Capital Market Assessment / Market Development Options Czech Republic

This Assessment was funded by the European Commission's Structural Reform Support Service and implemented by the World Bank.

WORLD BANK GROUP

European Commission

September 2017

1818 H Street NW
Washington DC, 20433
Telephone: 202-473-1000
Internet: www.worldbank.org

CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACRONYMS AND ABBREVIATIONS

AKAT	Czech Capital Market Association (AKAT)
AUM	Assets Under Management
B2B	Business to Business
CAS	Czech Accounting Standards
CG	Corporate Governance
CMA	Capital Market Undertaking Act
CMU	Capital Markets Union
CMZRB	Czech Moravian Guarantee and Development Bank
CNB	Czech National Bank
CPSS	Committee for Payment and Settlement Systems
CSD	Central Securities Depository
CZK	Czech Koruna
CVCA	Czech Private Equity & Venture Capital Association
ECB	European Central Bank
EC	European Commission
EMIR	European Market Infrastructure Regulation
ESMA	European Securities Market Authority
ETF	Exchange Traded Fund
EU	European Union
EUR	Euro
GDP	Gross Domestic Product
GNI	Gross National Income
IFRS	International Financial Reporting Standards
ISA	Individual Savings Account
KSIL	CZ Equivalent of a Limited Partnership
MiFID	Markets in Financial Instruments Directive
MiFIR	Markets in Financial Instruments Regulation
MoF	Ministry of Finance
MSCI	Morgan Stanley Capital International
MSME	Micro, Small, and Medium Enterprises
MTF	Multilateral Trading Facility
MTS	Electronic Trading System for Government Securities
NBFI	Non-Bank Financial Institution
OTC	Over the Counter Market
PE	Private Equity
PSE	Prague Stock Exchange
PX Group	PSE and Subsidiaries
RPA	Research Payment Account
SME	Small and Medium Sized Enterprise
SRSS	Structural Reform Support Service
VC	Venture Capital
YE	Year-end

ACKNOWLEDGEMENTS

This report was produced by a World Bank financial sector team consisting of: Raquel Letelier (project Technical Team Lead and Financial Sector Specialist), John D. Pollner (project Technical Lead and Lead Financial Sector Economist), Robert H. Singletary (Principal Capital Markets Consultant) and Sonia Iacovella (Senior Regulatory Change Expert). The team would like to thank the Ministry of Finance of the Czech Republic, the Czech National Bank, the PX Group, the Czech Capital Market Association, the Czech Private Equity & Venture Capital Association and other representatives of the financial and real sector of the Czech Republic for their collaboration

I. EXECUTIVE SUMMARY

1. **This Report is designed to provide an independent analysis of the Czech capital market that will underpin and inform a strategy for its further development.** This is not the first activity in this area. Instead, it joins with and supports prior efforts, both by the private sector and the Ministry of Finance (MoF).

2. Funding for this study has been provided by the European Commission's (EC) **Structural Reform Support Service (SRSS) whose mandate is to support authorities in their efforts to pursue growth-enhancing structural reforms**. One such structural reform is the EC's Action Plan to create a Capital Markets Union (CMU), for which the SRSS has developed a country-specific approach to support national authorities, including a comprehensive analysis of the current state of capital market development and identification of national impediments to further development. In this context, the focus of this study is on the Czech Republic's national system and how it can be broadened and deepened. This Assessment (a) evaluates the national capital market, (b) identifies obstacles and challenges for further development, and (c) proposes actions to increase and improve participation by issuers, investors and market intermediaries. Given that the largest Czech companies and investors have ready access to the broader EU capital markets, the focus of the recommendations is how to make the Czech national market more responsive to national needs.

