996) laid out in that stock market development has a positive and causal relationship with long run economic growth. It thus takes the view that developing the stock market is an important policy objective for the Russian government.

Section I comprises an analysis of the current state of development of the Russian stock market. Development is measured with consideration of the aforementioned studies, placing the emphasis on size and liquidity. It is shown that when considering free float market capitalisation the Russian market is underdeveloped relative to peers with respect to its size. On the liquidity dimension it is shown that while the extraordinarily high turnover and tight bid-ask spreads do not obviously signal illiquidity, the liquidity that exists is very concentrated with the top 10 stocks accounting for 85% of total secondary market liquidity. In addition primary market liquidity has declined significantly since the 2008 global financial crisis, with many cancelled and postponed IPOs and a continuing internationalisation trend. In addition the question is raised as to the impact of this internationalisation on the liquidity of local listings. Overall, the author finds the Russian market deceptively underdeveloped with respect to its position in the international community and its level of economic activity. It finds that while internationalisation may have an impact on domestic liquidity, this is a simply a reaction to market demand and a symptom of greater underlying structural issues that need to be addressed.

Section II considers what can be done to increase the development of the domestic stock market. It focuses on the attraction of long term capital to sustainably increase the size and liquidity of the market and reduce volatility.

¹ the author acknowledges that the issue is still hotly contested in the academic world

It highlights three key areas of required reform:

1. Upgrade of market infrastructure: creation of a Central Settlement Depository and relaxation of prefunding requirements
2. Corporate Governance: reduction of government participation in stock market, increased number of truly independent directors and introduction of minimum free float requirements
3. Domestic Institutional Investors: incentives for the pooling of long term capital, in particular looking at diversification of risk using cross-country swaps

The analysis is undertaken using a combination of literature review, interviews with market participants and the author's professional experience. Interviews were conducted with a diverse group of market participants, including Equity Strategists, Investment Bankers, Private Bankers, Equity Market Traders, Foreign Investors and a Russian Hedge Fund manager. A group of Russians not affiliated in any way with the financial markets were also interviewed for their perspective.

It was agreed that interview participants would retain anonymity to facilitate a frank discussion on all topics including those which are controversial or sensitive in nature.

SECTION I

THE CURRENT STATE OF STOCK MARKET DEVELOPMENT

SECTION I

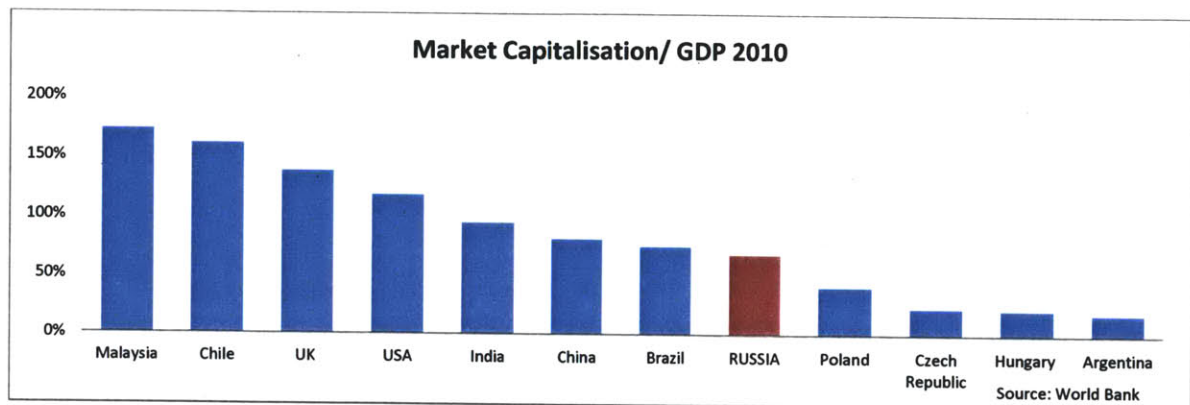
THE CURRENT STATE OF STOCK MARKET DEVELOPMENT

I:I Measuring the Size of the Market

Market Capitalisation/GDP

The Russian stock market has a market capitalisation of roughly \$700bn, i.e. the price of all shares of public companies multiplied by the number of shares in issue sums to this total. When normalising by GDP, the market capitalisation comes to c.70% of GDP (2010), above its ex-Soviet peers but slightly below its BRIC² peers. The more highly developed equity markets such as the US, the UK, Chile and Malaysia have an equity market penetration in excess of GDP, signifying that Russia has considerable scope for increasing its public listings.

Figure 1



Equity Free Float

The numbers above represent the total market capitalisation of public companies, however it is very common in emerging markets that a significant portion of these shares are not available for purchase by the public. These non-publicly trading shares generally constitute government, family/owner and or management holdings in addition to strategic stakes held by other companies. For the purposes of measuring stock market development in emerging markets it is most meaningful to compare the size of the free float (i.e. shares available for purchase in the market). It is not a trivial task trying to estimate the free float capitalisation and while there is often no official exact number, there is a general consensus as to the approximate free float levels. According to MICEX the average free float of the MICEX index³ is 30% and the market cap weighted free float is 38% as of 2010.

In 2004, a CSFB strategy report⁴ compared the free float of all emerging markets using their proprietary research database (see figure 2). While the absolute numbers may now be somewhat dated, the relative order is consistent with the information provided by the interviews with market

² BRIC: Brazil, Russia, India and China

³ The MICEX index comprises 98% of the total market capitalisation in Russia

⁴ Russian Equity Strategy, CSFB, March 2004

participants. Russia was continuously cited for its very low free float, all the while other major markets have actively been trying to increase liquidity by introducing a minimum free float requirement.⁵ CSFB found that of all significant emerging equity markets, Russia has the lowest free float available to the public.

Thus, using this data, we can obtain the relative position of Russia on a free float market capitalisation/GDP basis (see figure 3). The result is that the Russian equity market is actually very small compared to its potential size (as a function of GDP), at the same level as its much smaller ex-Soviet peers and significantly below the other BRIC economies. Despite the absolute market capitalisation appearing so large, based on free float capitalisation, it could be deduced that the Russian equity market is actually quite undeveloped relative to its potential, should certain structural impediments be addressed.

Figure 2

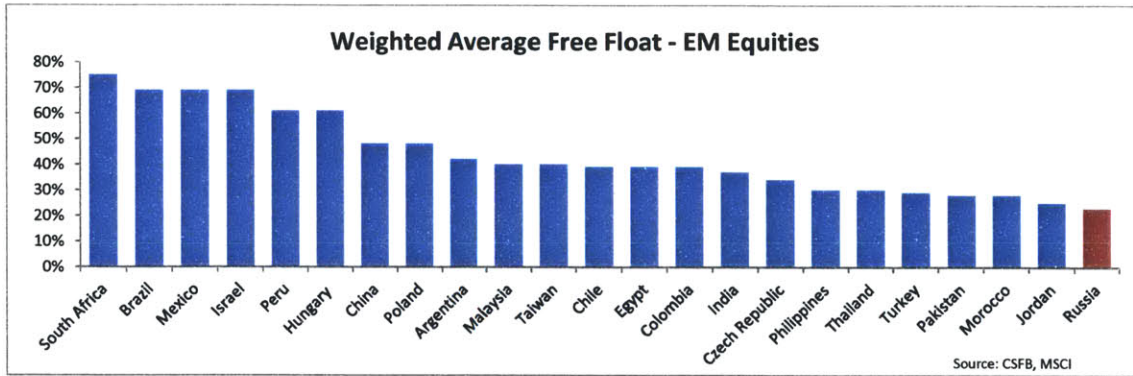
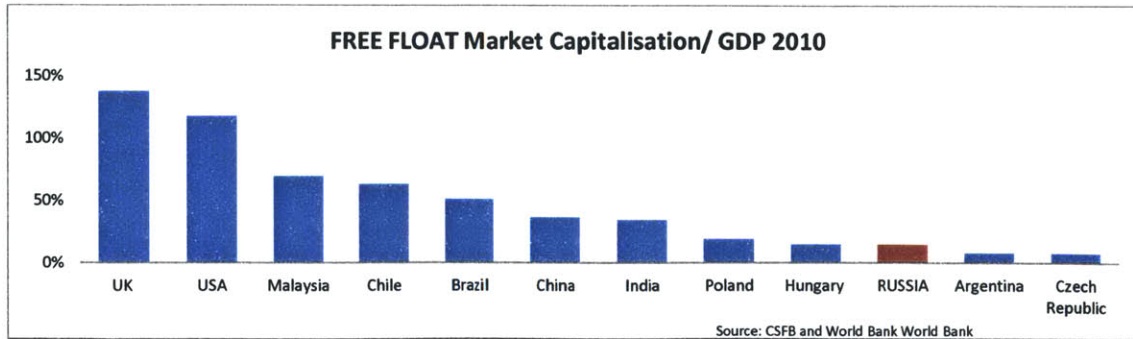


Figure 3



⁵ For example Brazil, India, HK, US, UK and the EU have all introduced minimum free float requirements for listed companies (see exchange websites)

Equity Market Concentration

The Russian equity market is very concentrated with the top ten firms accounting for 84% of the free float market capitalisation. The largest three largest companies by free float capitalisation (Gazprom, Lukoil and Sberbank) account for over 50% of the total market (figure 4). According to a study by the Romei & Jopson (2011) Russia's market concentration is similar to that of Brazil and significantly higher than that of China and India (figure 5). After making an adjustment for the free float capitalisation of the largest public companies in Brazil, it can be seen that the concentration of the Russian stock market free float is actually 10% higher than that of Brazil (figure 6). Furthermore, the free float is highly concentrated in the resource sector with 71% of the free float attributed to Oil, Gas and Mining (figure 7).

