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HOUSING CONSTRUCTION FINANCING STRATEGY: OPPORTUNITIES AND RISKS

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Abstract

Authors analyze history of the banking crises are be attributed to rapid changes in the real estate markets. It is noted that the banking crises that are either directly caused by the rapid changes of the real estate markets or can be explained by rapid changes in the real estate markets increased in both frequency and overall damage to economy over the last several decades. In various studies it is attributed to the changing role of the banking sector in the real estate markets and an increased risk-appetite of the banks towards real estate market risks. In Russia, where depth of the financial markets development (and share of banking assets in GDP) is comparable to developing economies and significantly lower than that of the developed economies, the risk of the “classic” banking crisis is currently estimated as low. However, given institutional transformation of the housing construction financing mechanism (introduction of the escrow accounts and project financing) and the resulting institutional reinforcement of the exclusive banking sector role in the real estate market (particularly that of the systemically-significant banking institutions), crisis is quite possible in the medium-term. In the meantime, it is expected that the tendency towards further consolidation of the construction sector and concentration of real estate risks on the balance sheets of the large banking institutions will persist.

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Keywords: Systemically-significant banks, banking crises, institutional transformation of the real estate financing.

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1. Introduction

The importance of the real estate markets in terms of their influence on the banking sector stability became widely recognized relatively recently, mainly due to the more frequent instances of the banking crises that originate from the real estate market turbulence, which in turn is often attributed to the changing role of the banking sector in both the economy in general and the real estate market (and respective growth in appetite for real estate risk by the banking institutions).

This aforementioned trend becomes more obvious when we study history of the bubbles associated with different asset classes. For example, researchers from Princeton University (Brunnermeier & Schnabel, 2016) in their study of the role of the central banks in the history of the bubbles studied a sample of bubble episodes (23 instances) for a period of over 400 years, starting from a widely known Tulipmania in 1634 and ending with Spanish real estate bubble and US subprime housing bubble.

Researchers conclude that throughout this period, bubbles occurred in a wide range of assets:

- Especially in earlier period: Commodities (tulips, grain, sugar);
- 19th century: Large infrastructure projects (railroads, canals);
- Throughout the sample: Securities and real estate.

Even though real estate bubbles were observed in both 19th century (Chicago real estate bubble of 1881-1883) and the beginning of the 20th century (US real bubble of 1920-19260), but they are:

a) virtually unknown outside of this study;

b) represent only a fraction in terms of the number of the bubbles that are associated with real estate that occurred in the late 20th century and the beginning of the 21st century.

Additionally, in case of both bubbles there were no instances of the widespread banking crises (that are directly associated with “popping” of those bubbles) due to the limited role that banks played on the real estate market. For example, in case of Chicago real estate boom, active market growth did occur on the back of the strong fundamentals associated with the recovery from serious depression of 1877, however it was almost exclusively equity-financed and not fueled by expansion of real estate – backed lending. As such, this episode of the bubbles history had no serious consequences outside of Chicago real estate market (and private investors) primarily due to the equity nature of the real estate speculation financing (with very limited leverage provided by the banks).

The second episode – US real estate bubble of 1920-1926 is also relatively unknown outside of this study (unlike the Great Depression of the same period, which is frequently associated with U.S. stock price bubble of 1928-29). Just like Chicago real estate boom, it did occur on the back of the strong economic fundamentals, namely agricultural sector growth. Additionally, it was the first instance of the bubble where securitization played a central role. However, since banks overall remained prudent and riskiest securities were mainly held by private investors, losses were primarily outside of the banking sector and were limited to several regions.

Between those two episodes we can observe the evolution of the banks’ involvement in the real estate market speculation and resulting losses for the banking sector. In the latter case the losses were ‘modest’ whereas in the former case they were almost entirely concentrated outside of the banking sector (among private investors). Nevertheless, both episodes, despite demonstrating said evolution, represent the case where banks remained prudent and demonstrated conservative behavior compared to banking

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sector involvement in the real estate market in the last three decades. As a result, it stands to reason that these two episodes represent an important litmus test of the crises where banks participation (either direct or indirect) is limited compared to the latest episodes of the crises, namely US subprime housing bubble and Spanish housing bubble (and other real estate bubbles and subsequent banking crises over the recent decades), where banks due to de-regulation and other factors played a much more active and even central role in exacerbating growth stage of the bubble and the subsequent meltdown of the real estate markets.

