Liquidity Management in State-led Financial Capitalism: Corporate Bond Market and Emergence of Collateralized Finance in Russia

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Abstract: The article approaches emerging financial capitalism in Russia and its recent developments, the rise of collateralised finance and trading in repo markets. Domestic corporate bonds, one of the key collaterals in Russia, are used as a starting point for analysis. The main conclusion is that decoupling of financial system from credit supply to enterprises continues to exist since the collapse of communism. The role of capital markets is restricted to short-term liquidity management in money markets. Existence of a large monetary overhang accumulated within Russian banking system and its interconnectedness with collateralised markets are discussed. Combination of a strong state control over finance and sophisticated speculative practices in financial markets is a distinctive feature for Russia after 2000. Classification of financial capitalism is extended with a new type, state-led marked-based banking.

Key words: Russian financial markets, collateral-based finance, repo markets, varieties of capitalism, corporate bonds, money market, liquidity
1. Introduction

What happens if fragilities of speculative finance overlap with a strong presence of the state in economy? The Russian case considered in this article provides a perspective on outcomes produced by interaction of such seemingly contradictory tendencies. Starting from the early 2000s, the Russian state made a comeback into economy as an active player. The process embraced increase of state ownership, coordination of economic activity and control over the main liquidity flows. These developments have been well-documented in previous research regarding corporate sector in general (Sprenger, 2010; Chernykh; 2011; Author 2 et al., 2018.) as well as extractive industries (Gustafson, 2012), commercial banking (Kirdina and Vernikov, 2013), and non-bank financial sector (Author 1 & Author 2, 2016). The 2008 crisis became a turning point that made state expansion at the expense of private sector irreversible. In the 2000s, inflows of foreign speculative capital in time of the oil price boom created a fragile regime of financial capitalism; its systemic risks could not sustain a reversal of global financial flows in 2008 (Abramov, 2008; Nesvetailova, 2016). The tendency towards the state’s presence in economy was reinforced after introduction of the Western sectoral sanctions as a part of the Ukrainian geopolitical crisis in 2014 (Connolly, 2018), and after a new currency crisis unfolded in Russia in 2014-15 (Johnson and Woodruff, 2017; Author 1 and Author 2, 2018).

Against this background, previous research has said little about financial architecture of post-2008 Russian capitalism, not least about how liquidity flows are organized and redistributed between state-controlled actors. Very little has been written about how this process is interrelated to a broad international tendency towards formation of collateralised finance and expansion of repo (repurchase agreement) markets. The instrument of repo is used as a form of lending involving the sale and repurchase of collateral assets that underpin circulation of liquidity between central banks and other financial market participants. Government bonds generally function as the main benchmark for repo transactions, but corporate bonds and stocks as well as a broad array of securitised assets can be also used as collateral. In the 1980s and 1990s, repo markets have been playing an ever-increasing role in financial markets of core capitalist economies (CCEs) to become a systemic element of monetary policy and central banks’ refinancing operations (Gabor, 2016; Gabor and Ban, 2016;
Collateral-based finance has been reproduced ever since in emerging market and developing countries (EMDs), including Russia after 1996. To fill this gap in literature on political economy of the Russian finance, we approach domestic corporate bond market, a growing segment of Russian financial markets, as one of the key elements to understand Russia’s collateral-based finance.

In August 1998, the Russian state declared default on its government short-term bonds (Russian abbreviation: GKO) market due to inability to meet its financial obligations. The sovereign debt default discredited the very idea of ‘safe’ collateral (Boy, 2014) and left a large impact on the subsequent formation of collateral framework in Russia. Extensive use of government debt securities as principal collateral in repo operations has been delayed until the post-2008 crisis period triggering development of alternative types of collateral. Starting from the 2000s, Russian domestic corporate bonds have taken a more prominent role in formation of collateralised finance compared to CCEs and EMDs with sophisticated repo markets such as China (Li and Hsu, 2017, p. 75). While the use of government bonds as principal collateral has been a mainstream practice in global finance, the Russian path diverges from this ‘normality’.

Contrary to a declarative purpose of capital raising for non-financial companies (NFCs), corporate bonds are not used for investments into productive facilities in Russia. Instead, these securities have been an integrated part of liquidity flows between government agencies, the Central Bank of Russia (CBR) and state-controlled financial market participants. We demonstrate that a new type of collateralized finance has already emerged in Russia, and that the Russian state has been at the core of these developments. The purpose of the article is therefore twofold. First, we define the role of domestic corporate bonds within the system of collateralised finance in Russia. Second, we use this segment of financial markets as a starting point to explore inner mechanisms that underpin functioning of Russia’s state-led financial capitalism.

The rest of the article consists of six sections. Section 2 presents a theoretical discussion on financial capitalism and collateralised markets, and relates it to the Russian case. Section 3 depicts the main developments of the Russian corporate bond market and presents data on the
main fixed income securities used as collateral. Section 4 identifies a monetary overhang in the Russian banking system and discusses how its accumulation is related to liquidity management of state-originated money. Section 5 introduces the main actors in the corporate bond market after the 2008 crisis with an emphasis on increasing presence of state-controlled banks and NFCs. Section 6 highlights the recent developments in Russia’s collateralised finance, including securitization of repo markets under state control. Section 7 sums up results of the study.

2. Varieties of financial capitalism (VoFC) and market-based banking: a theoretical perspective

Classification of national financial systems developed by Zysman (1983) remains so far the most elaborated approach to varieties of financial capitalism. Its primary focus was on interconnection between industrial policy and financial sector as capital supplier. Basing on three dimensions that define allocation of investments into industry and state capacity to manage financial flows Zysman defined three models of finance. The first one is a capital market-based system typical for Anglo-Saxon countries. It allocates long-term industrial funds through security issues of stocks and bonds with prices set in competitive markets. This model is characterised by non-relational interaction between investors and the industry, with a great diversity of available market segments, financial instruments and specialised institutions. Financial intermediaries do not strive to establish long-term relationships with company management concentrating instead on increase of market value of diversified portfolio investments. The role of the state in such system is limited. It defines the rules of the game for fair competition between financial market participants, without pursuing an ambition to allocate resources between economic agents. Central banks are concerned primarily with indirect influence on money supply such as control of monetary aggregates or interest rates.

The second model is a state-led credit-based financial system with government that pursues an active industrial policy and influences distribution of investments according to its policy agenda. Stock and bond markets are not easily accessible for private borrowers but can be used by state agencies to raise capital for particular investment projects. Firms need to rely
on funds supplied by lending institutions (banks) that function as the main agents of the state, which coordinates credit provision and guarantees bank lending. Government has the ultimate responsibility for creation of money and sets the price level in key markets giving priority to development of certain firms and sectors of economy. Banks concentrate considerable parts of voting stocks of related companies participating in direct ownership control. While the French state’s industrial policy during the post-war period was the main source of inspiration for Zysman, he admitted that the East Asian developmental state of the same period fit well within this model of financial capitalism. It is also reasonable to conclude that the policy of industrial growth pursued by czarist Russia before the 1917 revolution (Gerschenkron, 1962; Gatrell, 2010) could be also classified within the second model.

Bank-led credit-based system was the third model suggested by Zysman, with West Germany as its typical illustration. In such a system, a few large financial institutions coordinate industrial policy and credit supply to companies keeping a strong autonomy from the state, which exercises its influence through indirect market operations. Government does not interfere in the markets with administrative price setting or provide financial assistance to banks, which appear as the main centres of economic power. Banks collect deposits from household savers and distribute liquidity as credits to enterprises basing on cultivation of long-term mutual relationships between lenders (banks) and borrowers (NFCs), not on arm’s-length market operations. This reduces the impact of market and price fluctuations on credit supply to non-financial sector creating what Zysman defines as financial power of banks. Through domination in (non-liberalized) securities markets and by keeping long-term bond and equity holdings of affiliated NFCs, banks are able to have a strong influence on decision-making inside these NFCs.

After a massive wave of large-scale deregulations, privatization and financial liberalisation in the 1980s and 1990s, the second state-led type of Zysman’s financial capitalism seemed to be extinct in CCEs. This led to an unfortunate simplification of classification leaving research on comparative political economy of finance with largely two basic models. Publication of the influential work of Peter A. Hall and David Soskice (2001) on varieties of capitalism (VoC), which distinguished Anglo-Saxon liberal market economies in opposition to coordinated market
economies of continental Europe and Japan, rather followed in footsteps of Zysman’s first and third models. Meanwhile, financial markets underwent unprecedented liberalization that triggered off the process of financialization, broadly defined as the increased importance of financial activities and markets as a source of profiting in the economy (Krippner, 2011, p. 27). Within financial sector itself, financialization shifted focus to risky short-term market operations away from supplying long-term ‘patient’ capital to NFCs leading to increased volatility in financial markets (Ertürk and Solari, 2007; Hardie, 2012). This fundamental transformation of CCEs, which gradually affected also large EMDs, requires a further extension of Zysman’s classification rather than reducing it to a dichotomy suggested by Hall and Soskice.