Figure 4

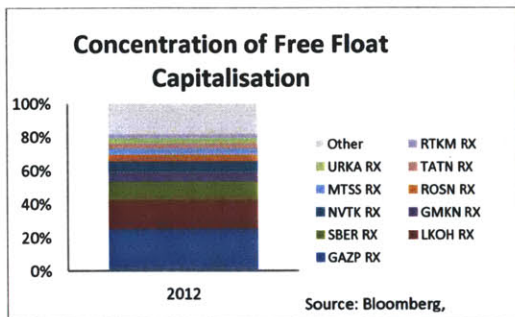


Figure 5

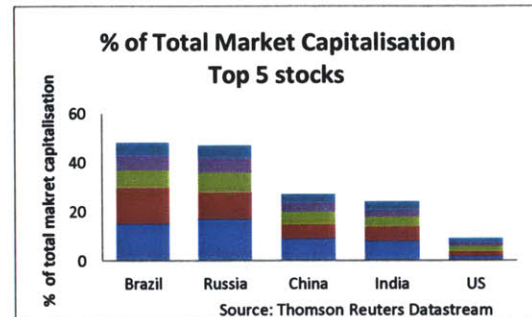


Figure 6

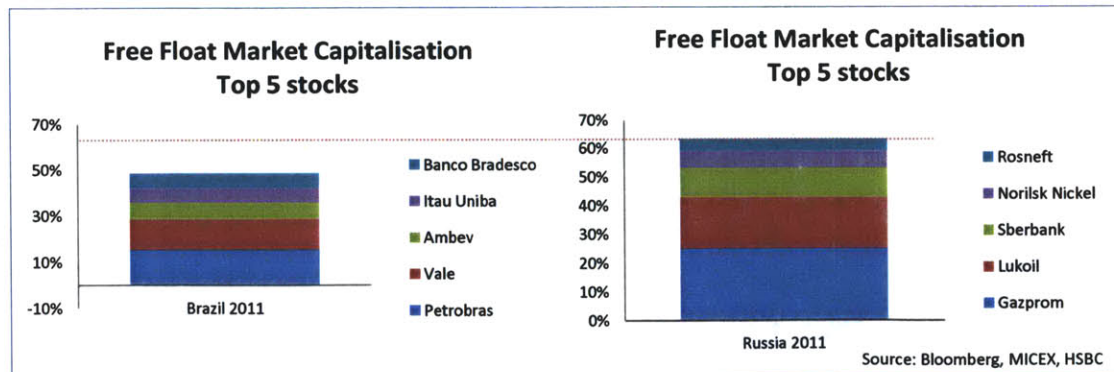
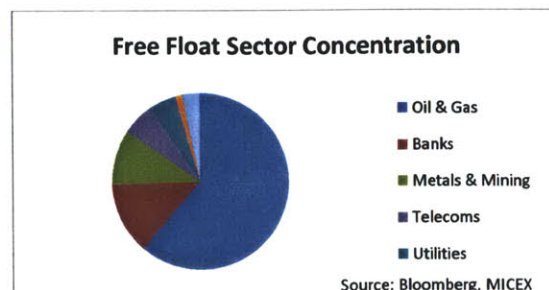


Figure 7



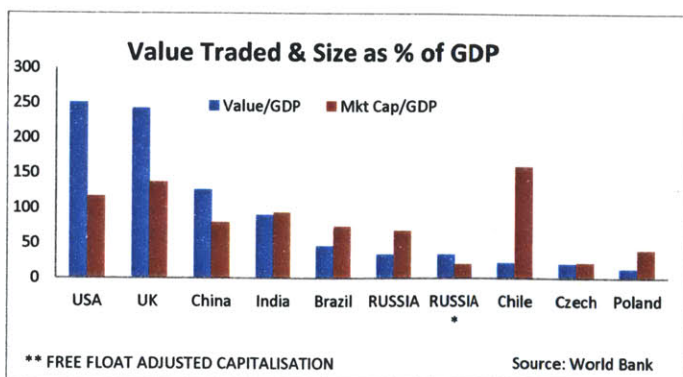
I:II Liquidity

Harris (1990, p3) defines liquidity as follows: “A market is liquid if traders can buy or sell large numbers of shares when they want and at low transaction costs. Liquidity is the willingness of some traders (often but not necessarily dealers) to take the opposite side of a trade that is initiated by someone else, at low cost.” Another oft quoted and early definition is by Keynes (1930), who considers an asset as more liquid if “it is more certainly realizable at short notice without loss” While a definition of liquidity can be agreed on, measurement is more complicated due to its multi-dimensional characteristics. Harris (1990) identified 4 dimensions of liquidity; width, depth, resiliency and immediacy. Width as measured by bid-ask spread, depth as the volume traded at said bid ask spread, immediacy as the time it takes to achieve the trade at desired spread/volume and lastly resiliency as the time it takes for prices to re-adjust after a large, price moving order. For the purpose of this paper, it was not possible to obtain such detailed information on the Russian equity trading history so a combination of liquidity proxies are considered instead.

Value of shares traded as a % of GDP

This indicator attempts to measure the depth of the market. Using this proxy international markets suggest that very liquid markets tend to have a value traded close to or above its market capitalisation. As can be seen in figure 8, certain markets show a large differential between value traded and market size with highly developed markets such as the UK and US exhibiting a trading value significantly higher than the market size. While on first take it would appear that Russia is on the low end of this scale, when adjusting Russia for its free float we can see that the traded value is actually 60% higher than its market capitalisation indicating a reasonably liquid market. The large negative differential in the cases of Poland and Chile which are generally accepted to be reasonably developed markets may be due to the dominance of pension funds ownership⁶ who are traditionally ‘Buy and Hold’ investors.⁷

Figure 8



⁶ Both Chile and Poland have mandatory pension schemes

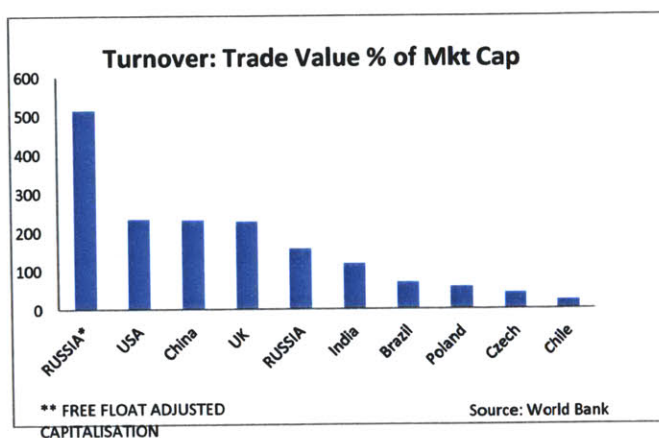
⁷ Wahal (1996) finds a relationship between institutional ownership and the liquidity of a firms stock.

Turnover: Value Traded as % of Market Capitalisation

Russia's free float adjusted turnover is extremely high at almost 500%. The consensus from interview participants was that this is representative of the speculative nature of local retail investors and some foreign hedge funds who trade at a very high frequency.

In a 2010 strategy report, Kingsmill Bond of Troika Dialog wrote "One anomalous aspect of the Russian equity market is that trading is so remarkably high...given the lack of domestic money. We believe the answer to this... is that domestic investors trade with alarming frequency." (Bond 2010, p18)

Figure 9



Bid-Ask Spread & Trading Costs

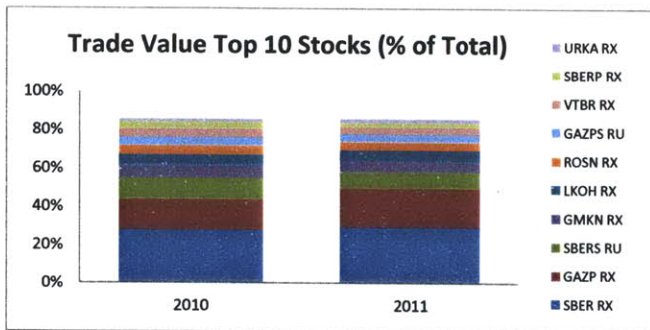
As mentioned above, it was not possible to obtain historical bid-ask spreads for this paper, however interviewees did discuss recent trends. The bid-ask spreads for the largest stocks are very tight. Commissions are not levied for local institutional and hedge funds investors and foreigners pay comparably to other major markets. In the second tier, spreads were quite wide for foreign investors trading large blocks due to the price risk incurred by brokers. In second tier block trades, the broker will often borrow the stock to fill the order and then slowly buy the stock back in the market at as best a price possible (this can take weeks in some cases). The differential between the order price and the price the broker manages to buy the stock back for is price risk. For local investors who buy in much smaller quantities the spread is quite narrow as the orders are crossed easily in the market without meaningful risk to the broker. Post 2008, foreigners are less active in the trading of second tier stocks, accordingly such wide spreads are now rarely seen. With the establishment of Direct Market Access (DMA) platforms and several price aggressive new competitors, spreads in both top and second tier stocks have continued to tighten. The overall takeaway from interviewees was that bid-ask spreads

reflect liquidity in the top tier names but that the size of the trade for second tier stocks alters the spread greatly as there is very little liquidity to do large trades in second tier stocks.

Concentration of trading volume and value

The concentration of trading volume/ value indicates to us where this liquidity is located in the market. The picture for Russian liquidity concentration is even more striking than for its market capitalisation. 65% of trading liquidity is in the top three stocks (Sberbank, Gazprom and Norilsk Nickel) with the top ten stocks accounting for 85% of the total trading value. This is in line with the discussion of the second tier stock liquidity as above. Sector wise, only basic resources and banking stocks are represented (see figure 10).

Figure 10



Thus, while the Russian market is not short of liquidity on the aggregate level, on a composite level it can be shown that the high level of liquidity only exists for a small number of stocks and is driven in a large part by speculative non-informed traders, due to the high level of retail investor activity.

I:III Volatility and Negative Event Illiquidity

Levine and Kunt also find that the collapse of stock markets can negatively affect growth (1993) so the volatility of the Russian market is an important consideration. Over the past 6 years Russia has experienced the highest level of volatility of all major equity markets (figure 11). Russia has had two major collapses over the past 12 years (1998 and 2008) wiping out over 75% of the stock market value each time (figure 12). No other major equity market suffered as poorly during the past crisis despite Russia's fiscal surplus and large Stabilisation Fund at the time (figure 13). Investors have also experienced many lesser but still significant 30% - 40% drops over the same 12 year period, consistent with Levine and Kunt's market collapses. Not only can these market drops negatively affect growth, they also impact the ownership structure of the equity markets as long term 'wealth preserving' investors exit the markets in favour of less volatile instruments, leaving the more

speculative investors who tend to buy when the market is going up and sell when the market is going down exacerbating the negative event illiquidity problem.

Yeyati, Horen and Schmukler (2008) found evidence of this event-liquidity phenomena when conducting an empirical study of secondary market liquidity during financial distress for emerging markets. They identified that in periods of financial turbulence Russian liquidity tends to dry up faster than its emerging cohort. Results showed that lagged bid-ask spreads for Russia were 52% wider than the mean of surveyed countries and the lagged Amihud illiquidity ratio⁸ was 40% higher than the mean (p677 and p678) during periods of financial distress.

Figure 11

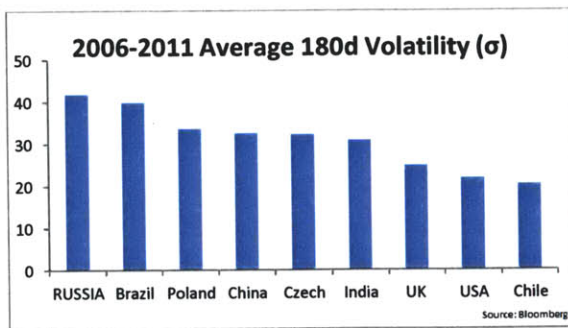
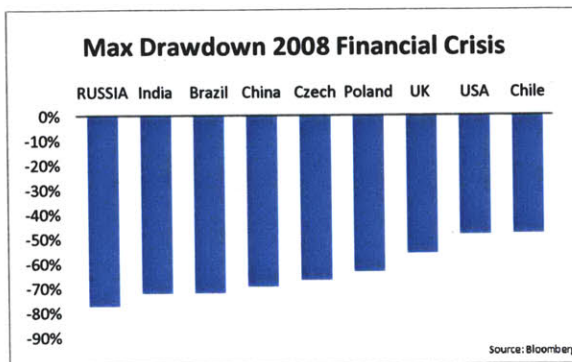


Figure 12



Figure 13



⁸ Amihud illiquidity ratio: the daily stock price response associated with one dollar of trading volume

I:IV Capital Raising

The Primary Market

So far we have discussed the development of the secondary market in Russia. It is just as crucial to understand whether the stock market serves its purpose as a primary market for new shares, that is to say, can companies raise money on the stock market in a timely manner at attractive valuations. This could be referred to as the liquidity of the primary market. New share placement usually occurs during initial public offerings (IPO), private placements and rights issues. For the purpose of this paper only the IPO market is analysed due to the lack of historical data on private placements and rights issues.