3. **Broadly speaking, the need to grow the Czech Republic's capital market is rooted in three main public policy objectives.** First, there is a direct correlation between a country's capital market operations and economic growth. The evidence is clear that broader and deeper capital markets lead to better investment, more growth, increased employment and higher material standards of living. The reason for this is that capital market investors are interested in building companies and wealth, while lenders are interested in whether their loans will be repaid. Second, the capital markets create economic opportunities for the ordinary citizen that would be otherwise denied to him/her. Capital markets provide the chance to participate in a wide range of investment opportunities. Third, capital markets serve to spread systemic risk. They are an antidote to bank-centric structures where the great majority of credit risk rests within the banking system itself *and exposes the Government to high levels of fiscal risk in the case of bank failures.* A well-operating capital market reduces the Government's financial/fiscal risk in that the risks of default are taken outside the banking system, *and thus removed as financial risks to the deposit insurance fund or the State budget.*

4. **When benchmarked to its peers, the messages are that the Czech capital market could play a much larger role in stimulating economic growth for the country.**

   - Compared to the capital markets of other countries with similar-sized economies (GDP peers), the Czech market is small. It falls below the peer group's median and is surrounded by markets recognized as second or third tier.
   - When the focus shifts to GDP per capita, essentially taking the population factor out of the equation, the Czech capital market begins to compare more favorably to its peers. It occupies the median of the Market Cap per capita data set.

- The most noticeable positive aspect is that the Czech market stands out within the group of 13 new EU entrants, placing high or at the top of the various metrics.
- At the same time, it is much smaller than capital markets within the remainder of the EU, in some cases by a power of ten.

5. **The conclusion drawn is that, at its current level of operation, the Czech capital market is simply not in a position to support the Czech Republic's economic growth into the next (upper) tier of EU economies.** It may well be that the other factors for economic growth exist within the country but this key element –the ability to channel widespread equity and long-term debt financing- is missing. This factor alone provides a strong policy reason to focus on developing the Czech capital market.

6. **At the same time there appears to be significant latent demand for the types of investments the capital market can provide.** With a national savings rate of 28.71% of Gross National Income (GNI), the Czech Republic has the highest savings rate of any of its GNI per capita peers. More importantly, its savings rate is the third highest in the entire EU, surpassed only by Ireland (40.00%) and Luxembourg (36.10%). Thus, each year the Czech economy generates EUR 46 billion in savings, more than the entire market capitalization of the Prague Stock Exchange (PSE) (EUR 39 billion). The paradox is that for the last 9 years the PSE's market capitalization has not been increasing as would be expected from this excess of savings being present in the economy, but has been stagnant or even slightly decreasing.

7. **Answering the question 'why' begins with a review of the overall Czech financial sector.** Three aspects stand out as particularly impactful for the capital market:

   - The Czech Republic's financial system is highly bank-centric. Banks hold 74% of total assets in the system, and their capital is 84% of total capital. This raises the question of whether banks are using their dominant position to dissuade participation in the capital market, both for potential issuers and potential investors.
   - Banks are highly liquid. As a group, they lend only 56% of their available funds to their customers. In total, this results in **CZK 995.7 billion** (EUR 36.85 billion) in idle funds, or 22% of the Czech Republic's 2015 GDP. Little of these excess funds find their way into the capital market. Instead, banks prefer to purchase government securities (15% of available funds), keep these resources at the Czech National Bank (CNB) paying little or no interest (10% of funds) or lend to other banks (11% of funds), with only the remainder invested in non-government securities.
   - Interest rates are very low. Yields on government securities and borrowing rates in the interbank market have been falling steadily since 2008. Yields on government bonds with 5-year maturities and less have gone negative in real terms (*i.e.,* after inflation) since 2011 and have been negative even in nominal terms since 2015. This dynamic is both negative and positive for the Czech capital market. On the one hand, it makes borrowing from banks a far less expensive alternative than issuing corporate bonds in the capital market. On the other hand, given that rates are expected to rise, the capital market can step in to meet the needs of corporate treasurers looking to lock in low-cost, long-term funding.

8. **The architecture of the corporate securities market does not appear to be the problem;** the system is highly advanced and possesses all the required components for operation.