While analysing all 23 episodes one can also deduce that frequency of the real estate booms and busts among all episodes of the bubbles increased over the past decades:

- during the period between 1630 and 1970 among 15 episodes spanning over 300 years only two episodes are real estate booms and busts, neither of the them had serious systemic implications for the banking sector;
- in contrast to that, in the period between 1980 and 2010 among eight episodes of booms and busts in various asset classes – at minimum three episodes can be directly associated with real estate market bubble (real estate bubble in Australia, subprime housing bubble, Spanish housing bubble) and the other two – Asian financial crisis and «Lost decade» in Japan had real estate market boom and subsequent bust and the associated banking crisis (reflected in bad debts in the banking sector and overall exposure of the banking to the real estate market risk).

As we can see, all of the recent real estate market booms and busts are not only more frequent than in the previous several centuries, but they are also much more severe in terms of their impact on both the economy in general and banking sector in particular. A more in-depth study to that effect is thereby warranted in order to identify the underlying changes in banks' role on the real estate markets that explains such an explosive growth in occurrence of the crises and help formulate conclusions relevant for Russia given the recent institutional changes of the housing construction financing (introduction of escrow accounts and project financing).

2. Problem Statement

Over the recent year Russia's housing sector undergone a swift change in regulation (introduction of the escrow accounts and project financing for housing construction that drastically changed regulation of the housing construction financing in Russia and the role of the banking sector in the real estate market (Blokhin, Sternik, & Teleshev, 2019), which occurred on the back of the greater trend of institutional transformation of the banking sector (Blokhin, 2019b) and concentration of the real estate assets on the books of the largest banking institutions (Sternik & Teleshev, 2018) as well as the wider institutional changes in the Russian economy (Blokhin, 2019b). In that respect, the study of the banking crises associated with the real estate markets turbulence could be of significant interest to real estate market professionals, banking institutions and regulators as well as to policy makers.

With that in mind, we formulate the main objectives of our study as follows:

1) Study examples of the more recent and severe banking crises associated with the real estate markets;
2) Identify underlying changes in the banking sector role in the real estate market;

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3) Outline recent changes of the housing construction financing in Russia and prospects for further changes of the housing construction sector and related to the changing role of the banking sector;

4) Draw possible conclusions as to the probability of the banking crisis in Russia associated with the real estate market and identify both the common traits with other episodes of the crises and the differences with other episodes in case of the Russian real estate market.

2.1. Asian financial crisis, crisis in Ireland, 'credit shift' in the United States

Unlike subprime mortgage crisis in the United States that is universally associated with the real estate market bubble and that is almost universally accepted as the primary cause of the most severe recession since the Great Depression (similarly, 'Lost decade' in Japan where real estate market and construction sector roles are understood as being at the forefront of the crisis), an earlier crisis episode, namely Asian financial crisis is less frequently associated with the real estate market meltdown. At the same time, while studying "Asian tigers" phenomenon, several researchers point out an important role that Asian banks' exposure to real estate markets played in exacerbating and prolonging the subsequent recession. In particular, researchers from International monetary fund who studied the aftermath of the financial crisis (Collyns & Senhadji, 2002) observe the fact that the real estate market meltdown was one of the factors that influenced severity of the crisis that followed economic boom. As authors demonstrate, in at least two instances (Thailand and Malaysia) severe or mild real estate bubble coincided with the subsequent banking crisis. This, in turn can be explained by the increased appetite of the banks for real estate risks (i.e. bank exposure to real estate). By the researchers' observations, banks' real estate exposure in 1997 grew to particularly high levels – in particular in Hong Kong SAR, Malaysia, Singapore and Thailand. In other countries, in South Korea in particular, concentration of real estate risks in banking sector manifested itself to a lesser extent (given the fact that the capital inflow was channeled to greater extent towards industrial conglomerates – chaebols and not the real estate market) and Philippines (where real estate growth in 1990s was less pronounced). It is important to note that in those countries, where real estate bubble coincided with the less conservative banks' approach (as reflected in higher property exposure and lower capital-asset ratio), banking crisis was more pronounced. At the same time, in Hong Kong SAR, despite relatively high property exposure banks maintained relatively high capital-asset ratio while share of non-performing was relatively low and. As a result, there was no systemic banking crisis in Hong Kong SAR post-Asian financial crisis. This can be attributed to the very conservative approach Hong Kong banks maintained with regards to their real estate financing (similar observations are made for Singapore during that period). Researchers also draw wider conclusions regarding feedback effects between banks real estate exposure and risk-assessment, real estate market growth and the subsequent banking crisis:

1) presence of both positive and negative feedback loops between credit policy of the banks towards real estate financing and real estate prices formation mechanism;

2) banks' (and banking regulators) ability to amplify real estate prices swings during the bubble and in the aftermath of the real estate market meltdown;

3) role of the regulators (central banks) in development of the crises, which during the boom stage often lag behind the situation; however, once real estate prices start to deflate and the banking sector weakens may facilitate further price declines and inadvertently prolong the real estate market recovery.