Russian issuing companies have raised over \$65b in IPO equity over the past 5 years which is a very large number considering the free float of the market is estimated to be currently shy of \$250bn. However, over 75% of this capital was raised before the financial crisis and despite some improvement in 2010, the IPO market has failed to recover and is a long way from its pre-crisis highs. While there has been much discussion in the press of an imminent IPO boom from Russian companies (including the awaited privatisation of government stakes to the value of \$33bn⁹), the realised value of completed IPOs has failed to live up to expectations with many deals being cancelled and postponed due to unsatisfactory pricing ranges. Interviewees cited the high valuations that Russian owners demand when selling equity stakes, and the poor trading performance of the majority of Russian companies after their listings (from 2007 onwards). “Nearly two-thirds of Russian share sales have trailed the country's equity indexes by 10% or more over the last decade” (WSJ, 04/04/10)¹⁰ “In 2007, when a record \$47 billion was raised in Russia¹¹, post-IPO stocks had their worst year ever, trailing the RTS Index by 27 percentage points. Large funds were under pressure to snap up blocks of shares that later traded without much liquidity, and other investors paid dearly to diversify their holdings outside a few large oil and gas stocks.” (WSJ, 04/04/10)¹²

This would appear to provide further evidence that while there is some liquidity in the Russian market it is heavily concentrated. As there is limited participation from retail investors in IPOs, institutions bought large blocks of stock that proved to be very illiquid in the after-market, depressing stock valuations. This is in stark contrast to other markets where IPOs tend to be slightly underpriced and investors expect to make a quick profit. For example Carey (2008) found that US IPOs are underpriced on average by 15%. The theories behind IPO underpricing are many with some examples

⁹ <http://www.bbc.co.uk/news/business-10850855>

¹⁰ <http://online.wsj.com/article/SB10001424052748703862704575099493045114232.html>

¹¹ This \$47bn is referring to the total number IPOs and SPOs

¹² <http://online.wsj.com/article/SB10001424052748703862704575099493045114232.html>

being investment bankers favouring their institutional clients (the IPOs buyers), the high liquidity needs of pre-IPO investors and the need to provide a premium for incentive investors to participate in the primary market. There are many fundamental arguments for why Russian IPOs should not be underpriced (indeed why no IPOs should be underpriced) but the final outcome is that investors generally expect to make money on IPOs and at the very least not to lose money. This has not been the case for several years in Russia.

The current plethora of cancelled IPOs lately has been lately due to unfavourable market conditions (meaning the owners want a higher sale price than they are able to achieve at the current time). It would appear that investors now place a heavy liquidity discount on the valuation of new issues and this gap between buyer and seller expectations has made deal execution more challenging.

Adding to this problem is the low valuation investors place on Russian stocks. Russian stocks currently trade on a forward PE¹³ multiple of 6x in contrast to 12x in the US, 9x in Brazil and 10x in Poland. Furthermore this valuation discount on Russian stocks has been decreasing consecutively from a high in 2007 of 11x. Essentially this means that the Russian cost of capital is higher than elsewhere as investors will pay less for the same level of earnings. This valuation discount carries through to the valuation of IPOs by investors. Interviewees described this discount as a statement by investors as to their concerns of political/legal risk in Russia and the country's lack of diversification (resource stocks typically trade at valuations below other sectors).

"Russian IPOs do not have a stellar reputation," says Andrew Cornthwaite, deputy chief executive of Renaissance Capital, a leading Russian investment bank. "The average view in London and New York is that Russian companies look to take every possible cent off the table. A lot of the deals over the last year have struggled in the secondary market."¹⁴

As support for this observation Wang (2010) finds that the Russian stock market is very sensitive to the changes in Russia's economic activity and the world oil price. With the "contribution of industrial production of Russia and world oil price shocks to Russian stock prices variability at 41.9% and 6.6% respectively" (p110)

¹³ Price divided by next year consensus forecasted earnings

¹⁴ <http://online.wsj.com/article/SB10001424052702304520804576348970606526448.htm>

Figure 14

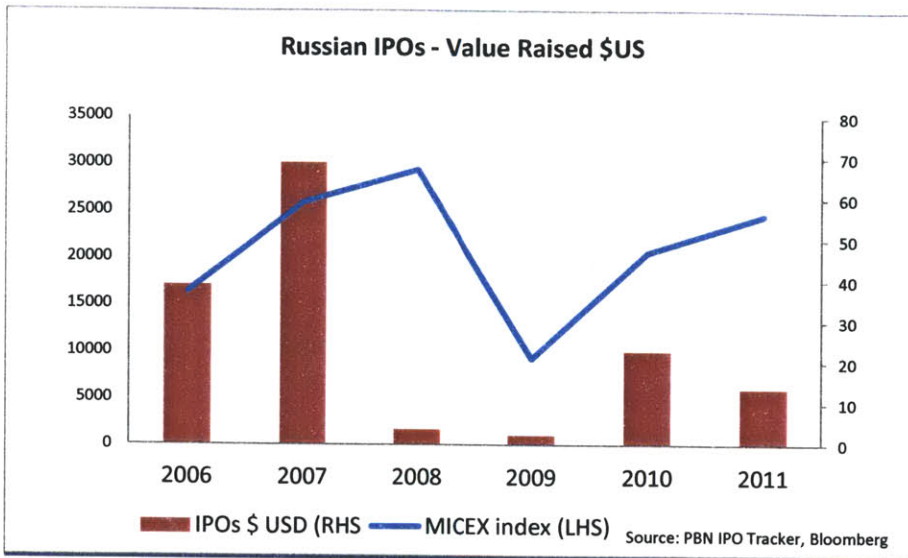
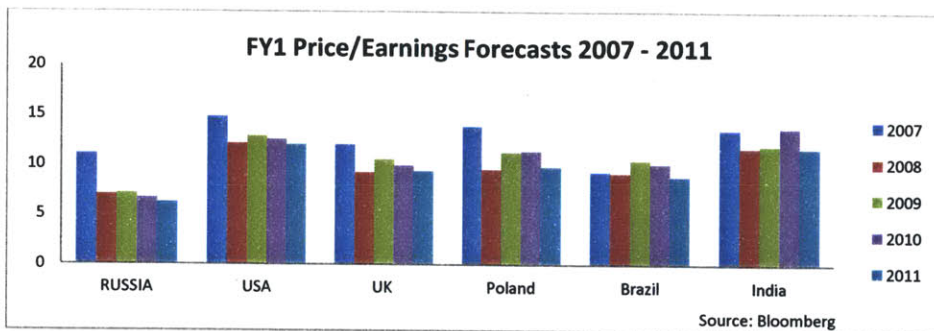


Figure 15



This paper is concerned with the Russian local equity market so it is important to understand not just the demand for Russian IPOs but the demand for Russian IPOs in the local market.

A large portion of the issues in figure 14 are overseas listings; either full listings or global depository receipts/ American depository receipts¹⁵. Figure 16 shows the breakdown by number of listings. As can be seen, Moscow (MICEX and RTS) listings represent only a third of issuances since 2005.

In 2009 the financial regulator attempted to curb the volume of foreign issuance by passing a law that further restricts that amount of total share capital that can be issued in ADRs and GDRs. While this did temporarily increase the number of local listings a bigger implication was that many larger, financially able companies planning their listings actually re-registered their companies offshore to achieve foreign domicile to avoid this restriction. "It's either this new rule or a lack of domestic investor base, the small number of which was wiped out during 2008 crisis, that companies lined up

¹⁵ negotiable certificates issued by depository banks which represent ownership of a given number of a company's shares which can be listed and traded independently from the underlying shares (www.londonstockexchange.com)

to be domiciled as offshore in order to get to a listing in London.” (Moscow Times, 04/03/2012)¹⁶ Yandex, Russia’s answer to Google, is the most famous example of this in recent years with their much talked about \$1.3bn placement on the Nasdaq. Yandex is registered in the Netherlands and is solely listed on Nasdaq without a primary listing on the local Russian market.

Foreign listings are understandable given the main buyers of Russian IPOs are foreign institutions. An analysis of recent IPOs by VTB showed that on average 50% of IPO investors were UK institutions, followed by the Europe and the US, with Russian investors accounting for less than 8% (figure 17). By issuing shares in foreign jurisdictions the pool of potential capital increases as the political and legal risks of investing directly in Russia are reduced.

Figure 16

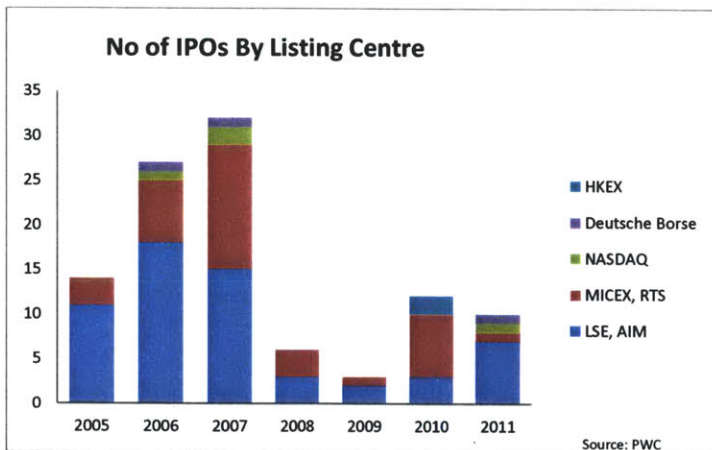
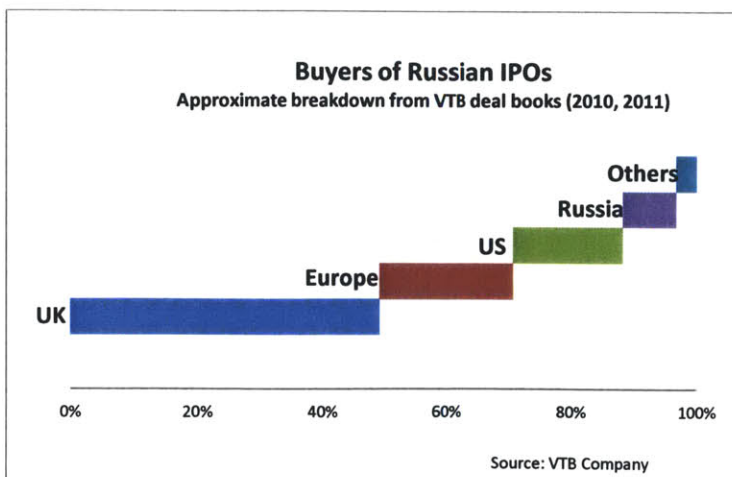


Figure 17



¹⁶ http://www.themoscowtimes.com/business/business_for_business/article/history-of-russias-ipos-as-reflected-in-the-msci-russia-index/455986.html#ixzz1u8IQHIs7

I:V Internationalisation and Liquidity Trends

Levine and Schmukler (2005) find that internationalisation harms the liquidity of domestic firms. Those firms that internationalise win as their total share of trade increases, while firms that do not internationalise experience reduced liquidity. This is in large part due to migration and spillovers. International listings also mitigate country specific risk that can be a concern for international investors e.g. US investors have been found to prefer ADRs over local issues (Aggarwal et al. 2005). Furthermore, listing on exchanges in strict regulatory environments may be a signal of firm quality (Cantale 1996 and Fuerst 1998).