Hardie, Howarth, Maxfield and Verdun (2013) claim that a new model of financial capitalism has emerged in CCEs, which they propose to define as market-based banking (MMB). The latter combines the weakest features characteristic for both credit-based and capital market-based models in terms of accumulation of systemic risks and financial fragilities. MMB remains to be concentrated on credit activity, but the nature of this intermediation has been very different. Traditional relational banking as a part of capital supply and exchange of information between financial institutions and NFCs has been abandoned reducing financial power characteristic for ‘old-school’ commercial banks. Customer deposits do not constitute necessarily the main source of banks’ liabilities undermining a stable base for provision of long-term capital to enterprises. Instead, banks rely on borrowing from the market, mainly from other financial intermediaries, and on lending to the market, also increasingly to other financial institutions. From the 1980s, practices of the ‘originated to distribute’ model of banking have been increasing; banks originated loans with a variety of clients for further resale of the risk, often packed as securitized financial products (Nesvetailova, 2018, p. 6). Therefore, MMB rests on creation and utilization of assets and liabilities whose value depends on market sentiments rather than on ability of financial institutions to withstand market instability. At the same time, the negative aspect of relational exchange, when information is kept private between involved counterparties, has been preserved in MBB. Banks continue to assume ongoing counterparty risk due to repeated transactions with limited number of similar large financial institutions. In that sense, MBB differs also from transparency of conventional capital market-based model,
which presupposed the one-off sale of assets through public equity exchanges with high standards of information disclosure and dispersion of risk among a large number of investors. The difference between commercial banks and non-bank financial intermediaries such as investment banks, money-market funds and hedge funds has blurred. They moved altogether towards opaque practices of non-regulated over-the-counter (OTC) markets (Hardie & Maxfield, 2013, pp. 58-62; Guttmann, 2018). Under MBB, banks and other intermediaries has benefited from dramatically increased profits generated by speculative finance at the cost of financial stability and long-term engagement with NFCs. Essentially, fundamental uncertainty, pro-cyclicality and fragility of finance are characteristic for MBB, which became visible during the 2008 global crisis (Hardie & Howarth, 2013).

Hardie, Howarth and Maxfield stresses the multifaceted nature of MBB that embraces a broad variety of practices including securitization, trading in derivatives, shadow and parallel banking, and repo markets. The latter are critical for MBB since trading collateral makes possible extensive exchange of assets and large-scale liquidity flows. In collateral-based finance, financial intermediaries rely on repo markets for the purpose of short-term liquidity management and leveraged trading involving risky speculative strategies for profit maximization (Adrian & Shin, 2010; Gorton & Metrick, 2012). The reuse of collateral (up to five repo transactions, unless state regulators introduce regulative controls for reuse) creates collateral chains that interconnect financial institutions relying on repo markets as a source of funding and profitmaking (Singh, 2011; Gabor, 2018: 147).

Two aspects of collateralised finance are central for undermining financial stability. First, financial intermediaries and, increasingly, central banks rely on mark-to-market (MTM) practice of pricing collateral used for repo transactions to its constantly changing market value on daily basis. During periods of market stress, margin call practices are enacted each time the market value of collateral falls below the borrower’s capacity to repay the loan obtained through a repo transaction because the decreased value of pledged securities does not correspond to the amount of borrowed money. The borrower needs either to provide additional collateral, or the lending institution becomes the ultimate owner of securities that guaranteed the loan. In the worst case, the chain of margin calls can lead to a liquidity spiral (Brunnermeier & Pedersen,
2009), a combination of falling asset prices and liquidity squeeze, triggering deleveraging and cross defaults between financial intermediaries. A non-payment crisis affects the entire financial system, as it happened during the 2008 crisis globally, and in the Russian market in particular. Second, collateralised finance puts a special responsibility on the state since sustainability of markets depends on the ability of monetary authorities to issue ‘safe’ collateral in form of government bonds (Boy, 2014; Gabor & &, 2016). Monetary policy’s primary objective becomes to manage liquidity through provision of good collateral and maintaining price stability of those assets. This transforms the ultimate role played by the central bank for financial stabilization, from being the lender of last resort into the dealer of last resort (Mehrling, 2012; Johnson & Santor, 2013).

After the fall of communism and the initial phase of ‘shock therapy’ with privatization and liberalization of prices and foreign trade, EMDs in Eastern Europe were exposed to similar tendencies towards establishment of MBB and embracing practices of financialization. In the 1990s, these included dismantlement of relational banking, introduction of central bank independence with tight monetary policy and low inflation as policy priorities (Gabor, 2012). From the 2000s, the process was supported by liberalization of capital account, establishment of shadow (parallel) banking and the rise of collateralised finance (Gabor, 2010; Kaurova, 2018). International financial organizations (IFIs), CCEs central banks, government agencies and other financial institutions became the main providers of this transformation (Johnson, 2017). It was enforced through IMF’s conditionality imposed on borrowing countries or, wherever applicable, as a part of the EU accession criteria. In parallel, ideology and practices of financialization were transmitted through the exercise of soft power of IFIs and central banks in CCEs such as educational programmes targeted to officials and employees of financial regulators in EMDs. Gabor (2015b) demonstrates actual priorities of transition envisioned by economists affiliated with IFIs in the late 1980s. High-status Western transitologists advocated destruction of the planned economy’s financial system and its institutions, including the relational nexus between state-owned banks and NFCs. The narratives of Kornai’s soft-budget constraint, ‘excess’ demand and monetary overhang were used as a theoretical justification for this destruction. The planned economy should be replaced by a new system of profit-maximizing firms put under
strict market discipline of new commercial banking and its rigorous assessment of borrowers’ creditworthiness. At that time non-existent capital markets would provide a new source of investments enabling NFCs to raise capital through issuance of bonds and equity. By the end of the 1990s, implementation of this policy agenda led to deep economic decline and systemic failure to create a new sustainable model of financial capitalism. As it was confessed by two influential transitologists, banking system that arose throughout post-Communist countries in Eastern Europe was centred on activities with a short-term investment horizon and lending predominantly to the government. The newly born capital markets were unstable and highly volatile while enterprises had to depend on internally generated funds (Berglöf & Bolton, 2002).

Within the Russian context of the early 1990s, the relational banking embraced refinancing and lending practices between the former branches of Gosbank (the Soviet State Bank) and large mass-producing enterprises. By the mid-1990s, Russian banks stopped by and large to provide credits to NFCs (Johnson, 1999, pp. 98-106), leaving no choice for Russian enterprises but to rely on retained profits as the main source of business conduct. At the very beginning of the transition, the CBR opposed tight monetary policy pursued by the Russian government on advice of IFIs. However, after 1992, it underwent its own transformation into an institution that gradually took the main responsibility for destruction of the remaining lending practices inherited from the planned economy. Tight monetary policy and squeezing lending to NFCs resulted into a non-monetary barter exchange that secured for years survival of enterprises and substituted limited access to refinancing and credits (Woodruff, 1999). Capital markets established on advice of consultants from the United States Agency for International Development (USAID) associated with power networks in the US financial industry, did not deliver a promised alternative for raising funds for NFCs (Author 1, 2015). In the 1990s, the newly created stock market worked as a playground for non-resident investors while corporate bond market remained undeveloped.

In the 2000s, Russia’s path towards a new model of financial capitalism diverged from general trends in Eastern Europe. The main difference involved return of the state in financial sector. Russian influential political and business insiders, including the powerful banking lobby, continued successfully to prevent a massive takeover of the banking sector by foreign players.
(Sutela, 2012, p. 174). This was in contrast to the majority of EMDs in the region, which lost control of their financial sector interconnection to foreign capital (Kirdina & Vernikov, 2013, p. 480). In part, relational banking between large state-controlled banks and NFCs was restored, which contributed to better economic performance of such enterprises in the 2000s (Vanteeva & Hickson, 2017). However, it would be too early to conclude that finance in Russia has been transformed into a state-led credit-based system envisioned by Zysman; industrial policy in Russia has not been implemented on a national level being restricted to a limited number of NFCs and projects (Dranev, Kuznetsov, Kuzyk, Pogrebnyak & Simachev, 2014). In the 2000s, the VoC approach stimulated discussions on what kind of new capitalism was emerging in Russia. As a rule, such generalizations attempted to present a holistic view of Russia’s capitalism with an emphasis on state-business relations, labour markets and welfare, while financial sector rarely received a special attention. It became evident that Hall and Soskice’s dichotomy did not provide a helpful tool for analysis of the Russian case. Penetration of informal power networks and practices as well as strong presence of the state in economic activity laid ground for invention of new definitions of Russian capitalism. It has been labelled as a "state-managed network capitalism" (Puffer & McCarthy, 2007), “Weberian political capitalism” (Hanson & Teague, 2007), a “state-led corporate cooperative capitalism” (Lane, 2013, p. 310) or simply as a Russian sistema (Ledeneva, 2013). Another alternative is to view Russia as a semi-peripheral capitalism with a subordinate status as a part of the world capitalist system (Dzarasov, 2013). Most of these concepts are certainly helpful to describe the role of the state in Russia’s emerging capitalism, or to understand its relations with CCEs within global financial flows and production chains. However, such approaches tell more about deficiencies of institutional framework or external factors that constrain workings of Russia’s state-led capitalism. They do not reveal systemic elements that make it distinctive enabling classification within a set of VoFC. A more fruitful approach to describe Russia’s capitalism would be to view it as a combination of statism and financialization (Nesvetailova, 2016; Kaurova, 2018). Although financialization was initially adopted from CCEs, it has been gradually transformed into an integrated part of Russia’s economic environment. However, we prefer to view financialization as a process with a large number of co-existing and interacting elements, practices, actors and
tendencies rather than as a specific type of financial capitalism. We choose to use the concept of MBB for analytical purpose because it enables to understand underlying factors that guideline financial actors in pursuit of profits and allocation of investments. In other words, we are trying to uncover inner logic and internal mechanisms that facilitate reproduction of a particular type of financial capitalism that has emerged in Russia.