- The market is overseen by the CNB. It is charged not only with supervisory responsibilities but also with market development and encouraging investor protection and awareness. The MoF sets policy at the law level by proposing amendments to the current regime and new acts, as guided by the EU regulatory regime covering capital markets, as transposed into the Czech national legislation.
- Trading is primarily facilitated by the PSE, with a 2016 market cap of CZK 1,044.46 billion (EUR 38.65 billion), 25 listed equities, 49 listed corporate bonds, and 16 members.
- The Central Securities Depository (CSD) maintains the central register of dematerialized securities and performs clearance and settlement for trades conducted on the PSE and the over-the-counter (OTC) market.
- There are 62 investment firms, with non-bank investment firms holding CZK 492 billion (EUR 18 billion) in clients' funds and bank-related investment firms holding CZK 3,011 billion (EUR 111 billion).
- There is an ample supply of potential corporate issuers. The data indicate there are 1,640 large-sized enterprises with average assets of CZK 2.7 billion (EUR 100 million). Just as importantly for this market, there appears to be 6,794 medium-sized enterprises with average assets of CZK 306 million (EUR 11 million). The challenge is attracting these enterprises to use the capital market.
- The investment fund industry is growing rapidly, with 195 mutual funds (contractual plan) and 92 investment funds (corporate form). Total fund assets were CZK 224.1 billion (EUR 8.3 billion) at YE 2015, an increase of 25.9% y-o-y and 87.3% since YE 2012.
- The growth of pension funds is another area with potential for the capital market, increasing by CZK 32 billion (EUR 1.2 billion) for 2016 alone. Total amounts in this system were CZK 402 billion (EUR 15 billion) at YE 2016.
- The factoring industry is another promising segment. Although not technically part of the corporate securities market, there are ways to link this financing technique to it.

9. **Similarly, the architecture of the government securities market follows the standard configuration and is highly advanced.** The CNB, acting as fiscal agent for the government, is both the creator, operator and regulator of the government securities market. The MoF fulfills the role of the issuer determining what issues will be offered, when and in what amounts. At YE 2016, there were 12 primary dealers. Trading is organized and performed through a designated electronic trading system known as MTS. Issuance results and trading activity are highly transparent.

Core Observations:

10. Recent activity within the capital market sends several important messages ('lessons learned') that inform how the policy makers can expand and deepen this market.

    - Developments in the Regulatory Environment. The CNB has dedicated time and resources to ensure that market participants and investors are confident in the Czech market. During technical discussions, the most often cited obstacles to developing the Czech capital market were: (a) the high level of compliance costs and the disproportionality of some requirements for emerging market participants, (b) constantly shifting requirements, and (c) the short reaction times allowed to implement required changes. In this regard, the primary focus was on the EU-wide requirements. However, there was some concern that the Czech Republic has imposed additional, unneeded national-level requirements that are driving local Czech firms out of the industry. To this end, there are some actions that policy-makers can take to mitigate this impact.

- PSE Activity Levels. Despite the fact that the Czech market possesses a well-developed capital market infrastructure, there is a broadly held view that activity levels over the last 10 years have been disappointing. Taken together, three metrics –number of listings, market cap and trading levels– point to the overall difficulties faced by the exchange. On the equity side, the number of listings has been rather constant since 2008, as has been the market capitalization. At the same time, trading levels have fallen dramatically. On the bond side, listings are up more than double since 2006 but trading levels have fallen more than 66%. There are more and more bonds available on the exchange but again liquidity has fallen substantially.[1]

What is the explanation? Regarding equities, the narrative is that the share market's reputation is tied up with the disappointing results of the mass privatization program of the 1990's. Regarding corporate bonds, the lack of participation on the exchange can be traced to the relative cost of funds between bank credit and issuing bonds. While the capital market may not be competitive for short-term credit, there are likely to be opportunities to capitalize on expected changes in the interest rate environment. There are a few suggestions in this regard.