The continuing rise in cross-listings and issuance of depository receipts by Russian companies as described above may be placing further negative pressure on domestic liquidity for those firms that are not internationalised, increasing the concentration of local market liquidity towards large internationalised stocks.

SECTION II

INCREASING LONG TERM CAPITAL PARTICIPATION IN THE STOCK MARKET

II:I Overview

In Section I, it was identified that the critical issues that need to be addressed for further development of the Russian stock market include:

1. The overall size of the market free float
2. The high level of concentration in both the free float and trading activity
3. The low liquidity in the primary and secondary markets for second tier stocks
4. Volatility and event illiquidity
5. Internationalisation trends

All of these issues can be targeted through two primary avenues: increasing the level of foreign investment in the domestic market and developing a domestic capital base of long term investors in the stock market. Increasing the level of foreign investment has positive impacts on liquidity, market size and potential positive implications for corporate governance. More importantly, developing a domestic institutionalised long term capital source may not only increase liquidity and the size of the market, but it should also reduce volatility and negative illiquidity in addition to increasing the number of primary listings in non-resource industries. Furthermore, the establishment of domestic institutional capital may help to reverse the internationalisation trend.

Thus the question was posed to interview participants as to what are the critical impediments to the further development of these two sources of capital. The author's conclusions from these discussions are that the following three reform pillars are required:

1. Upgrade of market infrastructure: creation of a Central Settlement Depository and relaxation of prefunding requirements
2. Corporate Governance: reduction of government participation in stock market, increased number of truly independent directors and introduction of minimum free float requirements
3. Domestic Institutional Investors: incentives for the pooling of long term capital, in particular looking at diversification of risk using cross-country swaps

II:II Market Infrastructure

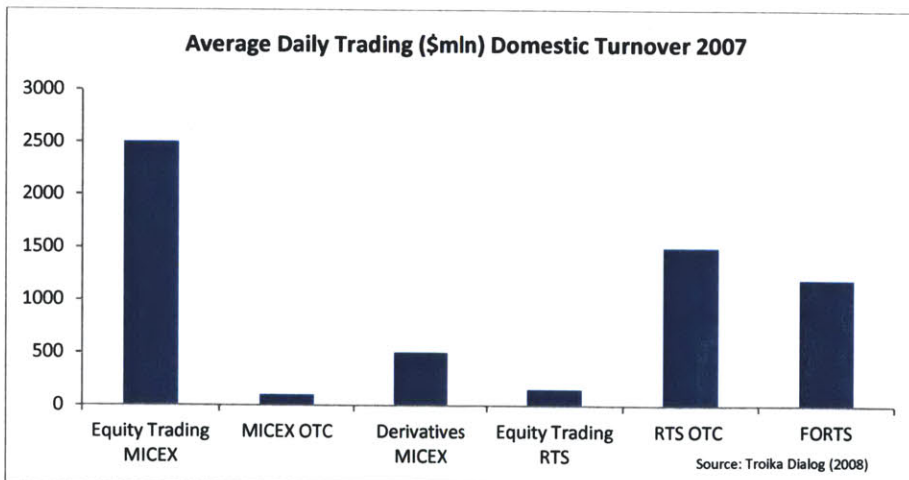
Russian stock market infrastructure is highly inefficient, extremely complex and below the standards of comparable markets. Local investors are exposed to significant counterparty risk due to the lack of a Central Settlement Depository and higher costs due to an outdated, overpriced system of Share Registration. Foreign investors simply refuse to accept the conditions and prefer to engage in over the counter transactions and require their financial intermediaries (hereafter Brokers) to assume the bulk of risk and bridge financing. As foreigners represent a large portion of the market, Brokers must comply to maintain market share. The three main problems can be summarised as follows:

- Absence of a recognised Central Settlement Depository
- Prefunding requirements and predelivery demands
- Inefficiencies related to Registrars

Background

Up to this year, stocks have been traded on two main exchanges, the Russian Trading System (RTS) and the Moscow Interbank Currency Exchange (MICEX). The trend has been for secondary market exchange trading to occur on MICEX and over-the-counter (OTC) trading through RTS. Figure 18 shows the split of volume between the different exchanges¹⁷.

Figure 18



The National Settlement Depository (NSD) is the clearing and settlement depository for MICEX, the main trading exchange¹⁸. It operates on a prefunding basis, thus trades settle on a T+0 basis.

Essentially, prefunding means that buyers and sellers must have the stock and cash on account with

¹⁷ FORTS is the futures and options exchange for RTS

¹⁸ MICEX trading accounts for c95% of on-exchange trading of local stocks

the NSD before a trade can take place. This means that MICEX can assure the buyer that the seller does physically own the stock and the seller that the buyer does physically have the cash before the transaction is confirmed. Trades then settle on a T+0 basis¹⁹ meaning that the stock and cash is transferred to buyer and seller accounts in the NSD automatically. Notification is then sent physically to the Registrar in order for the stock to officially be re-registered into the buyer's name. It can take up to a month in the most extreme cases for the official re-registration so the purpose of prefunding is to provide an assurance that the buyer will take possession of the stock so they can trade or lend it without having to wait for the often lengthy Registrar confirmation.

In principle prefunding sounds like a robust idea in a country such as Russia given the history of fraud in the 90s, however it has some drawbacks.

Absence of a Central Settlement Depository

While the NSD is a settlement and clearing depository, it is not an internationally recognised Central Settlement Depository (CSD). This is a fundamental issue as large foreign institutions refuse to prefund an account with a non-recognised depository. In order for the NSD to be recognised it needs to achieve the following:

- There must be mandatory use of the CSD, however NSD currently competes with the Depository Clearing Company (DCC) which services RTS transactions²⁰
- Provide delivery vs. payment (DVP) meaning that the stocks and cash actually officially change hands at the same time (rather than just 'on paper' within NSD accounts)
- It must be a regulated entity
- Liquidation is not possible and any changes must be approved by the Financial Services Regulator and the Central Bank of Russia
- Equity capital must not be less than \$250m (currently \$125m) to ensure that the CSD can guarantee trades

Large foreign investors currently refuse to put money on account at the NSD for prefunding purposes due to the risk of liquidation/insolvency, Registrar risk (i.e. Registrar and NSD books not reconciling) and fraud. Prefunding also requires foreign institutions to hold more liquidity on their books due to the different timing of settlement across the different countries in which they trade. Most other depositories around the world settle on T+3 or longer basis. Buyers and sellers do not need to physically possess the cash or stock until the settlement date but they can take advantage of the price at the date of the trade. For example, on a T+3 exchange an investor could sell the stock of stock X and buy the stock of stock Y also today. Those trades would settle in 3 days at which time the investor

¹⁹ Trades settle 'zero' days after the transaction

²⁰ A bridge has now been created so that the NSD and DCC can share information and stock can be crossed from one system to the other

would receive cash from the sale of stock X:US and would then pay that cash out to fund the purchase of stock Y:US. If instead of buying stock Y:US, the investor had wanted to buy stock Z:RU, a Russian listed stock, he would have to have extra cash on hand to fund the 3 days between trade and settlement of stock X:US. Otherwise, the investor would need to wait 3 days before buying Z:RU at an unknown price.

In general, foreign institutions refuse to prefund and only accept delivery vs. payment (DVP) transactions. Some Brokers will assume this risk on behalf their very largest foreign clients meaning the Broker will use its own stock/cash on account at the NSD to facilitate the trade. If the Broker does not have the stock on account, they will borrow it in the market, transfer it to the client institution and then buy the stock back in the market to return to the lender on the registration date. This presents a significant price risk to the Broker as they may have to buy the stock back at a higher price than it was on the trade date.

Given the large risk this poses to Brokers, it is more common to facilitate trades for foreign institutions over-the-counter on the RTS. For OTC trades, settlement occurs directly with the Registrar and the trade is not considered settled until the stock has been officially registered into the new nominee name. There is no fixed settlement cycle for OTC trades, they usually occur sometime between T+5 and T+30 depending on where the Registrar is located. The benefit of OTC trading is that terms can be negotiated. As foreigners still expect delivery vs. payment terms, Brokers can try to negotiate the date of payment term to minimise their own risk. OTC trades are typically not DVP so Brokers on either side of the trade will try to reduce their own credit risk and funding costs, by reducing the time between when they must pay for stock or pay their client and the agreed date in the Purchase and Sale Agreement (PSA). The selling investor demands payment shortly after the Purchase and Sale Agreement is signed (the trade date) as they no longer own the stock, this is usually within several days. The time between the Broker paying their client and the payment date when the Broker receives payment as agreed in the PSA is a credit risk and a funding cost for the Broker. It is a funding cost as the Broker could be utilising that capital somewhere else or at least earning the risk free rate. It is a credit risk as the trading counterparty could default before settling the transaction²¹.

Similarly the Broker facilitating the purchase of the stock will need to fund the trade on the payment date as negotiated in the PSA and will only be paid by their client when the stock settles in their nominee name.

This inefficient system places a large liquidity burden on Brokers and significantly reduces the profitability of the brokerage industry.