The breakup of ties between financial intermediaries and NFCs has been remaining ever since publication of Berglöf and Bolton’s seminal paper in 2002. What has changed since that is the emergence of more complex mechanisms and instruments that underpin liquidity management between central banks, commercial banks and other financial market participants. A rapid spread of collateral-based finance and associated repo trading has been the main novelty for financial systems in Eastern Europe during the 2000s and 2010s. The speculative nature of finance in post-communist countries has been reinforced through implantation of these innovations from CCEs. In the Russian case, the state regulators created highly sophisticated and centralised repo markets to facilitate liquidity flows between state-controlled financial institutions.

It is remarkable that a master thesis remains the only work that provides a relatively comprehensive account on how repo markets have been evolving in Russia (Bagrei, 2014). It expresses a very positive view of repo as a progressive financial innovation that helps Russia to embrace the best practices already introduced in ‘developed’ financial markets. This view reflects a prevailing approach shared by Russian financial market participants and regulative authorities towards collateral-based finance. There is no critical account on how the Russian state has promoted repo markets as a key element of MBB. Meanwhile, as an EMD country, Russia is also exposed to fraud and manipulative practices that deteriorate workings of formal institutions and rules that financial market participant are presumed to follow (Author 1, 2015). Recently, Mamonov (2018) has demonstrated that potentially insolvent Russian banks tend to accumulate hidden ‘holes’ in capital balances due to fraudulent accounting practices in the years preceding revocation of licenses by the CBR. Such banks tend to provide credits to NFCs with shorter maturities, which reinforces the short-term horizon of lending practices characteristic for MBB. Existence of this informal dimension of finance applies to formation of repo markets.
as well, not least regarding creation and acceptance of collateral. The next sections will address Russia’s collateralised finance using corporate bonds as a point of departure for our analysis.

3. Russian corporate bond market: pre-2008 account and main development thereafter

Almost thirty years have gone since the debates on transition, yet capital market instruments such as equity and corporate bonds have not constituted a workable alternative to banking sector as a source of investment in fixed capital for companies. Figure 1 illustrates this outcome. Throughout the observed period, contribution of capital markets instruments into fixed capital investments has been negligible. In 2015, its share was only 2 %, one of the highest indices between 1998 and 2015, while retained profits, or organizations’ own funds, were 50,2 %. From 2016, the Federal State Statistics Service (Rosstat) stopped to publish data regarding the contribution of corporate bonds and equity to fixed capital investments, which simply reflected insignificance of the Russian capital markets for economic growth. The latest available data from 2015 demonstrated that only 6,6 % of total domestic corporate bond issuance was channelled into investments in fixed capital. Figure 1 also reveals that bank credits made a very limited contribution to investments. This fact witnesses about disintermediation of banks in terms of capital supply outside financial sector. Retained profits of enterprises and public funds have been the main sources of capital provision to NFCs. Notwithstanding this fact, the development of fixed income instruments accelerated continuously after 2000, including forex-denominated corporate Eurobonds and domestic rouble-denominated corporate bonds. What were the real factors behind this expansion, besides an obviously declarative purpose of capital supply to enterprises?

Figure 1. Investment structure of fixed capital for Russian companies by origin, in per cent
Before 2008, companies raised funds received from bond issuances for such purposes as refinancing, business restructuring, mergers and acquisitions (Dvoretskaia, 2008, p. 50). Between 2000 and 2008, the rouble experienced a real appreciation and companies were able to access international liquidity through forex-denominated Eurobond issues. On the supply side, domestic rouble-denominated bonds were not considered as an ultimate purpose of fund raising in Russian capital markets. Rather, they functioned as an intermediate phase before companies could secure access to international liquidity through Eurobond issuance. For some business groups that owned successful cash-rich companies, debt issuance was a natural step towards an initial public offering (IPO) of a company on stock exchanges. A high market capitalisation was regarded as a comparative advantage to increase the company’s market value before its final sale to a new investor, often represented by a multinational corporation.²
On the demand side, fixed income securities were used for three purposes; as collateral for the CBR’s refinancing and for commercial banks’ operations in the interbank market; as an alternative lending vehicle used by commercial banks for crediting NFCs; or for speculative activities in financial markets. Russian commercial banks were the first large group of corporate bond investors. Inability of the banking system to provide credits to companies, whatever real economic purposes these would pursue with loans, was one of the prerequisites for the market expansion. Instead of taking risks connected to direct lending and associated risk management characteristic for traditional relational banking, Russian banks preferred a market-based alternative of capital provision through corporate bonds, which in effect worked as a pooling-of-assets mechanism for a number of banks.³

Non-residents such as index and hedge funds constituted the second large group of investors. As a part of carry trade strategy, they used Russian corporate bonds as an investment vehicle into rouble-denominated assets. Subsidiaries of global banks worked as intermediaries of these short-term foreign capital inflows. Carry trade deals with borrowing capital denominated in foreign currencies with low interest rate (funding currencies such as US dollar, Japanese yen or Swiss franc) and its further reinvestment into high-yielding financial instruments denominated in EMD currencies such as Russian rouble or Brazilian real. Carry-trade investors pursue a high-risky strategy since their positions are exposed to foreign exchange rate volatility including a sudden devaluation of a target EMD currency or changing conditions for borrowing in funding currencies. Particular speculative carry-trade strategies can target a broad range of financial assets and instruments (Gabor, 2015a). Between August 2004 and August 2008, and following liberalisation of capital account, Russian capital markets experienced large liquidity inflows from international financial markets. Not only non-residents, but also domestic intermediaries including banks and investment banks accessed international wholesale money markets (Lu & Yakovlev, 2017, pp. 8-9). This foreign liquidity was used for undertaking short-term positions in rouble-denominated assets such as corporate bonds and stocks. Russian securities were in turn pledged as collateral in repo transactions in pursuit of complex speculative strategies involving leveraging, pyramiding and derivative products (Abramov, 2008). These practices were not unique for Russia but reflected a common trend of
EMDs’ inclusion into global financialization (Gabor, 2010; Kaltenbrunner, 2010). Yet even against this background the growth of collateralized finance in Russia represented a special case.

After the default on the short-term government bond GKO market in August 1998, the expanding mid-term government bond OFZ (Obligatsii Federal’nogo Zaima, or Federal Loan Bonds) market remained for a long time underdeveloped. Due to high inflows of hydrocarbon income, the Russian Ministry of Finance (MOF) had limited incentives to issue debt using OFZ as an instrument to sterilize liquidity. Contrary to international practice, OFZ bonds did not provide an anchor for the main domestic yield curve (World Bank, 2006, pp. 51-60). In the 2000s, this created a quite remarkable situation when principal collateral was almost absent at the same time as collateral-based finance was growing, not least because of the CBR’s efforts to introduce repo mechanism into its refinancing policy. The limited tradability of Russian government bonds meant that OFZs could not be used widely as collateral for leveraged trading and repo lending between financial institutions. Instead, corporate bonds and stocks had to substitute government debt securities as collateral for repo transactions. However, the amount of reliable companies that would be able, or willing, to meet obligations to investors in time of financial trouble was relatively limited. Hence, bonds issued by high-risky Russian companies played the same role of a substitute for ‘safe’ government bond collateral as securitized financial products including subprime mortgage loans did it in CCEs (Gorton & Metrick, 2012; Gabor, 2016, p. 982). In this respect, Russian market participants followed practices of international finance including repo trading and high leveraging, which were reproduced with a smaller number of available financial instruments.

Before the 2008 crisis, the development of Russian corporate bond market was also affected by deficiencies of its institutional framework. Both investors, issuers and state regulators failed to develop self-sustainable mechanisms of risk management and solvency control over bond issuers. During the pre-crisis speculative boom and liquidity inflows from international markets, investors were ready to buy low-quality bonds and stocks from problematic issuers. When the risk from collapsing global financial markets started to spread into the Russian market in 2008, this led to a wave of corporate defaults. A considerable part of
bond issues could be classified as a junk segment because of the lack of information about companies’ real business conduct. The structure of issues was also fragile since parent companies used special purpose vehicles (SPVs) for organization of issues instead of issuing debt directly. Indirect guarantees provided by issuers proved to be unreliable. A large number of issuers saw the 2008-09 crisis as an opportunity not to pay their debt to investors, declared default and reregistered thereafter their companies under different labels.\textsuperscript{4}

To summarize, the pre-2008-crisis architecture of Russian financial markets as a whole, and corporate bond market in particular, was unsustainable due to fragility of funding, short-term investments strategies, and systemic weaknesses of its regulative and institutional framework. This time, an attempt to create a collateral-based financial system in Russia was abrupt by the global crisis. Corporate bonds and other securities such as stocks turned out to be a poor replacement for ‘safe’ government bond collateral. As soon as global financial flows were reversed and carry trade stopped, a liquidity drainage in combination with a drop of the value of collateral under repo led to a non-payments crisis connected. A local run on repos paralyzed the Russian financial system in September 2008 (Abramov, 2008; Johnson & Woodruff, 2017, pp. 624-626).