- Offerings Levels. Registered securities offerings since 2008 tell a similar story. Again, equities have played only a nominal role, with bond offerings exceeding equities offerings by a significant margin. Absent large scale privatization offerings, it would appear that big new share offerings may be few and far between.

Instead, the better promise for corporate securities offerings seems to lie in the small registered and private placement spaces. This Assessment has identified ways that the Czech market could allow a full public offering regime with reduced disclosure requirements according to the amounts raised. Adopting 'disclosure lite' for small registered offerings may actually provide better investor protection than currently existing given the growth of the 'private bond regime'. Enabled by 2012 amendments to the Bonds Act, that essentially remove the CNB from the entire regulatory picture for bond offerings made to fewer than 150 persons, there have been numerous offerings that fall completely below the regulatory radar. Depending with whom one speaks, this is either a 'great benefit' or 'great danger' to the system. Given that rates offered have reached as high as 12%, it would appear there is notable risk. At the same time, however, it is clear that retail investors purchasing these offerings are 'on their own' as the offerings are not regulated. There are some options to address this aspect and also to support small, but official, offerings.

- Investment Fund Flows. A bright spot in the narrative are investment fund inflows. As noted above, from 2014 to 2015, total assets under management (AUM) within the funds grew at 25.9% to a total of CZK 224 billion (EUR 8 billion). However, looming changes to the EU regulatory regime may impact future growth, as the new MiFID II Inducements Rules will inhibit commissions by prohibiting firms from accepting them when offering independent advice or portfolio

[1] For example, in the ongoing translation of MiFID II, the MoF aims to adjust the current Capital Market Act to be as close to the EU legislation as possible.

management. To the extent that bank-sponsored investment funds may internalize their distribution costs, this may not impact their sales schemes. But for the remaining non-bank fund groups (which hold 14% of total assets and rely on external distribution), the impact will be profound. In response, this report offers some ideas on how the direct marketing approach can be enabled to replace the costly sales agent regime.

- SME-level Activity. While there are at least 15 private equity (PE) and venture capital (VC) firms operating in the Czech Republic, there are no PE or VC *funds* domiciled in the country, which fit the classic model of private equity. 'PE' funds domiciled within the country perhaps fit more closely as family offices or single asset funds. This is a disadvantage for the Czech Republic. The supporting 'ecosystem' for non-domestic funds remains outside the country, which is a loss of business opportunity for the overall system. Further, VC/PE funds with decision centers located outside the country may not devote the same energy and care in growing Czech SMEs as would 'national' operators.

The main reason for the absence of local PE/VC funds is that the Czech tax treatment for investment funds is non-competitive with other jurisdictions. PE and VC funds are taxed at 5% at the fund level while in many other financial centers (*e.g.,* Luxembourg) the tax rate at the entity level is 0%. While the 5% figure might appear nominal, for institutional investors keenly attuned to minimizing costs, this is significant. There are several alternative approaches which could make the jurisdiction more attractive.

- Transparency of Financial Reporting. Reporting under International Financial Reporting Standards (IFRS) is required for all listed companies. Thus, the Czech system meets the minimum expected criteria for developed markets. However, use of IFRS by market participants such as investment firms and fund managers is optional, which does not follow the trend for more developed markets.

- Experience within Pension Funds. While the overall growth in AUM for pension funds has been a bright spot, the rates of return for these funds have not. Yields have averaged less than 2% over the last few years. Individual contribution levels have also been low. These two factors taken together mean that the third pillar *can only be expected to generate 15.8% of the worker's final salary as replacement income*.

The root cause for this dilemma is the 'no losses' guarantee. Although the portfolio composition limits for the Transformed pension funds allow sufficient risk-taking to boost yields, the minimum guarantee 'chills' the fund manager's willingness to invest in anything other than the safest (and lowest yielding) instruments. Given this imposed investment bias, pension funds cannot generate enough yield to provide adequate replacement income.