²¹ OTC trades are not guaranteed by the DCC

Registrars

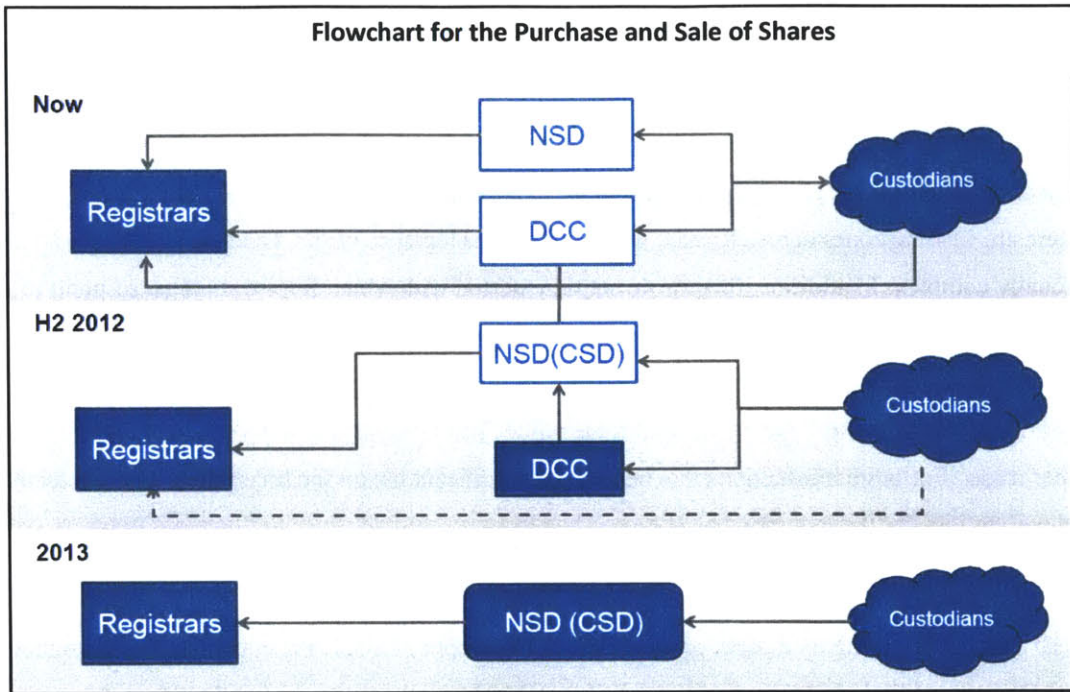
One of the most uncertain aspects of the market infrastructure is the registration process. As there is no central depository to guarantee trades, settlement falls entirely on the Registrar. Currently the physical transfer order must be couriered to the Registrar. The Registrar then updates the shareholder register to reflect the nominee name and sends a confirmation back to the Broker/Custodian. There are currently over 40 Registrars located around the country so there can be a significant time difference when dealing with Registrars in Moscow and those in Siberia or the Far-East. It is important to note that there are 11 time zones across Russia, which makes the logistics of the dispersed Registrars additionally complex. In addition, there is no set time period with which Registrars must respond to the transfer orders. In the very worst cases, Registrars may only update their books once a month. This uncertainty causes the Broker funding cost and credit risk explained above. In addition, Registrars can charge up to 20bp of the total trade value. This compares to a flat rate of \$25-\$50 in the US²² per trade. For large transactions this becomes a significant tax on the transaction and represents a dead weight loss for the industry.

Current Status

After 10 years of lobbying by market participants, in December of 2011, President Medvedev signed a Central Depository Law enabling the creation of an internationally recognised CSD. Several days later MICEX and RTS officially merged into one company, MICEX-RTS. It is anticipated that as of July this year the NSD will be fully accredited as a CSD and the DCC will cease to exist. Transactions will still be prefunded in the near term, however with the NSD now being a recognised (and properly funded) CSD, foreign investors should be willing to put money on account. In 2013 it is expected that settlement will move to T+3 which will resolve the extra liquidity that was required for prefunded trading for foreigners. Registrar's will have accounts within the CSD that record share transfers in order to facilitate DVP. There will be at least daily reconciliation between the CSD and the Registrars, and Registrars may not rectify any discrepancies without CSD consent. The CSD will legally prevail over registrars ensuring standardization and finality of settlement. As transfers are settled within the NSD, a small flat fee will be charged rather than a % of the trade value. It is yet to be seen how effectively the infrastructure improvements will progress but it is certainly a step in the right direction.

²² <http://www.shareholderservicesolutions.com/200801a.html>

Figure 19



II:III Corporate Governance

“Corporate governance is the system by which companies are directed and controlled. This involves a set of relationships between a company’s management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. Good corporate governance should provide the proper incentives to pursue objectives that are in the interest of the company and the shareholders and should facilitate effective monitoring, thereby encouraging firms to use resources effectively”²³. (OECD, 2000, p 6) There is a large amount of literature supporting higher levels of corporate governance. Brown and Caylor (2004) find that better-governed firms are relatively more profitable, more valuable, and pay out more cash to their shareholders. Chung, Elder and Kim (2004) find that “firms may alleviate information-based trading and improve stock market liquidity by adopting corporate governance standards that mitigate informational asymmetries.” (p 1) Shvyrkov and Pastoukhova (2010) found a strong predictive relationship between companies with good corporate governance and future stock market returns.²⁴ Guenster and Bauer (2003), Prugsamatz (2009), and Pajuste (2002) all find that in general companies with high corporate governance standards perform better than companies with worse standards.

In recent years, Russia has experienced a rapid development in corporate governance, in particular an increase in independent directors and shareholder disclosure. This has been largely driven by the large number of IPOs and cross listings aimed at foreign capital.

In a speech by Igor Yurgens at the XII St. Petersburg International Economic Forum in 2008 he stated that despite these improvements, “In practice, corporate governance reforms were often conducted in a superficial manner and used for propaganda purposes rather than as a means for introducing structures and procedures that could help the company win investors’ trust, reduce the risk of financial crises and expand its access to capital.”²⁵

Most strikingly there continue to be critical issues pertaining to minority shareholder rights driven by the concentration of ownership with the government, Oligarchs and company management and the absence of truly independent investors. Shvyrkov, Pastoukhova and Konigsburg (2008) find that “Corporate governance remains one of the most important factors constraining (Russia’s) attractiveness to foreign capital providers and, in particular, potential long-term shareholders.”

²³ <http://stats.oecd.org/glossary/detail.asp?ID=6778>

²⁴ Corporate governance measured by S&Ps GAMMA ratings

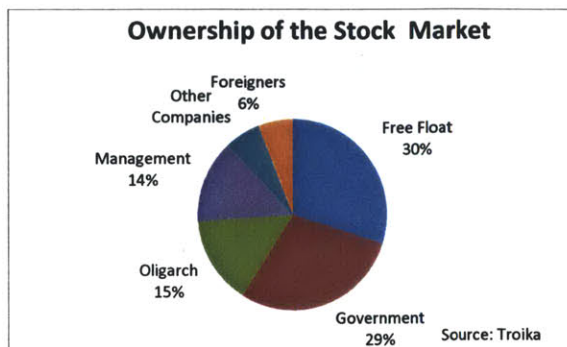
²⁵ http://www.insor-russia.ru/en/_news/analytics/263

Stock Market Ownership

In order to appreciate fully the current ownership structure of the Russian market it is useful to look at its development in the early 1990s. In an effort to break the power of Soviet bureaucrats and raise money for a bankrupt government, authorities embarked on a mass privatisation program of state assets, whereby shares were offered for sale to Russians. Russians were each allocated a 10,000rub voucher with which to buy shares (equivalent to 1kg of butter at the time). Company management and workers were allowed to buy a controlling stake in the enterprises where they worked for a discount. There was some time lag between the issuance of the vouchers and the privatisation program, so many Russians sold their rights early on to obtain money for basic subsistence as most had lost their rouble savings due to. Ownership quickly consolidated as those with the means i.e. the Mafia, former Nomenklatura and the industrial elite purchased these shares from the public. (Appel, 1997) In many cases management used company funds to consolidate share ownership under the guise of protecting the company from 'hostile takeover' which was indeed rife throughout the period. The Loans for Shares program in 2005-2006 was essentially the second wave of privatisation. Some of the largest state assets were leased to commercial banks (favoured insiders) in exchange for loans to the government. As these loans were never paid back, collateral was seized. This amounted to a low cost transfer of company ownership. This led to the further consolidation of ownership to a new small elite group, the Russian Oligarchs.

Today, government, Oligarchs and company management still control 56% of the Russian stock market (figure 20). There are some strategic foreign ownership stakes which account for 6% of the market and another 8% owned by Russian companies. The free float at 30% as described in Section I, is amongst the lowest of the major stock markets. In addition, the large share concentrations prevent market-driven changes in control given the limited influence of minority shareholders. The large participation of the government hinders the development of corporate governance due to their bureaucratic and guarded management approach. Further as corruption is pervasive within the Russian government, it is generally accepted that companies under government control are likely to be similarly exposed to corrupt practices.

Figure 20



Minority Shareholder Rights

The Institute of Corporate Law and Corporate Governance (an institute dedicated to the development a system for the protection of investors' rights and improvement of the corporate governance in Russia) cites the fundamental problem of corporate governance in Russia as being the “insider encroachment of minority shareholder rights of ownership through transfer pricing, asset stripping, dilution of capital, restructuring/merger transactions and lack of transparency.”²⁶ Shvyrkov, Pastoukhova and Konigsburg (2008) find that companies regularly infringe on minority rights by delaying shareholder meetings, delaying dividend payments, and by hiding indirect ownership stakes. Early in the last decade, minority shareholder legislation was amended to better protect minority owners from the abuse experienced in the 90s. While the law is generally robust, it is only enforced selectively. Furthermore, when investors attempt to exercise those rights in companies controlled by government, it is often the case that ‘tax fraud’ allegations are levied against the activist investor. The most famous case of this is Bill Browder in 2006 whose assets were seized (for tax evasion) and he was subsequently expelled from Russia for probing too deeply into the affairs of large state controlled enterprises like Gazprom, Sberbank, Surgtneftgaz and RAO UES. (Economist, 03/23/2006)

A notable case of minority shareholder abuse in recent times is that of Telenor, who in 2005 opposed Vimpelcom’s 2005 purchase of a failing Ukrainian telecom company URS. Telenor owned 30% of voting stock in Vimpelcom and argued that the deal was overpriced and related interests were not transparent. URS had been losing money and the prospects for the company looked bleak. Alpha Group, the majority shareholder with 44% of the voting stock and board control approved the deal nonetheless (Alpha is controlled by billionaire Mikhail Fridman, who has close links to the Kremlin). Telenor proposed that the deal with URS was a related party transaction and individuals within Alpha benefited directly from the deal. Telenor took Vimpelcom to court in an attempt to invalidate the decision to acquire URS. Not only did Telenor lose this case, but shortly after a company called Farimex sued Telenor for delaying the deal and potential lost profits from earlier entry into the Ukrainian mobile market. Alpha denied any connection with Farimex (as was required to pursue an independent court proceeding on the deal) but it later acknowledged the connection. The proceeding was brought in a distant court in remote western Siberia, the courts of which are known to be more flexible to external influence. In 2009 the court ruled to hold Telenor liable for US\$1.7 billion and ordered bailiffs to sell Telenor’s substantial stake in Vimpelcom. Finally, in 2010, after 5 years of court battles, Alpha and Telenor announced a merger of their Russian and Ukrainian operations on the condition that Farimex dropped the \$1.7b suit which would have resulted in the complete loss of Telenor’s stake.

²⁶ <http://www.iclg.ru/enrating>

Related Party Transactions

Related party transactions have been the most prevalent form of minority shareholder rights infringements in recent years. One of the larger weaknesses in the Russian corporate reporting requirements is that only legal ownership must be disclosed not actual control, making disclosures about ownership and transactions with related parties less meaningful.