After the global crisis, the Russian financial market underwent a systemic transformation in terms of state take-overs of commercial and investment banks. Privately owned commercial banks, which were negatively affected by active engagement in financial speculations, were rescued by the state or nationalised. Independent investment banking as it developed before 2008 in form of privately owned companies ceased to exist through either bankruptcies or nationalisations (Author 1 & Author 2, 2016). However, corporate bonds as a fixed income instrument continued to grow; it applied to both primary and secondary markets. Figure 2 illustrates developments of cumulative debt within the main domestic rouble-denominated segments of the Russian debt markets. Domestic corporate bonds demonstrated a steady growth that outpaced expansion of the main segment of the OFZ market. Figure 3 illustrates outstanding value of rouble-denominated corporate bonds and Russian forex-denominated corporate Eurobonds. Until the 2014 geopolitical crisis and Western financial sanctions, both segments had been expanding. Yet even after the 2014 crisis, the rouble value of domestic
corporate debt continued to increase; its diminished USD value after 2014 depended on a strong depreciation of the Russian national currency.

**Figure 2. Outstanding value of domestic rouble-denominated segments of the Russian debt markets, RUB bln**


**Figure 3. Outstanding value of rouble-denominated bonds and Russian corporate Eurobonds, USD bln**
The 2014 geopolitical and financial crises became the watershed for subsequent developments of Russian fixed-income markets, which demonstrated two contradictory tendencies in terms of integration into global financial flows. The first one deals with introduction of Western sectoral sanctions against a number of state-owned banks and NFCs in 2014 that led to stagnation and transformation of Russian Eurobond corporate market. A considerable part of foreign investors sold out Russian Eurobonds that were already in circulation while the number of new issues dropped dramatically. Since this market is over-the-counter (OTC), there is no available statistics that would demonstrate an exact composition of investors into these securities. However, there is a market consensus that most part of Russian Eurobonds have been purchased by cash-rich Russian banks and corporations when the fall of its value was as strongest. Not always these investors appear as Russian buyers since their interests can be represented by a bank registered in Switzerland or a broker from Cyprus. This transformed the Eurobond segment from being an offshore market into Russian domestic
corporate debt market. In 2014, the MOEX undertook an emergency solution providing possibility for listing and on-exchange secondary market trading in Russian corporate Eurobonds. In 2015, about 30 % of repo trading on the MOEX switched to Eurobonds making these securities one of the key collateral in Russian markets (Marich, 2015). It is highly plausible that the current tendency towards replacement of forex-denominated corporate Eurobonds by rouble-denominated corporate bonds, which is visible in Figure 3, will sustain in the future. This means decoupling of Russian corporate debt markets from global financial flows.

The second tendency concerns developments of the OFZ market. Notwithstanding constrained relations with the West after 2014, this segment has been more and more integrated into the global financial architecture. After the 2008 crisis, the MOF increased borrowing through new OFZ issuances for budget-balancing purposes. In parallel, the Russian regulative authorities prioritized to attract foreign money into the OFZ market. Between 2010 and 2013, they reformed infrastructure for acquisition and deposition of domestic securities by foreign investors. The CBR was the main driving force behind creation of the NSD (National Settlement Depository), which gained monopoly rights for registration, settlement and clearing of market transactions. As a result of these institutional reforms, the leading global settlement companies Euroclear Bank S.A./N.V. and Clearstream Banking S.A. opened depository accounts in the NSD which made easier cross-border movements of international capital. In addition, the structure of OFZ issues such as maturity and coupon payment schedules was adjusted to preferences of international investors enabling increased tradability of OFZs. In fact, foreign investors, mainly global money market funds and hedge funds, were co-founders of the liberalized OFZ market; its institutional and infrastructural evolution after 2011 was conditioned by a standing dialogue between the MOF and international investors (Lu & Yakovlev, 2017, pp. 4-5, 14). Inflow of foreign liquidity into the OFZ market, and the subsequent growth of non-residents’ share in total volume of the OFZ primary market, from 3,7 per cent in January 2012 to 33,1 per cent in January 2018 were outcomes of the OFZ market liberalization (Figure 4). Neither the 2014 crisis nor downgrading of Russia’s investment grade by international rating agencies in February 2015 led to considerable outflows of foreign capital from the OFZ market. Its decreased relative share on the primary OFZ market in December 2014 depended on the
growth of the total OFZ bonds issuance at the same time. The actual impact of foreign investors on the secondary OFZ market trading has been more profound compared to their share on the primary market. While most of Russian investors in OFZs such as banks and large NFCs pursue a more conservative buy-and-hold strategy, foreign players dominate trading on the OFZ secondary market.

Figure 4. Non-residents’ share on the OFZ market, February 2012 – January 2018


Keeping international investors in the OFZ market has had its macroeconomic costs. On the one hand, high key policy rate, low inflation and budget austerity measures enhanced investors’ confidence into Russian debt securities making the cost of borrowing through issuance of fixed income securities lower. On the other hand, tight monetary policy has also restricted capability of Russian companies to borrow from the banking sector contributing to a
slow (in practice, almost non-existent) economic growth and recovery after the 2014 crisis (Lu & Yakovlev, 2017, pp. 30-31). According to a former CBR deputy governor and MOEX president, the large presence of international investors on the OFZ market during 2014-17 witnessed about a renewal of carry trade through this mechanism. As soon as inflows of foreign money achieved critical volumes, the OFZ market has been exposed to sudden outflows of international speculative capital. This factor put serious limits on the ability of Russian monetary authorities to pursue an independent monetary policy (Korishchenko, 2017).

The prevalence of foreign investors on the OFZ market has decoupled OFZs from other segments of the Russian fixed-income market. This created a contradictory situation in terms of using government bonds as anchor collateral. Despite the growth of the OFZ market in absolute terms and its increased use as collateral in repo operations (see Table 2; Figures 12 and 13), it cannot still perform a role of a benchmark for price valuation of other fixed-market instruments (Lu & Yakovlev 2017, p. 26). In other words, the OFZ government bonds still cannot be viewed as principal collateral in Russia.

4. Corporate bonds and liquidity distribution within the Russian financial system: monetary overhang

To understand why Russian corporate debt markets continued to grow after 2008, notwithstanding the state take-over of private financial institutions and the progress of the OFZ market, one needs to address the issue of how demand on domestic debt securities is interconnected with liquidity flows on domestic money markets. Figure 5 illustrates these long-term developments. Depending on the factors that conditioned the origins of liquidity, we define five different periods from 2000.

The first period, from January 2001 until July 2004, was characterised by moderate liquidity. The demand on domestic corporate bonds was formed primarily by Russian banks’ limited liquidity. The second period started in August 2004, when international rating agencies awarded Russia investment-grade ratings, and lasted until August 2008, when the global financial crisis hit Russia. It was characterised by large inflows of cheap foreign liquidity through
carry-trade mechanism due to liberalization of capital account and a stable rouble exchange rate. The period between September 2008 and August 2011 included the 2008-09 crisis and a subsequent post-crisis recovery. Russian monetary authorities substituted foreign capital inflows with targeted provision of direct funds supporting refinancing in the banking sector. The use of this state liquidity for lending to companies and consumers was limited due to the CBR’s high key policy rates, but it increased demand on domestic debt securities.

Between September 2011 and January 2016, bank liquidity was supported by massive CBR liquidity provision. These inflows of state money created additional demand on corporate debt securities stimulating new issues and increased trading in the secondary market. At the same time, the CBR liquidity provision through repos and non-marketable assets increased fragility of the financial system. Instead of lending to NFCs, banks preferred to channel this liquidity further into the currency market to undertake speculative positions against the rouble. In 2014, combination of falling oil prices, Western sanctions due to geopolitical tensions and liquidity excess in the bank sector led to a deep currency crisis and volatility of the rouble exchange rate during 2014-15 (Author 1 & Author 2, 2016).

Figure 5. Primary and secondary corporate bond markets and bank liquidity in Russia, January 2001 - February 2018
Sources: Authors’ calculations based on data from the CBR, accessed at www.cbr.ru, and the Moscow Exchange, accessed at www.moex.ru. Bank liquidity is defined as correspondent account balances of credit institutions with the CBR.

A new period of the state-led liquidity management started in January 2016. Figure 6 demonstrates a gradual decrease of the CBR-led bank refinancing (“CBR net operations to provide and absorb liquidity”) from its peak level in January 2015. Instead, the Ministry of Finance became the main provider of liquidity through accumulation of public funding on accounts of budget-financed companies in banks. In Figure 6, this is reflected by the indicator “Change in general government accounts with the CBR”. Sell-out of assets previously accumulated in the Reserve Fund has been the main source of the Ministry of Finance’s budgetary spending. This factor has defined an accumulation of excessive liquidity in the banking sector (indicator ‘Correspondent account balances of credit institutions with the CBR’) that required its absorption. Alongside with the CBR deposit auctions, domestic bonds became
such a sterilization instrument of the state liquidity. This is reflected in Figure 5 by dramatically increased trading volumes on the secondary corporate bond market.

**Figure 6. Monetary overhang in the banking sector and liquidity management by the CBR and Ministry of Finance, January 2011 - January 2018**

Sources: Authors’ calculations based on data from the CBR, accessed at www.cbr.ru.