- Government Securities Market Trading. Within this Assessment, the reason for focusing on the government securities market is that it forms the basis for pricing all other types of corporate securities. To the extent that the government securities market provides a reliable benchmark for all maturities of debt, it increases the efficiency of the corporate market. Given the relatively low levels of Czech national debt, the auctions of needed government securities do not support a 'yields-at-auction' curve. The question remains whether secondary trading levels support a reliable 'yields-at-market' curve. It is an important question that needs to be addressed with industry and the MoF.

Recommended Actions:

11. **It should be made clear that there is no single solution for building the breadth and depth of participation in the Czech capital market (by both issuers and investors).** Instead, the Assessment indicates there are numerous parallel actions that can be taken, that should result in objective progress.

12. **Because these initiatives cut across several institutions and subject matters, it is recommended that the MoF forms a working group to address these reforms / improvements in an integrated manner.** By including the private sector as well as the interested public bodies, the working group can address these questions not only from a policy and architectural viewpoint, *but also how these changes can be implemented in a practical and impactful way at the business operational level.*

13. It should also be noted that these suggestions are made against the current backdrop of high liquidity in the financial system, and the low yields and borrowing rates. Thus, some of these suggestions apply today while some are proposed to be prepared for (and take advantage of) a change in the financial system climate. These suggestions are organized around several broad focus areas.

    - Reducing the Regulatory Burden – Building Supervisory Capacity. Given the emphasis on compliance costs during technical discussions, there appears to be an urgent and critical need for Czech policy-makers to explore how this can be responsibly reduced. At the EU level, the MoF and the CNB are encouraged to be proactive in the process, in part in defense of the Czech market specificities, but also recognizing that the Czech market is the largest among the 13 most recent entrants to the EU. Leadership in this tier cannot be expected to come from other sources, but perhaps the *Visegrad* Member States grouping could also be utilized to drive the agenda forward.

    More importantly, unnecessary regulatory obligations that are not directly and absolutely imposed through EU rules need to be removed. To that end, Czech policy-makers are encouraged to reexamine constantly the policy drivers behind their existing regulatory requirements, in the context of MiFID II translation into local regulation, including on the supervision of market intermediaries. A restatement and reiteration of the CNB's mission and involvement in terms of capital market development is also envisaged.[2]

    - Building Content for the System. Given the structure of the PX Group, a first goal of the strategy could be increasing the number of corporate securities handled by the CSD. This by itself will build financial strength within the infrastructure complex. A second goal could be increasing trading on the organized market. The strategy could also seek to harness the strong areas of the financial sector (the banking system and government securities market).

    In order to stimulate interest in the equity market, the Government is encouraged to examine the remaining inventory of State-Owned Enterprises (SOEs) to see which can be privatized, with a tranche reserved for retail investors.

[2] See Article 2 of the Act No. 6/1993 Coll., on the Czech National Bank. This could be done by referring more expressly to the role of CNB in the development of orderly market functioning which does not have to be through supervisory actions only.

Even in cases where an SOE or separate State agency is not deemed a candidate for privatization (such as in the case of strategic assets) these entities can still be directed or encouraged to seek debt financing through the corporate bond market, consistent with their need to obtain efficient financing.

Another main aim is to build participation in the fixed income market, specifically in the use of corporate bonds. The overall tactic here is to make it more attractive for banks to hold corporate bonds as a greater percentage of their assets. To create stronger business drivers for this, it is recommended that the CNB considers several policy decisions, including: (a) allowing specific corporate bonds as eligible collateral for bank/CNB refinancing transactions, (b) allowing short-term government securities as collateral for member operations on the PSE, and (c) linking the functionality of the CSD with the CNB's depository.