Alexey Navalny has taken over from Mr Browder as the chief investor activist in Russia in recent years. In 2007 he challenged a contract on the purchase of 30 drilling rigs by VTB leasing (a subsidiary of Russia's second largest bank). His claim argued that VTB leasing unnesarily used the Cyprus based intermediary, Cypriot Cluseter Ltd, in the purchase of \$450m worth of equipment from a Chinese company. He further shows that Cluseter bought this equipment from the Chinese manufacturer for only \$300m. While there is no direct proof, it is generally understood that there is a related party interest between management and/or owners of VTB leasing and the owners of Cypriot Cluseter Ltd. Navalny's case was rejected by the courts.

In 2009, Navalny, as a shareholder of Transneft (a government controlled oil transportation company), petitioned the courts for Transneft to disclose the recipients of \$240m worth of 'charitable activities', citing this as excessive in relation to company profitability. The Arbitration Court of Moscow rejected his suit.

Navalny has also sought more disclosure to shareholders relating to the relationship between Russian oil companies and the Switzerland headquartered, Cyprus registered oil trader Gunvor. Navalny petitioned Rosneft, Gazpromneft and Surgutneftgaz for the terms of the partnership with Gunvor, who ultimately is responsible for the contract and what the economic justification is for using partnering with an oil trader. Courts rejected his request, finding that these details are considered 'accounting records' and thus only available to shareholders with at least 25% ownership. (Navalny, 2008) Gunvor, is a private and secretive company that sells more than 30% of the crude oil produced in Russia. A wikileaks release of US State department cables in 2010, stated that President Putin derives his personal wealth directly from Gunvor (certain political insiders have suggested a 50% stake). Gunvor has adamantly refuted this. (12/02/2010, Financial Times)

In the largest bank bailout of Russia's history last year, it was found that the Bank of Moscow, had \$9bn worth of 'problem loans' extended to companies connected to the banks former management. It is claimed by the new owner VTB, they have uncovered a special portfolio loan book of over \$12bn that was created by the previous Bank President, Mr Borodin, for loans to related parties. Specifically he was connected to Moscow construction magnate, Yelena Baturina, Russia's richest women and wife of the former and now disgraced mayor of Moscow, Yuri Luzhkov. In total, VTB claims that

related party loans account for 50% of the company's loan book in contrast to the 7% described in the banks 2010 IFRS results.

The Shortage of Truly Independent Directors

Independent directors are critical in their role of protecting the interests of shareholders. "The lack of truly independent directors on Boards of many Russian enterprises represents a significant obstacle to the investment attractiveness of Russian issuers and creates room for violations of rights and infringement legitimate interests of investors and shareholders". (Corporate Governance in Russia website)²⁷

A McKinsey survey (2001) showed that western investors would pay 38% more for shares in Russian companies with a well developed system of corporate governance. Investors considered the presence of independent directors as one of the most relevant factors when assessing the investment appeal of the company on developing markets.

While 90% of companies in Russia now have at least one director complying with independence requirements, it is unclear if the definition of 'independent director' is sufficient. According to the Independent Director Code of Russia an independent director:

1. Has not been for the last 3 years and is not an officer (manager) or an employee of the company, or an officer (employee) of the company's management company
2. Is not an officer of another company, where any of the company's officers is a member of the board committee on appointments and remuneration;
3. Is not affiliated with an officer of the company (an officer of the company's management company);
4. Is not affiliated with the company or with its affiliated parties;
5. Is not a representative of the state;
6. Does not own either personally or through affiliated entities equity stakes in the company, sufficient for self-nomination to the board of directors of such company;
7. Does not receive remuneration for consulting and other services provided to the company, other than the remuneration for board membership;
8. Does not represent the interests of consultants or counterparts, working the company;
9. Maintains solid business reputation, adheres to strong ethical standards and possesses the necessary leadership skills and business experience;
10. Has publicly declared his/her independent status prior to the election to the board

²⁷ <http://www.corp-gov.org/projects/boards.php3>

The criteria for determining independence are, in practice, highly formal and don't take into account real-life conflicts of interest. For example there are many 'independent directors' who sit on the boards of numerous government-controlled firms or are executives at a government controlled firm. While they technically meet the criteria for independence, they are essentially still representing the interests of the government.

Furthermore, many independent directors are just window dressing, particularly many foreign independent directors hired in the lead up to an IPO. A report by the Russian Institute of Directors (2006) suggests that "those firms (planning IPOs) often pay lip service to corporate governance and adopt basic measures aimed at achieving maximum results with minimum effort. Such measures are often last-minute changes limited to the adoption of a dividend policy or the introduction of one or two independent directors, preferably well-known foreign names".(p 1) Independent directors total on average only 20% of Russian boards, while the Russian Code of corporate behaviour recommends 25% independence. This is in comparison to the US and the UK which state that companies must have a majority of independents on their boards. (Heidrick and Struggles, 2007) With such a small percentage represented, particularly given many are 'window dressing', independent directors do not generally have sufficient clout to influence strategy and decision making to assure proper corporate governance and management best practices. Tappan (2008) suggests that proportion of independent directors on the Russian boards should be increased significantly to 40% or more (currently 20%) in order to achieve the necessary critical mass for effective Independent Director participation. A positive trend from internationalisation is the increase in number of independent directors in order for internationalising firms to meet foreign listing requirements. "Ninety percent of Russian companies with an international listing have independent directors who typically account for between one-third and half of the Board. The majority (57%) of these independent directors are foreign nationals." (Heidrick and Struggles, 2007) With this larger representation, it is more likely independent directors will be able to truly exercise an independent position.

Looking to the Future

While Russian corporate governance laws are adequate, the main challenge is in ensuring consistent enforcement of these laws. It is generally well known that the rule of law in Russia is in its naissance. Courts are influenced by authorities in order to protect the interests of the ruling elite and judgments can often be bought by those in power. A 2009 study on the Judicial System of Russia found that corruption (bribery) is not the biggest problem in the Russian legal system (it finds that corruption in the legal system is no more pervasive than in Russia in general). In fact, it found that for non-government related cases, judges usually ruled objectively on the outcome of cases. It concludes

however that judges are highly dependent on government officials. If they rule against a government entity, the case will just be overturned in appeals in front of another more compromising judge. The more frequently judgments are overturned, the more grounds there will be for dismissing a judge who ruled objectively. (Institute of Contemporary Development, 2009)

Given the non-independence of courts towards the government, a powerful lever of corporate governance reform would be to reduce government participation in public companies. In this vein, President Medvedev recently announced his intentions to remove government officials from the boards of directors of Russian companies.²⁸ The government has also recently committed to selling down its stake in many of Russia's largest companies. In 2010, the government announced a \$60b privatisation program to run over 5 years, which would include the potential divestiture of control at firms such as Rosneft, and VTB after 2015²⁹. It is not clear however, if the newly elected President Putin will continue with the scheme to the same level. The unfavourable climate for Russian stock issues may also delay plans for some time.

Another possibility for reducing the concentration of ownership would be to increase the free float minimum required for inclusion in the MICEX index composition. If current MICEX index listed companies increased their free float to 25% as is common in other markets, it would affect a third of MICEX listings and could account for up to an addition \$200bn in free float.

As will be discussed in the next chapter, the creation of a domestic institutional fund industry is very important for stock market development. Institutional investors, due to their longer term view, may have more incentive to encourage the improvement of the corporate governance environment.

²⁸ http://english.ruvr.ru/2012_03_22/69285753/

²⁹ http://www.rferl.org/content/Russia_Agrees_60_Billion_Privatization_Plan/2196492.html

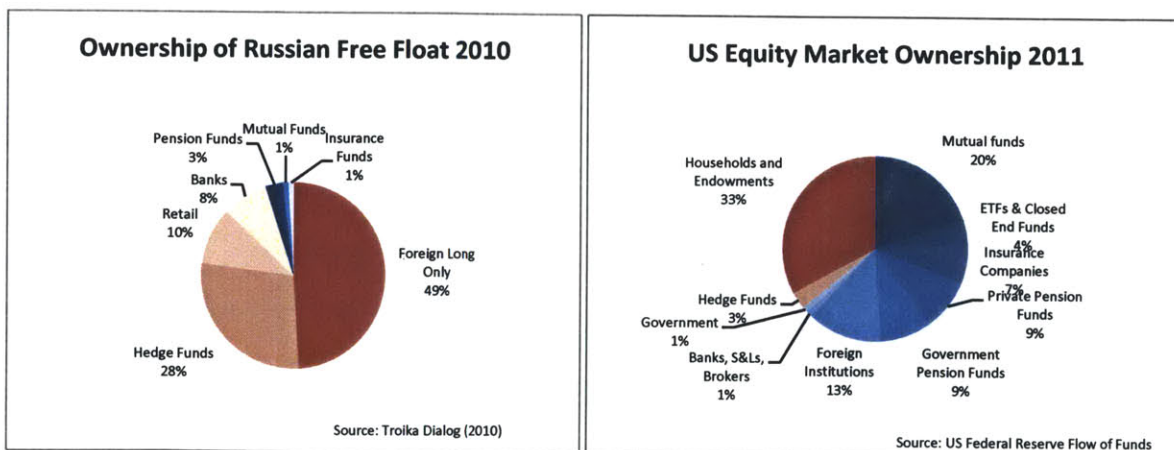
II:IV The Absence of Domestic Long Term Capital

Domestic long term capital refers to capital that will be invested throughout the cycle with generally little need for short term liquidity. Long term capital is an important component of the market as it helps to reduce volatility caused by speculators.

Free Float Ownership

The ownership structure of the Russian stock market looks dramatically different from its developed market and more advanced emerging market peers. In particular, domestic institutional investors account for only c.4% of the market compared to c.50% in the US (figure 21). Institutional investors are funds that pool large quantities of capital for investment in financial assets. Institutional Investors comprise mutual funds, pension funds and insurance funds. Typically due to their longer time horizon, they do not trade with a high frequency, but they take very large positions compared to most other types of investors. They are often labelled 'Buy and Hold' investors, it can take them considerable time to get into a large position and they may then hold it for a long period of time as their liquidity requirements are generally not immediate (e.g. returning funds upon retirement or large insurance pay-outs). These institutions usually have clear mandates as to where the capital should be invested with a minimum-maximum range for investment across asset classes. Thus when the market turns down, these funds cannot automatically liquidate their holdings unlike other investors. Hedge funds are also large pools of capital but are generally much smaller than the institutions, they may also take large positions but they tend to trade at a much higher frequency than institutions and may liquidate their equity position at any time. Retail investors in Russia take on the characteristics of hedge funds, trading with high frequency but more speculative behaviour patterns. Foreign Long-Only capital is a hybrid of the two styles described above; in normal times they behave like long term capital but when market confidence falls they tend to liquidate positions quickly.

Figure 21



Why are domestic institutional investors important?

The most obvious reason as described above is that institutional investors tend to stay invested in the market in a down turn providing liquidity support and a fundamental floor. This helps to dampen the event illiquidity that the Russian stock market faces in times of financial turbulence. Currently, the low level of domestic 'long term' capital results in the market being driven by high frequency short term capital (such as hedge funds and private speculators) and foreign institutions. While, in general, the foreign capital is invested on a long term basis, when global confidence wanes typically capital has been pulled from Russia first. As discussed in Part 1, the Russian stock market is highly sensitive to industrial production and the oil price (Wang 2010). Resultantly, the Russian market is viewed as a commodity play by foreign investors so when global growth slows Russia becomes an unattractive market and exposure is reduced. Domestic short term capital is also speculating on growth and commodity prices, thus when foreign capital begins its retreat, liquidity rapidly dries up (event illiquidity) and prices fall sharply. Domestic institutions are usually required to keep a portion of their assets in the domestic equity market, and thus they would provide a price floor by buying up stocks at a considerable discount to facilitate the foreign capital outflow.