Between 2006 and 2017, excess liquidity grew in both banking and corporate sectors. In the banking sector, unused cash increased by 5.7 times, from 0.7 to 4.1 trillion rouble. To a great degree, this outcome can be explained by a corresponding increase of available liquidity accumulated primarily by the largest state-controlled companies. There is no available statistics
that would provide a full assessment of how excess liquidity in the corporate sector is
distributed between state- respectively privately owned companies. However, it is possible to
make an assessment of this ratio basing on data sample of the largest 145 publicly listed
companies that include both companies with state participation (CSPs) and privately owned
entities. Between 2011 and 2016, available funds on bank accounts of CSPs increased by 2,6
times. During the same period, available funds on bank accounts of privately owned companies
increased by 1,7 times only. The amount of funds accumulated by CSPs dwarfed resources kept
by private companies (Figure 7).

We suggest defining this excess liquidity as monetary overhang. Historically, the concept
has been applied to a variety of monetary phenomena, which had in common accumulation of
large pools of liquid assets retained by banking system or money holdings kept by the nonbank
public instead of using these assets for credits or spending (Caprio & Honohan, 1991).
Methodologically, it is usually difficult to provide an exact quantitative estimation of such
excess liquidity. Monetary overhangs have been observed in developing economies, notably in
Africa, that failed to channel accumulated liquidity into lending to NFCs. In CCEs, such
overhangs appeared during recessions that followed periods of financial turmoil leading to
banks’ distrust towards potential borrowers and their creditworthiness. In the Russian context,
this concept was first introduced as a part of the Sovietology and transitology theoretical
debates of the 1980s and early 1990s. In particular, the disequilibrium school stressed existence
of a monetary overhang as a result of constrained spending of Soviet consumers due to a
mismatch between money supply and supply of available goods in the shortage economy. At
that time, monetary overhang was viewed as a potential source of inflationary pressure during
the future transition to a market economy. This debate was quickly over as hyperinflation
caused by price liberalization depreciated deposits of the Russian public in 1992. Within a
critical reading of the transition, such overhang was an inventory construction introduced for
particular political purposes of the ‘shock therapy’ proponents (Gabor, 2012).

In the 2010s context, accumulation of the monetary overhang in the banking sector and
on accounts of the state-controlled companies witnesses about a systemic failure of Russia’s
emerging capitalist economy. It cannot transform this liquidity into investments and economic
growth since monetary transmission mechanism to channel this liquidity into lending to enterprises and population is very weak. This is also an explanation of why (rather limited) capital acquired through corporate bond issues has not been used for investment purposes in companies’ fixed capital. The problem does not lie in corporate bonds as a financial market instrument, but rather in the underlying structure of the Russian economy and its financial system. It does not enable to use corporate debt for investment strategies in productive facilities with a long-term horizon.

Figure 7. Monetary overhang in the largest 145 publicly listed companies, including CSPs and private companies

Sources: Authors’ calculations based on data from the CBR, accessed at www.cbr.ru, and financial records of publicly traded companies.
5. Main actors and beneficiaries of the corporate bond market after the 2008 global crisis

Transformation of the domestic corporate bond market into an integrated part of liquidity flows created by and exchanged between the Russian monetary authorities and state-controlled market participants led to a regrouping of the main players on this market. Most notably, independent private market participants’ share in new issuances and secondary market trading decreased substantially after the 2008 global crisis.

Table 2 illustrates these tendencies regarding the primary market. Although the MOEX corporate bond listing consists of 335 issuers (2017), this market is getting more and more concentrated, with CSPs taking the lead in total bond issuance. Between 2010 and 2017, the share of 24 largest issuers varied between 58 % and 88 %. In 2017, it achieved almost 82 %. This was very close to a historical maximum of 88 % in 2009, when the global crisis and a sudden stop of cross-border liquidity flows hit the Russian financial market as hardest. Domestic corporate bonds were used then as a vehicle of the state rescue support to the largest companies. Since 2009, CSPs has been prevailing among the major issuers. For the cohort of 24 largest issuers, the share of CSPs varied between 37 and 75 % of the total bond issuance. In 2017, this share reached its historical maximum. Thus, the corporate bond market works as a mechanism for redistribution of financial flows in favour of the largest CSPs.

Starting from 2009, the previously competitive market of underwriting and consulting services for new corporate bond issuances has been captured by investment banking divisions of the largest state-controlled banks, such as Sberbank, VTB and Gazprombank. A turning point happened during the provision of state rescue packages during the 2008-09 global crisis. State liquidity was mainly channelled through state-controlled banks to particular companies, often defined under a legal formulation of a ‘systemic important company’. Loan agreements of that time contained a requirement that all future financial transactions should be made through a particular bank. Through this mechanism, state-controlled banks secured their share of investment banking services. They behaved like quasi-market players; availability of liquidity to the corporate sector was their main argument to attract new clients. For privately owned
investment banks, the market of underwriting services decreased substantially, leaving only specific market niches, products and corporate clients that large state-owned banks were uninterested to engage.\textsuperscript{8} This outcome turned out to be permanent.

The 2014 currency crisis and subsequent shock increase of the CBR policy rate strengthened the tendency towards decreased tradability of corporate debt securities. The market has been less transparent being transformed into a closed system of relational lending between a limited number of large systemic players. Figure 8 demonstrates how the share of non-market issuances, i.e. bonds with no stock exchange listings, increased from 2014. By 2016, this tendency seemed to be irreversible. The share of market-based issuances of rouble-denominated corporate bonds in total capitalization fell in 2017 down to 47,3 % compared to 50,1 % in 2016. In 2017, the market segment of the bond issuance grew by 14,5 % only, to be compared with the growth of 27,7 % for non-markets issuance.

Figure 8 visualizes also the consequences of the 2014 financial crisis that affected Russian markets after the escalation of geopolitical risks in Crimea, introduction of Western sectoral sanctions and the subsequent oil price fall in autumn 2014. The yield to maturity (YTM) curve of the Interfax (IFX)-Cbonds Russian corporate bond portfolio is one of the main domestic indicators that enables to follow how the market evaluates the risk connected to investment into rouble-denominated Russian corporate debt. While the curve dramatically increased during the 2014 crisis, this shock still was not comparable to the 2008-09 peak levels. Thereafter, it also gradually decreased reaching 7,1 % of annual return that was below the 2014 pre-crisis level. In December 2013, the YTM of the IFX-Cbonds corporate bond portfolio was 8,4 %. Achievement of this stabilization depended on tight monetary policy pursued by the CBR after the 2014 crisis.

Figure 8. Outstanding value of rouble-denominated bonds and yield to maturity (YTM) of the IFX-Cbonds corporate bond portfolio, December 2003 – March 2018
Figure 9 illustrates increased presence of state-controlled players in the total secondary market trading, including corporate, regional and government bonds. Data on specifically rouble-denominated corporate bond trading is currently unavailable. Starting from August 2015, the MOEX stopped publication of data related to different segments of domestic fixed income market trading, which also reflected decreased transparency of the market. However, the cumulative data enables to see how composition of the secondary market traders reflects changing regimes of the Russian banking sector refinancing. Between September 2011 and until January 2016, during the period of active CBR liquidity injections through direct repo transactions, both the CBR and the largest state-controlled banks played the leading role in the

Sources: Authors’ calculations based on data from Cbonds Group, accessed at www.cbonds.ru.
secondary fixed income market trading. For example, in 2012, the share of the CBR and state-controlled brokers constituted correspondingly 35.5% and 29.1%.

When the period of direct repo transactions with the CBR ended, and a new refinancing mechanism with the Ministry of Finance as the main provider of liquidity began, the CBR share fell substantially while the share of state-controlled market participants increased. In Figure 9, this tendency is visible throughout 2016. During this recent period of refinancing, bonds have been pledged through repo transactions with central counterparty instead of direct borrowing mechanism with the CBR. Hence, the role of state-controlled commercial and investment banks as the main liquidity providers increased while the CBR presence in the market decreased.

**Figure 9. Private and state-controlled brokers in the MOEX secondary bond market as a percentage of total trading volume; including corporate, regional and government bond trading**

![Graph showing percentage of total trading volume for private and state-controlled brokers in the MOEX secondary bond market from 2005 to 2017.](image)

Sources: Authors’ calculations based on data from the Moscow Exchange, accessed at www.moex.ru.
Starting from August 2017, a number of the largest private banks (Financial Holding Otkrytie, Binbank, Rost Bank and Promsvyazbank), which played an important role in the secondary bond trading, in particular in the repo trading regime, were taken over by the CBR as a part of its bailout programmes. In effect, these banks have been nationalised. This led directly to a sharp, and temporary, increase of the CBR’s and state-controlled banks’ share in the secondary bond market trading. For example, in August 2017 this share jumped to 37,1% and 20,6% correspondingly. However, since the bailout procedures were financed by centrally distributed liquidity rather than through repo transactions involving collateralised debt, the CBR’s and state-controlled market players’ share returned to its ‘normal’ level. In February 2018, the CBR’s share constituted 1,8% only while the state-controlled market players’ share fell to 27,2%. Completion of bailout programmes for insolvent banks suggests that the CBR’s use of collateralised lending through repo transactions will remain at low levels in the future.