Also, as an additional observation from the example of the Asian financial crisis that may illustrate the extent to which real estate risks can be concentrated geographically, researchers note that at the height of the bubble the cumulative market capitalization of Greater Bangkok area was roughly equal to nearly 50 percent of Thailand GNP (Quigley, 2001).

Separate consideration has to be given to the banking crisis that resulted from the real estate market meltdown in Ireland between 2008 and 2013. This episode is not listed among 23 episodes of the bubbles and busts mentioned earlier, but by several measures it was one of the costliest banking crises with significant real estate market involvement and one of the most severe crises among advanced economies since the Great Depression (O'Sullivan & Kennedy, 2010). Government capital investment in Irish banks amounted to EUR 62.8 billion, or about 35 percent of 2008 GDP, which compares with other instances of the crises packages that were in the range between 3 to 7 percent of GDP (i.e. several European examples). Also by contrast, in the US, the sum of TARP capital investments plus government funds invested in the capital of Fannie Mae and Freddie Mac represented at the time about 4,5 percent of United States 2008 GDP. The Irish government had to maintain its banks' capital adequacy and provided capital support to of its 6 largest banks that equaled 3 times those banks' original capital. The overall development of the banking crisis in Ireland clearly shows a distinctive role that the real estate market played in the subsequent banking crisis that went through the following stages: increased amounts of real estate development lending; excess housing supply; banking crisis and economic recession; sovereign debt crisis. The sovereign debt crisis in turn developed due to the sizeable emergency package for Irish banks by the government, which happened at the backdrop of the unavailability of international capital markets for Irish government and economic recession that is also attributed to real estate market meltdown.

Examples of the bubbles and the subsequent banking crises may at first look like isolated cases where real estate market bubbles serve as a trigger, but the role of the banking sector may seem passive. However, global financial crisis of 2008 (and "subprime" mortgage crisis that preceded it) did not only stimulate a renewed interest in studies of interrelation between real estate markets and financial stability, but also stimulated a broader discussion of the banking sector role in the economy in general. In particular, researchers (Bezemer & Zhang, 2019) suggest that the balance between the growth in mortgage credit and business credit is a key factor in post-crisis macroeconomic vulnerability. Authors suggest that larger changes in credit composition before the crisis are linked to less efficient capital reallocation and larger investment cutbacks afterwards. The shift in the banks' credit policy – from providing working funds for non-financial firms to growing their assets through increasing mortgage portfolios and increasing overall real estate exposure is perhaps demonstrated on the examples of more developed markets (particularly United States) and was recently named "credit shift" indicating that this was a fundamental change in banks approach towards lending collateralized by real estate and moving away from a more traditional role of providing funds for non-financial firms.

As Alex J. Pollock notes (former CEO of the Federal Home Loan Bank of Chicago): "excessive real estate credit is the most common cause of banking booms, busts and collapses, throughout history, right up through the most recent financial crisis and around the world" (Pollock, 2017). It is important to note that this happened on the back of the significant banking system consolidation in the US, i.e. a 69 percent reduction in the number of depository institutions, and a 61 percent reduction in the number of

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commercial banks with simultaneous growth in banking assets relative to GDP from 47 percent of GDP in 1960 to almost 83 percent of GDP by the end of 2016. As author also points out, most of the growth cannot be attributed to the credit extended to non-financial firms: in terms of share of percent of GDP commercial credit and industrial loans remained almost flat at 8 percent to 10 percent of GDP. At the same time, commercial banking system's real estate loans rose from 5 percent of GDP in 1960, to more than 26 percent at their bubble peak (in 2006-2007), and by the end of 2016 they stood at 22,5 percent of GDP. Moreover, the popularization of mortgage securitization affected banking system's securities portfolios. For example, in 1992, the sum of banks' real estate loans and mortgage-backed securities as a percent of GDP grew to 32 percent (or six times the 1960 level). In summary, and as Charles Calomiris of Columbia Business School observes: "The unprecedented pandemic of financial system collapses over the last four decades around the world is largely a story of real estate booms and busts. **Real estate is central to systemic risk**. *[emphasis added]*" (Calomiris, 2018).