Additionally, domestic institutions are not just important in times of market turbulence but they should in theory help to reduce the level of irrational trading and smooth volatility of stock markets. Using the Monday effect³⁰ as a proxy for irrational market behaviour, Kamara (1997) and Chan, Leung, and Wang (2004) found that the increase in institutional market participants in the US reduced this irregularity. Using a similar technique, Bohl, Gottschalk, Henke, and Pál (2006) looked at the January effect³¹ in Poland and Hungary comparing the period before mandatory pensions were introduced and after. They found that "The empirical evidence indicates that trading by Polish and Hungarian pension funds to a certain extent arbitrages away seasonal patterns in stock returns and, therefore, increases the efficiency of both stock markets. The price effect of irrational trading patterns seems to be partly eliminated by rational investors." (p 23) This suggests that institutions may help to smooth the high levels of volatility that the Russian stock market exhibits. Davies and Steil (2001) find that a larger institutional sector is associated with a lower average level of capital market volatility.

As shown in Section I foreign institutions account for in excess of 90% of the demand for Russian IPOs and this lack of domestic demand is what is driving the rapid internationalisation of companies and listing domicile. The creation of a strong domestic institutional fund industry should increase liquidity in the domestic markets which would dampen the liquidity effects of internationalisation and may in turn encourage more domestic issuances.

³⁰ The Monday effect is the phenomenon of market returns tend to underperform on Mondays

³¹ Another 'seasonal' anomaly where the market tends to outperform in January

Domestic Institutions: Impact on Corporate Governance

There is considerable literature on the role institutional investors play in improving the corporate governance of firms. In Russia to date foreign institutions have had a significant impact on the corporate governance environment due to their large ownership of the market. In addition, as they are the main buyers of IPOs, firms planning to issue new stock are required to meet the corporate governance standards set out by foreign institutions in order to generate demand for their issues. In fact a very positive outcome of internationalisation is the much stricter corporate governance requirements levied on companies issuing stock in foreign jurisdictions such as the UK and the US which spills over to other companies in the Russian market. Subrahmanyam (2005) suggests that short term individual traders may lack the sophistication or the incentive to curb managerial excess in their investments and suggests that governance may be weaker because short-term investors do not have any vested interest in the long-run prospects of the company. Thus the creation of a strong domestic institutional investment industry may have positive spillover effects on corporate governance.

Households and The Stock Market: A Causal Dilemma

While Institutionalisation in theory should have a positive impact on stock market development in Russia, the less trivial question is how to get Russians to invest into institutional funds. There is no question of capital being available for investment. Disposable Income per capita is at the highest level of the BRIC economies and has been growing rapidly. In addition the household savings rate, at 10% of disposable income is well above developed market and Latin American levels.

Figure 22

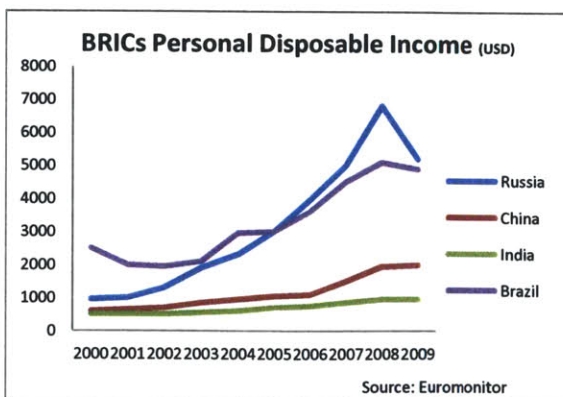
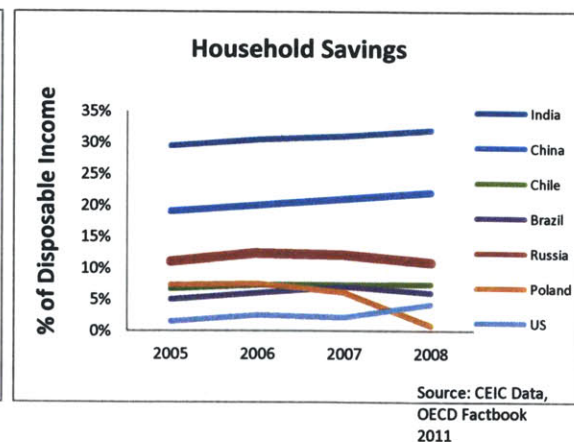


Figure 23



While the investment allocation of household savings is not officially recorded, a study by the BBC in 2007 reports that 50 percent of Russians with investable savings still keep this money in cash at home. The same study also reports that half of the population believe that property investments are the most

effective protection for their savings. (BBC, 11/27/2007) One interviewee who works with high net worth individuals in Russia suggested that clients with investable capital of more than \$1m keep the large portion of their money offshore and keep only discretionary cash in Russia invested primarily in short term instruments such as term deposits. A small amount is invested directly into the equity market in a speculative, short-term and non-diversified manner but they do not consider the equity market a viable vehicle for long term capital preservation. Bond (2010) Chief Russian Equity Strategist at Citi estimated in a 2010 report that 84% of household wealth is in property, 12% is in deposits and only 4% in other financial assets.

Referring to the wasted opportunity of capital sitting idle in bank accounts, Viktor Nossek, a researcher at Renaissance Asset Management estimated that “the underutilisation of Russian domestic capital is currently costing the country about 1.5% of lost growth per year” (Financial News, 04/06/2011)

In an article for *Russia Beyond the Headlines*³², Economist Denis Strebkov, an assistant professor at the Higher School of Economics, suggested that Russians lacked “elementary financial literacy as an essential component of market economic culture.” Potential investors do not trust or understand financial instruments. He stated his belief that “less than 1 percent of the population personally invest in the stock market in comparison to the United States, where approximately half of all households own shares in publicly traded stocks”. (RBTH, 06/02/2012) The high level of volatility and the extreme drawdowns leave the average³³ Russian perceiving the stock market as not much better than a casino. While they may be happy investing some small amounts of money during the bull markets, at the first sign of trouble they tend to sell out of their positions. In general, this author found the average Russian who was interviewed to be relatively risk adverse and uneducated about the financial markets, consistent with Professor Strebkov’s observation³⁴. There is an understandable scepticism towards the stock market given the countless stories of management fraud in public companies and the complete loss of savings they incurred repeatedly during the 1990s; the collapse of the Soviet Union and ensuing hyperinflation, the Russian crisis of 1998 and the multitude of pyramid investment schemes, which tricked people into investing money by promising them huge returns, but subsequently collapsed. Furthermore it is not entirely clear that the risk –reward pay-out is adequately attractive. Figure 24 below shows the cumulative returns for a selection of markets between 2006 - 2012 overlaid with their average volatility. Russia has the highest volatility of the sample yet it has

³² English language branch of Rossiyskaya Gazeta

³³ Middle – upper middle class Russian not connected to the financial services industry

³⁴ Based on interviews with 8 Russians of different backgrounds/ wealth levels and from the Author’s experience of living in Russia for 3 years

returned only 17% cumulative while domestic inflation has been running at 10% per year³⁵. The risk free rate was 10-12% from 2005-2009 to around 8% through 2010-2012³⁶.

Figure 24



A positive result has been the robust macroeconomic situation throughout the 2000s. The government has run a current account surplus throughout the decade, managed the rouble within a relatively tight band and wages have been increasing rapidly. This stability has contributed to a growing faith in the financial sector in general, although the financial crisis of 2008 brought back memories of the darker days in the '90s. Unfortunately, regardless of this positive trend, the high level of volatility and event risk in the Russian stock market is still discouraging the formation of pools of domestic risk seeking equity capital. The causal dilemma is that to reduce volatility, a long term domestic capital base must be created, but in order to create a long term domestic capital base, volatility needs to be reduced.

Potential Sources of Long Term Capital: Pensions?

Consistently, each financial expert that was interviewed cited the reform of the Russian pension system as being critical for the development of a long term capital base. Specifically, they suggested that the reform of the current system to increase the portion of mandatory defined contributions into the equity markets and cited Poland and Chile as the benefits of such systems. Vittas (1999) coined the idea of symbiotic finance suggesting that the development of the pension fund industry would

³⁵ Federal State Statistics Service: www.gks.ru/eng/about/default.asp

³⁶ Central bank of Russia: www.cbr.ru/eng

promote the development of other institutional investors. From the perspective of Russia, it seems reasonable to suggest that the development of the pension industry might contribute to the general level of financial education and comfort with financial products.

In 2002, a ‘Three Pillar’³⁷ pension system was introduced. The first pillar is a basic payment by the government on a pay-as-you-go (PAYG) basis that just covers basic subsistence (this is what most pensioners currently live on). The second pillar is paid by the employer as a social tax and amounts to 20% of individual salary. Only 6% is attributed to the individual if they are born after 1967 and this 6% can be invested through the state pension fund or through a private pension fund. The third pillar is a voluntary payment managed by insurers or non-state pensioners’ funds (NPFs).

Unfortunately the reforms have failed to live up to expectations with the pension deficit ballooning to to \$50 billion this year. There are two main causes of the underfunding. Firstly, many workers in Russia are paid in cash to avoid tax, thus the 6% of official wages is not representative of future needs. Secondly, only 13% of Russian citizens are paying into the NPFs, in large part due to managers being discredited by irresponsible and risky speculative investments, corruption and inefficiency. In 2009 the Financial markets Regulator published a list of almost half of the total number of registered NPF that are accused of breaking the law³⁸. A recent article on Russia Profile.org³⁹ highlighted the extent of the funding issue: “Last year, only 31 of the several dozen management companies had a positive balance and only two of those recorded yields at 1.5 percent above inflation, according to the State Pension Fund. Pension savings under the government’s direct control did not perform any better. The yield on the pension investment fund was a mere 5.47%.” (24/04/2012) Unfortunately poor performance and irregularities at private funds have driven money into the State Pension Fund which is restricted to investing largely in Russian government securities.

Nickel and Almenberg (2006) suggests that if the pension deficit is funded by increased borrowing in capital markets, and if pension funds are large buyers of government debt (as is the case in Russia) then essentially the three pillar system is just simply an exchange of implicit liabilities for explicit ones (at a significant cost).