Figure 9 witnesses also about a blurred division between market-based and state-controlled players in the financial market. Statistical data cannot provide a full assessment of the state influence in emerging markets with unstable institutional framework, if it is not supported by a qualitative analysis enabling to interpret data within a broader institutional context. After the 2008 crisis, a number of large commercial and investment banks continued to remain formally in private hands. However, survival of their business models depended on close ties with important insiders within the state apparatus. Such shadow owners, high-rank officials in the government, presidential administration or monetary authorities, provided a secure cash flow supply for a particular bank under his or her protection. These cash flows, usually originating within state institutions, facilitated profit-making for an affiliated bank. Through informally shared knowledge, market participants in Russia are commonly well-informed about who is a real beneficiary, or group of beneficiaries, of a specific nominally private bank.10

Financial holding Otkrytiye represents such a case. To illustrate its impact on the secondary bond market, we made visible its share in total trading volume. Otkrytiye group traced its origins from activities in emerging investment banking of the 1990s. During the 2000s
and 2010s, due to growth through merges and acquisitions, it was transformed into a financial holding that included a commercial bank under the same label. By August 2017, *Otkrytiye* became one of Russia’s largest commercial banks. From December 2013 until February 2017, its share in domestic secondary market bond trading increased from 1,5 % up to 16,0 %. Before nationalisation in August 2017, the state owned only 10 % of *Otkrytiye*’s equity through the state-owned bank *VTB*. However, due to unclear reasons never revealed to the public, state agencies and monetary authorities entrusted *Otkrytiye* important transactions in the financial markets. Those included underwriting of the largest bond issuances of the state-owned oil corporation *Rosneft* in 2015 and 2016; acquisitions of large blocks of Russian Eurobonds in 2015, when this market was in distress due to the 2014 events; and liquidity management connected to the CBR’s rouble and forex refinancing of the banking sector. This was the reason of why *Otkrytiye*’s share in the secondary market bond trading was high. As a part of its liquidity provision to *Otkrytiye* through repos, the CBR itself accepted corporate bonds as collateral at a higher price compared to how the market valued these securities. This meant *de facto* provision of state money to the bank that already faced financial difficulties. The subsequent bailout of *Otkrytiye* in August 2017 seemed to confirm a special status of this financial group. The CBR officially acknowledged that the bank fell victim of the owners’ aggressive mergers and acquisitions policy in the financial sector (Bozhko, 2017). The *Otkrytiye* bailout programme under the CBR administration became one of the most expensive in post-Soviet Russian banking history (Eremina, 2017). However, unlike it happened with owners of other major commercial banks *Mezhprombank, Bank Moskvy* and *Master Bank* during previous large clean-ups of the banking sector in 2010, 2011 and 2014 respectively, *Otkrytiye*’s owners were not prosecuted for fraud immediately after the announcement of the bailout programme.\(^{11}\) On the contrary, they were able to keep considerable assets for personal gain and remained important players in the Russian financial and business environment launching new investment projects in 2017. This outcome suggests that in reality other high-rank persons in the state apparatus were responsible for *Otkrytiye*’s failed business strategy that resulted in accumulation of huge losses on its asset side. Following this logic, *Otkrytiye* top managers only represented interests of
these influential insiders who preferred to remain behind the scene. The costs associated with these mistakes were compensated by the Russian state and its taxpayers.

6. Corporate bonds and collateral-based finance in Russia

Transformation of the corporate bond market into an integrated part of the Russian money market after the 2008 crisis is visible through increased domination of repo trading regime in the secondary bond market trading. Figure 10 illustrates this change in a long perspective. In 2005, the repo trading mode constituted only 28,0 % of stock exchange-based corporate bond trading, while the auction (market order-driven) mode was 11,5 %, and the mode of negotiated deals was the largest with its 60,6 % share. In February 2018, the share of repos peaked at 96,6 % while the auction mode and negotiated trades fell to 1,6 and 2,4 % correspondingly. The explosive growth of repo trading is closely related to monetary authorities’ increased provision of state liquidity. In addition, repo trading has played an important role for lending activities between participants on the interdealer repo markets, including commercial and investment banks, non-residents and NFCs (CBR, 2012, pp. 14-25; Bagrei, 2014, pp. 56-79). Except for non-residents, these market participants have been more and more represented by state-controlled actors, which is also visible in Figure 9. The repo market expansion in Russia reflects an international tendency towards formation of collateral-based finance in CCEs, and its later advance in EMDs. In Russia, this systemic transformation of finance contributes to accumulation of systemic risks similar to countries with sophisticated financial markets. At the same time, it has also produced peculiarities specific for Russia’s own version of state-led financial capitalism.

Figure 10. Trading modes of the MOEX corporate bond section, including Eurobonds, as a percentage of total trading volume
The CBR has been the driving force behind the advancement of collateral-based finance in Russia. In 1996, the CBR introduced repo in the GKO market for the first time as a refinancing policy instrument, but this initial phase became very short-lived due to default in the GKO market in 1998 (Bagrei, 2014, pp. 38-40). The second phase of the repo markets expansion occurred between 2003 and 2008 when the new CBR leadership undertook a more active stance towards Russia’s integration into global financial markets. In parallel, inflows of foreign liquidity through carry trade were needed to be absorbed by the banking sector alternatively sterilised by monetary authorities. Direct repo, i.e. distribution of the CBR liquidity into the banking sector accepting securities as collateral, became one of the main instruments for bank refinancing. Repos were also actively used by financial market participants on the interdealer repo market to finance speculative leveraged trading before the 2008 crisis, as it was described in section 3. For the corporate bonds trading, this second phase of the repo expansion before 2008 is reflected in Figure 10. This second phase was abrupt by the 2008-09 crisis, to be
reversed by a third phase of the repo markets growth that took place in a different macroeconomic reality. After the global crisis, the main factor behind the resumed repo markets expansion was connected to increased inflows of the CBR liquidity into banking sector, especially from 2011. Repo markets in Russia have been primarily based on extremely short-term liquidity management, with an overnight segment dominating repo trading. However, in February 2014, the CBR established a one-week repo auction as its key policy rate for liquidity provision to the banking sector, replacing a very short-term repo overnight auctions as a key policy instrument. For interdealer repo markets, overnight repo maturities remained to be the most common.

The emerging collateral-based repo market in Russia has developed two distinctive features. First, repo transactions with rouble-denominated securities have been traditionally dominated by exchange trading with central clearing. Historically, this outcome depended on the 1998 GKO market crash and the lack of trust between market participants after the 1998 default. In the early 2000s, the counterparty risk was high, and the MOEX clearing and depository infrastructure was considered as a sort of guarantor that repo transactions would sustain (Annenskaya, 2009). The monopoly MOEX and its predecessor MICEX (Moscow Interbank Currency Exchange) has been founded and controlled by the CBR. This rendered the MOEX trading platform into a suitable mechanism for distribution of the CBR liquidity through direct repos with commercial banks. The share of domestic OTC repo market, which includes all transactions outside stock exchange trading, in the total volume of repo transactions has been low. This means that the total repo trading volume reported by the MOEX provides representative data regarding developments of the domestic repo markets in Russia (see Figure 11). It shows three peaks of repo market expansion that corresponded particular phases of liquidity distribution in Russia discussed in section 4. In 2008, carry trade inflows from international money markets stimulated trading in repos, which was abrupt by the global crisis. In 2011, the CBR increased dramatically its liquidity injections into the banking sector through repos, with a peak of repo trading volumes in 2013, before a new financial crisis hit Russia in 2014. In 2017, liquidity supply to corporate sector by the Ministry of Finance that started in 2015 resulted into a new historical maximum of repo trading volumes.
Second, as an EMD economy, Russia lacks available ‘safe’ collateral that would fully underpin sophisticated repo markets. After the default in the GKO market in 1998, the expansion of the government bond OFZ markets lagged behind the increased demand for high-quality collateral. This applied to CBR operations until the early 2010s (Table 2) and still valid for interdealer repo market (Figures 12 and 13). This factor explains why financial market participants relied on poor-quality securities for high-risky leveraged trading before the 2008 crisis. The lack of good collateral, including both government and corporate bonds, has also restricted the CBR’s capability to pursue refinancing policy. This became of special importance
when the CBR started its policy of large liquidity injections into the banking sector between 2011 and 2015. In part, the CBR had to refinance banks accepting illiquid non-market collateral. Considerable part of the emergency state liquidity worth several trillion rouble was provided to banks basing on relational exchange of assets and cash between the CBR and large state-controlled banks (Author 1 & Author 2, 2018).

**Figure 12. Collateral base used for interdealer repo market, in per cent of total trading volume**

![Image](image_url)

Source: Authors’ presentation based on National Finance Association (NFA) 2015a, 2015b and 2017.