2.2. Parallels and differences with Russian real estate market

Situation on the Russian real estate market invites comparisons with the situation in other countries as there are many parallels (and differences) with wider international trends:

- Growth of the banking system assets as a share of GDP simultaneously with the reduction in the number of credit institutions, which is centered around a small number of systemically-significant institutions due to persistence of institutional factors (Blokhin, 2019a);
- Concentration of the real estate assets on the books of the large systemically-significant institutions (which in itself however does not yet pose a systemic risk) (Sternik & Teleshev, 2018).
- Growth of the banks' consumer credit portfolio (both unsecured consumer credit and secured by real estate collateral mortgage debt).
- There are also material differences that separate the situation in Russia from other countries:
- Moderate capital inflows that are unlikely to flood the real estate market causing to it significantly appreciate, combined with various sanctions regimes that further limit capital inflows;
- Moderate growth of GDP and real disposable incomes;
- Financial sector depth that is comparable to developing countries, but far from the developed ones (Central Bank of Russia, 2018);
- Institutional and regulatory changes (both in the banking sector and in the real estate market, i.e. introduction of escrow accounts and project financing);
- Historically low level of delinquent mortgage loans.

A separate consideration has to be given to risks of financing of housing developers by the banks. By our estimates, there is a significant share of developers with one (or two) projects under construction among all housing developers, or 70 percent of the total number. At the same time, by various estimates there is a considerable portion (or around half of all housing construction projects) that fall into high-risk category in terms of the debt coverage ratio, should the housing prices decline by moderate 10-15%. It is also important to note that housing developers' profitability varies greatly in different regions of Russia (large cities being at the forefront and smaller and 'depressive' regions lagging behind). We expect that large, federally-operating housing developers will not continue to dominate the market in Moscow and

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other big cities (i.e., in terms of their overall revenue) and also have a wider range financing sources available, while remaining highly attractive for banks. At the same, largest developers will also continue to possess sufficient expertise to lead large regional projects further putting pressure on the small regional housing developers. As a result, a practically unavoidable consequence of the aforementioned factors' convergence is expected to be a significant consolidation of the housing construction market – according to various estimates – ranging from 30 percent to 90 percent reduction in the number of housing builders / developers. Overall, it creates opportunities and risks for achieving national goals formulated in national project "Affordable housing" (Sternik, 2019).

3. Research Questions

We therefore pose the following questions for our study:

1) Is there evidence that the real estate markets can pose a significant challenge to the baking sector and, if mismanaged, can real estate risks cause a severe banking crisis?

2) What are the similarities and differences between the case of the Russian real estate market and broader international examples of the real estate – associated banking crises?

3) What are the opportunities and risks for Russian banking sector and the housing construction sector?

4. Purpose of the Study

The main purpose of our study is to identify key challenges (and opportunities) for the banking sector, multi-family construction sector related to an elevated role of the banking sector in the real estate market that are relevant and can be used by the real estate market professionals, researchers (and potentially policy-makers).

5. Research Methods

In our research, we draw conclusions from a wide variety of sources and employ methods of:

- Historical analysis;
- Deductive reasoning;
- Institutional analysis and multi-disciplinary approach.

6. Findings

Based on our analysis we postulate that there is a strong international evidence that turbulence on the real estate markets can be directly linked to the most severe episodes of the banking crises. We also observe that the underlying cause of a more frequent occurrence of the banking crises originating from the real estate markets (and their severity) can be explained by a significant change in the role of the banking sector in the economy overall and the real estate market in particular. We find considerable similarities between the situation in Russia and international examples: growth of the banking system assets relative to GDP that coincides with reduction in the number of credit institutions; considerable

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concentration of real estate assets on the books of the large systemically-significant institutions; growth of banks' consumer credit portfolio (including mortgage portfolios). We also note considerable differences between the situation in Russia and examples of the real estate booms and musts and associated banking crises: virtual absence of the capital inflows from the international markets to real estate market; anemic economic growth; relatively low financial sector depth; institutional and regulatory changes (both in the banking sector and in the real estate market, i.e. introduction of escrow accounts and project financing); historically low level of delinquent mortgage.

7. Conclusion

Based on our findings, we identify the following factors as being risks for the Russian real estate market, banking sector and overall economy:

- Potential excessive concentration of real estate assets on the books of the largest banks may hinder further growth of mortgage lending (resulting potentially in lower economic growth);

- Potential excessive concentration of the housing construction sector, may, under the extreme scenario severely limit competition on the housing market, cause formation of "too big to fail" housing developers and result in lower construction quality for the most mass-constructed housing categories;

- Challenges for achieving national goals of housing affordability formulated in national project "Affordable housing".

However, the situation also presents a number of opportunities that we hope would also materialize as a result of the convergence of the factors mentioned regarding situation in the Russian real estate market:

- Further growth of mortgage portfolio, which is a significant opportunity for the banks to increase their assets and result in the greater depth of Russian financial sector given relatively low mortgage delinquency rates and traditionally high potential and attractiveness of the mortgage portfolios securitization;

- Formation of "national champions" among the real estate developers that are both capable of implementing large-scale and capital-intensive projects and have a sufficiently high profile for accessing international capital markets thereby diversifying their sources of capital and reducing the need for financing provided by the large systemically-significant banking institutions.

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