Given Russian pension regulation also restricts the level of investment in foreign securities (20% in foreign index funds or bonds of international banks), the risk levels for individuals increased significantly due to the high level of correlation of Russian securities and the economy. In addition, if an individual’s human capital (linked to Russian economy) is considered, the concentration of risks

³⁷ As recommended by the OECD

³⁸ <http://www.wsws.org/articles/2009/aug2009/russ-a17.shtml>

³⁹ http://russiaprofile.org/business/57897/print_edition/

increases significantly. "The risk profile of the pension scheme changes as the intergenerational risk-sharing of the PAYG system is replaced by risk-sharing through financial markets, in some regards individuals will face higher risks.... If local capital markets are underdeveloped, this will further increase the amount of additional risk borne by the individuals contributing to the system"(Nickel and Almenberg, 2006, p 24)

Lessons from Poland and Chile

There is no question that mandatory pension reform in Poland and Chile has helped to grow the size of the domestic stock markets. In Chile in particular the effect has been to smooth the volatility, over the past five years the level has been lower than even the US at 20% as shown in figure 24 and significantly lower than neighbouring Brazil (39%) and Russia (42%). Walker and LeFort (2000) find that there is a relationship between the size of pension assets in Chile, equity prices and cost of capital. In addition they find that overall market volatility decreases as does the sensitivity to external shocks. However, a combination of high management fees, low participation rates, insufficient funding levels, and prohibitively high costs to government has left the government with a large deficit to finance and many workers with inadequate pensions. There are very low participation rates due to the size of the underground economy, the number of self-employed and seasonal workers. It is estimated that only 50% of workers are captured in the system. (New York Times, 27/01/2005). Additionally, the assets allocated to pension accounts are not large enough to support retirees. In contrast, those people still benefiting from the governments' original PAYG pension scheme now receive up to \$1250 per month, only 0.01% of workers under the new system have managed to accumulate enough capital to pay out \$1250 per month. Many workers have had to continue to work well into retirement age. Excessively high management fees have meant that net returns to pension accounts between 1982 and 1999 were more like 5 percent, not the 11 percent gross that is cited in articles extolling the virtues of the Chilean system. A study by Kay (2003) found that the average worker would have done better simply by placing their pension fund contributions in a passbook savings account. (Kay, 2003) Furthermore, the primary impetus for the three pillar pension reform was to shore up the fiscal position of the government. Transition costs from converting to this system were much higher than expected at 6.1% of GDP in the 80s, 4.8% in the 90's stabilising at the current 4.3%. Much of this unexpected cost has arisen from the government obligation to subsidise workers failing to earn a minimum pension. (New York Times, 27/01/2005) Indeed a report by the World Bank expressed its disappointment with the performance of the three pillar approach in Latin America and recognised that the emphasis needs to change from improving the fiscal health of pension systems to assisting governments in administration and regulation in order to ensure citizens are better off. (Gill, Packard and Yermo, 2004)

In Poland, mandatory pension investment in stocks has certainly helped the development of the Polish stock market (WSE) which has now surpassed the capitalisation of its Central European peers significantly. This includes the Vienna Stock exchange which was the leading central European market throughout the 90s (WSE is now 30% larger by capitalisation). The number of listed companies has doubled over the last decade and turnover has tripled. The size of the pension fund industry has lowered the cost of capital as funds compete over the limited investment opportunities that exist, stimulating the primary market for IPOs. It is very extremely liquid with over 200 new companies being publicly listed between 2005-2010, including stocks from neighbouring Ukraine, Hungary and the Czech Republic. Even in 2009 when Russians managed to sell just three IPOs, 54 IPOs raised over \$4b in Poland. (Nemethy, 2010) A study by Hryckiewicz (2009) shows that the development of the institutional investment landscape (including through pension reform) has significantly promoted stock market growth in Poland.

While all this is good news for stock market development, as with Chile, the government is still faced with a ballooning pension liability as contributions do not meet sufficient levels to fund current needs. The government of Donald Tusk last year amended the pension policy, reducing contributions to privately managed pension funds from 7.3 per cent of workers' salaries to 2.3 per cent, with the difference flowing into the public pension system to help fund the deficit. (FT, 24/01/2011) Furthermore, while the Poland stock exchange is not as concentrated as Russia's, the mandatory investment in the stock market increases the risk significantly for pension accounts. Whereas PAYG systems are contingent on future industrial production, privatised pension schemes shift the risk to the financial markets. In Poland, up to up to 48% of pensions can be (and often are) invested in the stock market. Given the 5% restriction on foreign investments, this makes pension accounts highly sensitive to domestic financial markets. The 5% restriction goes firmly against modern portfolio theory which tells us the optimal portfolio of assets is diversified against different factor risks. Zalewska (2006) discusses the insufficient diversification of Polish pension funds, leading to higher risk due to home bias⁴⁰.

The purpose of this report is not to engage in the debate over public vs. private pension systems, but it does aim to point out that privatisation and mandatory investment in domestic stock markets is not a panacea. While such mandatory investments may be beneficial for the development of the stock market, the author takes a holistic approach, noting that what is good for the stock market is not necessarily good for the stability of pension system.

⁴⁰ tendency for investors to invest in a large amount of domestic equities, rather than diversifying into foreign equities despite overall improvement in the risk return profile

Risk Diversification

The author's key critique with the high portion of equity investments allocated in many of these three pillar systems is the mismatching of pension assets and pension liabilities. Pension liabilities are long dated fixed income securities whereas pension assets can range across the spectrum from fixed income securities to highly volatile domestic equity securities. Roldos (2004) discusses the high allocation to equities in developed markets being driven by "the existence of high excess returns on stocks" (p 13) and argues that extrapolating historical evidence from developed markets (that has been gathered for sometimes more than 100 years) that stocks outperform in the long run, to other countries is not only flawed in method but wrong in principal. MaCurdy and Shoven (2001) show that a quarter of the time equities underperform 20 year inflation linked bonds yielding 3.5%. Furthermore, there is the obvious notion that 'past results are no predictor of future results'. Thus large portions of Russia's pension assets being invested in the domestic stock market, given its undeveloped status would seem a very risky proposal for the stability of the system.

There are many studies that show the diversification and return benefits of allowing funds to invest internationally. For example, Roldos (2004) stresses the importance of allowing funds to invest abroad to "achieve adequate diversification levels and avoid undue pressures in local markets (p19), Grauer and Hakanson (1987) suggest that gains from international equity-portfolio diversification are large and Davis (2002) shows that international investments maximises the risk return ratio. Baxter and King (2001) highlight two benefits, first diversification and secondly a hedging benefit for income from labour (a person's human capital) that is highly correlated to domestic stockmarket performance.

Investing pension assets overseas however is akin to a capital outflow which can reduce the exchange rate significantly. Given one of Russia's major government mandates is exchange rate stability and is a key policy for social stability. Most major investments are still conducted in hard currency in Russia although this trend has been reversing in recent years with the stability of the rouble. A large capital outflow putting significant pressure on the exchange rate would eat into the economic stability fund as the central bank tries to keep the managed band or it would result in a loss of confidence in the rouble if the government were to let it fall. Politically, it is highly unlikely the government would support any policy reform that required a large capital outflow of this sort.

One possible solution is using cross country swaps to diversify away risk. Bodie and Merton (2002) advocate that "pension funds could use swaps to achieve the risk-sharing benefits of broad international diversification and hedging while avoiding the 'flight' of scarce domestic capital to other countries". They also show how "swaps can be used to lower the risks of expropriation and to lower the other transaction costs of investing in other countries". (p1) A swap is an agreement between two

parties to exchange sequences of cash flows for a set period of time⁴¹. The swap contract itself provides no new funds to either party at the beginning of the contract. As swap contracts are OTC transactions, the cash flows can come from an infinite number of sources. In the case of pension swaps, Russian pension funds could for example 'swap' the returns from investing in the MICEX index, with those of the MSCI World Index. In practice, when the MSCI World outperforms the MICEX index, the foreign counterparty would send the Russian fund a payment equivalent to the MSCI world return minus the MICEX return. When MICEX outperforms MSCI World, the Russian fund would send a payment to the foreign counterparty in the amount of the MICEX return minus the MSCI World return.

The benefit to the Russian fund is that they do not breach foreign investment restrictions (as they would still own the underlying MICEX index) and they achieve diversification benefits from owning the returns on the MSCI world index. The benefit to the Russian government is that domestic pension funds own the domestic stock market, providing liquidity and smoothing volatility, but they are less likely to suffer from as large drawdowns in times of crisis as they are diversified in international markets. The benefit to the counterparty is that he can diversify his exposure to high risk/return markets such as Russia without actually having to transfer his capital into Russia. Counterparty risk is reduced as rather than the investors whole capital position being at risk, it is only the returns on that capital which is at risk. In addition the foreign party only receives a payment when the MICEX is outperforming, a time when the Russian party is less likely to liquidate its fund. In addition Merton and Bodie argue that such a transaction reduces the risk of expropriation of assets by the government as the bulk of actual stock market ownership would be in domestic hands and thus would directly impact their 'vote wielding' constituents.

This structure is not restricted to MICEX and MSCI World returns. The cash flows of any asset can be swapped in such a manner provided a counterparty can be found to take the other side of the transaction. Cash flows from fixed income instruments, deposits, stocks/ stock indices and commodities are all a very common basis for swap contracts, but their use in pension funds is so far limited, with funds preferring direct investments that put their capital at risk (rather than just the returns). The state pension fund could also benefit greatly from this by swapping the returns on its own government securities for the returns of international AAA rated securities.

Furthermore, swaps would not need to be limited to pension funds, the use of swaps to create structure risk reduced products could be the right path for introducing the 'average' Russian to the stock markets. Where home bias exists in most countries, Russians are so highly sceptical of their own

⁴¹ www.investopedia.com

institutions, structured products sold through reputable (perhaps international) financial intermediaries that give a diversified exposure to international returns, removing or limiting the concerns they have of the volatility of the Russian market.

The introduction of swap products to diversify risk in the Russian market will require a significant overhaul of the law on derivatives and regulation of the industry (derivatives are currently classified under the same category as gambling in Russia). Derivative Law is currently being updated along with the overall upgrade of market infrastructure and regulation but is yet to be finalised.

In addition, the quality of private funds in Russian needs to be improved significantly. To begin, a certain level of investment education should be required of portfolio managers (such as successful completion of the CFA accreditation⁴²) and additional ethical exams should be undertaken to achieve professional accreditation. Regulation and oversight of these institutions needs to be increased up to international standards and most importantly rules must be enforced by the regulator with strict penalties. Until the instances of management fraud decline dramatically it will be very difficult to expect domestic investors to put any faith in these organisations, even an environment of lower volatility.

⁴² Chartered Financial Analyst

Conclusion

This paper begins with the assumption that stock market development has a positive and causal relationship with long run economic growth. It thus takes the view that developing the equity market is an important policy objective for the Russian government. Through a series of interviews, data collection and a review of the literature, it is found that the Russian equity market is rather underdeveloped as measured by its liquidity, free float capitalization and industry concentration. In order to stimulate the development of the market, the paper focuses on the attraction of long term capital to sustainably increase the size and liquidity of the market and reduce volatility. A set of viable reforms are suggested to achieve this goal including: 1) the upgrade of market infrastructure primarily through the creation of a Central Settlement Depository and relaxation of prefunding requirements, 2) Corporate Governance improvements through a reduced government participation, increased board independence and the introduction of a minimum free float requirement and 3) Incentives for the pooling of long term domestic capital, in particular through the diversification of risk using cross-country swaps.

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