**Figure 13. Collateral base used for interdealer repo market, in per cent of total outstanding amount of open positions**

![Image](image_url)
Most recently, evolution of collateral-based finance in Russia resulted in formation of the general collateral repo market. It has been conditioned by distribution of state liquidity. Starting from 2015, the CBR gradually abandoned its policy of liquidity provision to banking sector through direct repos and credits against non-market collateral. Instead, the Ministry of Finance became the main provider of liquidity to budget-financed companies, represented mainly by state-controlled NFCs. Ultimately, large pools of this state money was accumulated on bank accounts of these NFCs. This transition from the state of liquidity shortage in the banking sector to its surplus was preceded by a systemic transformation of money market infrastructure that started in 2013. To begin with, the MOEX introduced a new trading mode of repo with a central counterparty (CCP) represented by the MOEX-controlled National Clearing
Centre (NCC). The MOEX official who was in charge of money market management admitted that practices of the European repo markets and collateral management constituted a direct source of inspiration and imitation of institutional solutions in Russia (Marich, 2009). After its introduction in 2013, the repo with the CCP faced a rapid growth in terms of trading volumes achieving a share of 67.6 % in the total MOEX repo market in 2017 (Figure 14). The publicly declared purpose behind introduction of the central clearing counterparty trading with repos was about elimination of counterparty risk between market participants. This would contribute to growth of liquidity flows and repo trading volumes in Russian money markets. It was assumed that the monetary authorities and the state could not allow the CCP, which appeared as the only counterparty for participants in the CCP-cleared repo markets, to fail. Of special importance for the MOEX, trading with the CCP would substantially decrease transaction costs in the repo markets making it easier for market participants to access liquidity through pledged collateral (Marich, 2014). However, the systemic risk does not disappear with the introduction of the CCP. Instead, it is concentrated within the CCP, which puts high requirements on a central clearing organization to evaluate and manage market risks connected to the quality of collateral, price movements on particular securities and availability of sufficient funds that guarantee transactions. To summarize, stability of repo markets and the entire market infrastructure depends on one key actor, with an unpredictable outcome in times of markets stress (Blundell-Wignall, Atkinson & Roulet 2014, pp. 63-64).

*Figure 14. Trading modes of repo transactions with securities at the Moscow Exchange, by transaction counterparty in percent*
The emerging CCP repo trading in Russia has been relying on daily mark-to-market practices of collateral revaluation that depends on fundamental market insecurity characteristic for market-based banking. According to the MOEX officials responsible for money markets, increased tradability of collateral would potentially extend otherwise very short overnight repo maturities. For that purpose, the MOEX complemented establishment of the CCP with a parallel introduction in 2013 of collateral management system (sistema upravleniya obespecheniyem). The main rationale behind this innovation is a principle of collateral substitution, when a market participant may create a repo basket consisting of different securities. Collateral can be replaced by other security in the repo basket each time a market participant needs to withdraw a pledged security from the basket or use it for other repo transactions. Commensurability of collateral is based on mark-to-market evaluation executed by the CCP.\textsuperscript{13}

Repo trading with the General Collateral Certificate (GCC) introduced by the MOEX in 2016 has been a culmination of institutional reforms towards formation of collateral-based
finance in Russia. It means securitization of collateral in Russia, which makes trading in repo markets highly liquid and enables full, mutual substitution of accepted collateral. The value of pledged securities is transformed into standardised GCCs which appear as a universal means of payment in repo markets, a kind of quasi (shadow)-money. The previous mechanisms of the CCP trading and collateral management system such as repo basket are used in the creation of the GCC system. The GCC is a new type of security issued by the NCC as a central clearing organization in exchange of assets deposited by market participants into collateral pool. Market participants retain full legal ownership rights to deposited securities such as shareholder voting and dividend income. At the same time, the received GCCs enable market participants to easily access liquidity in money markets alternatively to use, and re-use, it for other operations with securities such as trading in the interdealer repo market. Possibility to substitute assets deposited within the pool has been one of the main benefits of the GCC system since it facilitates higher tradability of collateral. Direct access of NFCs to liquidity flows through securitized collateral markets was another ambition behind the GCC project. Daily mark-to-market revaluations of collateral pool as well as practices of haircuts as a part of collateral acceptance into the pool have been also an integrated part of the GCC system. A (very simplified) principle behind workings of the GCC trading with repos is shown in Figure 15.

**Figure 15. Creation of General Collateral Certificates and GCCs trading**
It would be no exaggeration to say that introduction of the GCC trading has revolutionized Russia’s collateral markets. A further expansion of repo trading volumes and increased share of repos with the CCP in 2016 and 2017 is statistically visible in Figure 14. Expectations to attract large pools of liquidity provided by cash-rich Russian NFCs, mainly exporters of raw materials such as state-controlled oil companies, into collateralised money markets have been fulfilled in 2017. The MOEX officials tried to legitimize introduction of GCCs referring to the “the best practices” previously developed in collateralised markets in the Eurozone, with claims such as “we did not invent this wonderful wheel, it has been invented before us and rolls successfully in Europe” (Marich, 2016). Securitization of repo markets is presented for the Russian public exclusively in a very favourable light, as a financial innovation that brings about better access to capital for economic actors. However, the MOEX and Russian monetary authorities moved a step further towards increasing tradability of collateral compared to the general collateral markets in the Eurozone. In the Russian GCC case, securities are not used directly as collateral in repo markets any more. Instead, GCCs as a securitized product backed by the current market
value of underlying securities of different investment quality are used as universal store of value and means of payment in repo market trading. Thus, the MOEX and Russian monetary authorities attempted to create GCCs as a ‘safe’ and liquid asset commensurable with the quality and safeness of the Russian government bonds OFZs (Poltev, 2016). The main question that arises in this context is whether GCCs represent in reality a ‘safe’ asset that would sustain the next financial crisis. As it previously happened in 1998, 2008 and 2014-15, the crisis would inevitably entail a sharp decline of value of certain underlying securities kept as collateral in asset pools used for creation of GCCs. A new wave of corporate defaults cannot be excluded. The sustainability of the GCC system will depend on the credibility of risk management practices applied by the NCC, in particular which securities it will accept as collateral to create asset pools for GCCs issuances. Critical reading of the European sovereign debt market’s formation demonstrates that the “wonderful wheel” of collateralized finance did not roll with the same success as the MOEX officials assured. The 2012-14 Eurozone crisis provides an illustration that pooling assets of different investment quality into the same basket in an attempt to create identical collateral for trading in repo markets might undermine financial stability (Gabor, 2014; Gabor & Vestergaard, 2018).

**Figure 16. Debt services defaults (including technical defaults) of Russian corporate bonds issuers, 2008-2017**
In the Russian case, domestic corporate bonds still constitute one of the key securities accepted to asset pools that underlie issuance of GCCs. Starting from 2015, the number and outstanding amounts of defaults on domestic corporate bonds increased substantially, even though it was well below the critical level observed during the 2008-09 crisis (Figure 16). The recent wave of corporate defaults could be even higher, if not the CBR’s bailout programmes for insolvent banks, which prevented unfolding of a new systemic crisis on the corporate debt market in Russia. Among other reasons, the fall of Otkrytiye bank discussed in section 5 resulted from opaque cross-collateral practices between Otkrytiye and its connected insiders. The latter used low-quality bonds issued by affiliated companies as collateral against borrowed cash received from Otkrytiye (Krivorotova, Peremitin and Miheeva, 2018). Historical record of scheming, concealment of information and outright fraud practised by post-Soviet Russian
financial market participants, corporate issuers and state regulators is rich. Thus, it would come as no surprise if a considerable part of collateral regarded by the state regulators as ‘safe’ today will quickly lose its market value in the future. This factor will not completely exclude emergence of systemic risks that can potentially undermine newly created GCC-based repo markets, which are increasingly being transformed into a core element of Russia’s money market.

6. Conclusions

The paper’s intention was to increase understanding of the emerging financial capitalism in Russia, with its unusual alliance between speculative finance and state control over capital allocation. To achieve this purpose, we approached repo markets that support liquidity management between the government, the Central Bank, commercial banks and other financial market participants. We chose corporate bond market as a starting point to analyse the rise of repo markets and collateralised finance in Russia. We found a self-supporting system with financial flows redistributed in a vicious circle between state monetary authorities, state-controlled companies and banks, and remaining few private economic agents. Repo markets make this exchange quick and ‘effective’ increasing trading volumes and creating additional possibilities for profiting. Russia represents today an example of MBB; the primary source of profits for banks and other financial market participants depends on rechannelling liquidity flows originated by the state. By doing so, they use standard practices and instruments of collateralised finance implanted from CCEs, including formation of assets and liabilities in the market through repos and mark-to-market valuation of those assets. Unlike in CCEs, the role of the state in Russian finance transcends its function as a regulator that defines rules of the game. It is neither restricted to the role of the principal collateral issuer. Centralization and securitization of repo markets in form of GCC trading under auspices of state-controlled MOEX suggests a logical evolution of such type of finance.

We concluded that neither Zysman’s typology nor Hall and Soskice’s dichotomy provide a reliable guideline for the Russian case. Hardie’s MBB model of financial capitalism extends
Zysman’s classification but it does not assume exceptional role of the state characteristic for post-Soviet Russia. Hence, to provide a better insight into Russia’s financial capitalism, we introduce a new definition of a state-led MBB (Table 3). Under such model, viability of financial market participants, whether they are state-owned or private, depends on provision of state liquidity while intermediaries pretend as if they act in a true market environment. The case of Otkrytiye bank considered in this article as well as data provided by Mamonov (2018) demonstrate this general tendency of the Russian finance. Failed market-based business strategies pursued by connected insiders are compensated by the state. To say the least, this is ineffective use of resources. It neither provides benefits of market discipline nor creates a stable channel for investments as a part of long-term relational banking.

Accumulation of excessive liquidity within financial sector discussed in section 4, which we prefer to define as monetary overhang, signals about an important deficiency characteristic for Russia’ economy and its finance. Large pools of money are available but cannot be used to support a new industrial policy or to finance upgrade of infrastructure and improvement of human capital. NFCs are either unable to absorb available liquidity to contribute to economic growth or cannot access it due to destruction of relational banking. The monetary transmission mechanism of capital into investments is broken; banks prefer to channel state-originated liquidity into financial transactions in collateralised markets instead of transforming it into credits. Corporate bonds and other securities are also used as collateral, which is the primary rationale behind the existing demand behind increase of securities issuances. Short-sightedness lays at the very heart of Russian finance, which reduces the role of banks and capital markets to redistribution of short-term liquidity in money markets.

It is reasonable to ask whether future transformation of the Russian MBB model into a more effective system can be possible. Table 3 witnesses that such transformations took place in the past, sometimes in both directions as it was exemplified by Japan. Financial capitalism does not exist in a vacuum. A particular organisation of capital and liquidity flows reflects preferences of elite groups that control bureaucratic institutions, banks and largest NFCs. If constellation of interests between elite groups will be changed, preconditions for future transformation of Russia’s financial capitalism may arise.
References:


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Author 2 et al. (2018). Anonymized article.


Hardie, I. & Maxfield, S. 2013. Market-Based Banking as the worst of All Worlds: Illustrations from the United States and United Kingdom. In I. Hardie & D. Howarth (Eds.). Market-Based Banking and the International Financial Crisis (pp. 56-78).


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Table 1. Concentration of the rouble-denominated corporate bonds issued by companies with state participation (CSPs)

<table>
<thead>
<tr>
<th></th>
<th>5 largest issuers</th>
<th>10 largest issuers</th>
<th>24 largest issuers</th>
<th>Total bond issuance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Totally</td>
<td>Including CSPs</td>
<td>Totally</td>
<td>Including CSPs</td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RUB bln</td>
<td>177</td>
<td>147</td>
<td>304</td>
<td>200</td>
</tr>
<tr>
<td>Share, %</td>
<td>20,7</td>
<td>17,2</td>
<td>35,6</td>
<td>23,4</td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RUB bln</td>
<td>241</td>
<td>191</td>
<td>389</td>
<td>309</td>
</tr>
<tr>
<td>Share, %</td>
<td>22,1</td>
<td>17,5</td>
<td>35,7</td>
<td>28,4</td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RUB bln</td>
<td>265</td>
<td>265</td>
<td>429</td>
<td>334</td>
</tr>
<tr>
<td>Share, %</td>
<td>22,1</td>
<td>22,1</td>
<td>35,8</td>
<td>27,9</td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RUB bln</td>
<td>550</td>
<td>550</td>
<td>705</td>
<td>640</td>
</tr>
<tr>
<td>Share, %</td>
<td>31,6</td>
<td>31,6</td>
<td>40,5</td>
<td>36,8</td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RUB bln</td>
<td>875</td>
<td>827</td>
<td>1051</td>
<td>934</td>
</tr>
<tr>
<td>Share, %</td>
<td>50,3</td>
<td>47,6</td>
<td>60,4</td>
<td>53,7</td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RUB bln</td>
<td>683</td>
<td>683</td>
<td>861</td>
<td>788</td>
</tr>
<tr>
<td>Share, %</td>
<td>35,6</td>
<td>35,6</td>
<td>44,9</td>
<td>41,1</td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RUB bln</td>
<td>972</td>
<td>882</td>
<td>1228</td>
<td>1038</td>
</tr>
<tr>
<td>Share, %</td>
<td>39,9</td>
<td>36,2</td>
<td>50,3</td>
<td>42,6</td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RUB bln</td>
<td>1518</td>
<td>1518</td>
<td>1890</td>
<td>1803</td>
</tr>
<tr>
<td>Share, %</td>
<td>53,2</td>
<td>53,2</td>
<td>66,3</td>
<td>63,2</td>
</tr>
</tbody>
</table>

Table 2. Collateral base used for the CBR direct repo operations, 2010-2013, in per cent of total trading volume

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Government bonds</td>
<td>33,4</td>
<td>48,5</td>
<td>62,4</td>
<td>68,7</td>
</tr>
<tr>
<td>Mortgage bonds</td>
<td>6,4</td>
<td>3,4</td>
<td>0,3</td>
<td>0,4</td>
</tr>
<tr>
<td>Corporate bonds</td>
<td>54,9</td>
<td>35,3</td>
<td>31,6</td>
<td>21,2</td>
</tr>
<tr>
<td>Regional (sub-federal) bonds</td>
<td>1,4</td>
<td>3,7</td>
<td>5,2</td>
<td>9,4</td>
</tr>
<tr>
<td>CBR bonds</td>
<td>1,0</td>
<td>6,7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Securities provided by non-residents</td>
<td>2,9</td>
<td>2,4</td>
<td>0,5</td>
<td>0,3</td>
</tr>
</tbody>
</table>

Source: Bagrei 2014: 50
Table 3. Varieties of financial capitalism

<table>
<thead>
<tr>
<th>Capital-market based system (USA and UK before the 1970s)</th>
<th>Bank-led credit-based system (West Germany, Japan after 1990s)</th>
<th>Market-based banking (contemporary CCEs after the 1970s, Japan in the 1980s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>State-led capital-market based system (non-existent)</td>
<td>State-led credit-based system (Russia before the 1917 revolution, post-war France, East Asian developmental states in the 1950s-1980s including Japan between 1950s and 1970s, China from the 1980s)</td>
<td>State-led market-based banking (post-Soviet Russia)</td>
</tr>
</tbody>
</table>

Sources: Zysman (1983), Hardie et al. (2013), Kamikawa (2013), authors’ classification for Russia

1 Finance was not of primary importance for the VoC approach. It was considered rather as an element within a more complex structure of contemporary capitalism including different welfare state and labour market regimes.

2 Head of fixed income department at a Moscow-based investment bank, interviewed on February 8, 2012 in Moscow; regional investment banker, interviewed on July 9, 2013 in Yekaterinburg. All interviews are recorded and fully transcribed.

3 Head of fixed income department at a Moscow-based investment bank, February 8, 2012.

4 Head of fixed income department at a Moscow-based investment bank, February 8, 2012.

5 Fixed-income trader at a Russian investment bank, interviewed on January 18, 2018 in Moscow; fixed-income trader at a global investment bank, interviewed on April 24, 2018 in London.

6 The Reserve Fund was one of Russia’s two sovereign wealth funds accumulated during the oil boom years of the 2000s. By January 2018, it was almost depleted and merged with the Russian National Wealth Fund, the second sovereign wealth fund.

7 We define companies with state participation as companies with a total sum of direct and indirect state ownership that provides more than 25% of voting stock. For discussion on which Russian companies can be regarded as state-controlled see Author 2 et al. 2018.

8 Head of fixed income department at a Moscow-based investment bank, February 8, 2012.

9 In 2016, state-controlled market players included the following brokers in the secondary MOEX securities trading; Sberbank, Sberbank CIB, VTB, VTB Capital and its subsidiaries, VTB24, Gazprombank, Rosselhozbank, Svyaz-bank, KIT Finance, VEB. From August 2017, Financial Holding Otkrytiye joined this list, to be followed by Binbank and Rost Bank in September 2017, and Promsvyazbank in December 2017.

10 Moscow-based investment banker, interviewed on July 25, 2013 in Moscow.

11 Boris Mints, Otkrytiye’s main owner until 2013, and one of the bank’s presumable beneficiaries before the state started its bailout programme in August 2017, left later Russia in May 2018 fearing such a prosecution (Pastushin,
The constellation of interests between Russian elite power networks changed after the Presidential elections in Russia in March 2018. Hypothetically, this meant that some of the real beneficiaries and formal owners of Otkrytie still could face prosecution for their financial dealings in the future.

According to the National Finance Association (NFA) repo market surveys for the years 2014-2017, this share varied between 3.7% at its lowest for the third quarter of 2014, and 8.7% at its highest for the third quarter 2015 (NFA, 2015, p. 5). In the first three quarters of 2017, this share did not exceed 4.8% (NFA, 2017, p. 6).

Regarding formation of the collateral management system in Russia, see the special issue of the journal Depozitariuim (NRD, 2017) “Collateral Management: Service of the Interdealer Repo Transactions” issued by the National Settlement Depository (NSD, Russian acronym NRD). Like the NCC, the NSD is owned and controlled by the MOEX.

Haircut is a difference (margin) between the market price of the security pledged as collateral and its agreed value against cash that the borrower, who initially owns collateral, receives from the lender as a part of the repo transaction. If the size of the haircut is 2%, the borrower can receive $98 against the pledged security with market value of $100. Haircut works as a guarantee provided for the lender against possible decline in collateral’s market value. The size of the haircut depends on the quality, or “safeness”, of collateral, with government bonds considered as the most secure collateral. Changing market sentiments towards a certain security can lead to a rise or decline in the size of the haircut. See Adrian & Shin (2010b, p. 608).

The EMU (Economic and Monetary Union) institutions are currently elaborating reforms that will introduce new financial instruments and solutions aiming to revitalize trading in securitized collateral markets. See Gabor & Vestergaard (2018); Engelen & Glasmacher (2018).