- Making the Market More Attractive for Issuers. The consistent evidence is that it has been a significant challenge to persuade real sector companies to come to the securities market. In order to make the market more attractive, the working group suggested above is encouraged to verify that the laws and regulations enable full flexibility for terms of preferred shares and corporate bonds. There are several 'customizing' features that could be included. The working group is also recommended to engage recent covered bond offerors to identify areas where issuing these types of securities can be further streamlined. Adopting 'abbreviated form' registrations will make offerings cheaper and faster.[3] And lastly, it is recommended that the PSE –with the strong backing of the MoF- redoubles its outreach to potential issuers to increase management's financial literacy on all aspects of using the capital markets for their company's benefit.
- Making the Market More Attractive for Investors. One key action to incentivize investor interest would be the adoption of the Individual Savings Account (ISAs). To some degree this concept could be considered as part of the changes to the pension system. But because it grants control over the investment decisions to the account holder, this could have a far greater impact to the capital market as a whole. ISA's are widely used in developed markets and help generate more investor interest in the system.

In parallel with the issuer outreach program noted above, the PSE could also -with the involvement of the MoF– engage in a wider retail investor education and financial literacy program to include, for example, video spots focusing on different aspects of investing in the Czech Republic, and using modern social media outlets.

Remaining suggestions in this regard revolve around two broad themes: (a) building investor trust and confidence in the market, and (b) providing better information flow. For example, there may be an information gap between companies and their securities holders when announcing corporate events (such as dividend payments, meetings, merger proposals). This can be cured by requiring all issuers whose securities are held at the CSD to inform the depository (acting as registrar), which will then post this information to its website and pass it to the custodians (who will forward it to their clients). In order to create a 'one stop shop' for potential investors, a 'securities information center' is recommended to be created, that would contain: (a) end of day reports of all transactions, (b) description of all securities, (c) description of all issuers, (d) copies of all periodic reports, (e) all relevant laws and regulations, and (f) prospectuses relating to public offerings. It is recommended that this operation covers all securities offered and traded in the Czech Republic, and be posted in

[3] In order to allow better enforcement of the Prospectus rules exemptions, it is also suggested that the rules be changed to require notice to the CNB when an issuer is relying on an offering exemption.

both Czech and English. In addition, it is recommended that the idea of requiring information in English be extended to all applicable laws, regulations, guidelines, and information released to the public by the MoF and the CNB. Finally, it is recommended that this is also required from the largest reporting companies.

In order to make the market more attractive to foreign investors, it is recommended to amend the Capital Market Undertaking Act (CMA) and the Civil Code to recognize the 'chain of nominees' concept, as expected by foreign investors. This will eliminate the current need for contractual 'work-arounds' and remove the current 'question mark' surrounding ultimate beneficial ownership.

- Promoting SME Access to the Market. Since it is unrealistic to expect SMEs to come to the market directly (due to their relatively small size), the system must look to SME sponsors to help them find the financing they need to grow. Two actions can be taken to enable local VC/PE funds as natural investors in SMEs: (a) authorizing a tax transparent Limited Partnership (LP) legal entity form, or (b) eliminating the 5% tax imposed at the fund level. A third method is to allow VC/PE funds to be publicly-held. This will require the MoF to adopt specialized guidance on valuing the fund's holdings.

The issuer outreach program noted above could contain a special subsection devoted to SMEs, including, for example: (a) a series of tailored videos focusing on capital market opportunities for SMEs as potential issuers, (b) a series of workshops/seminars for potential SME issuers, and (c) distribution of a handbook on capital markets tailored to SMEs considering listing or raising debt through the capital markets. The program could also include advisory services for pre-IPO stage SMEs.

- Encouraging the Use of Investment Funds. Although the Czech Republic taxes its fund investors twice, as opposed to direct investors who are taxed once, after careful consideration of the particular facts surrounding this issue, the removal of this double taxation is recommended if, and only if, the government determines for other reasons to revisit the current system of minimum holding periods. At the same time, it is recommended that foreign investors not be taxed on their income from Czech funds, and the withholding rules be adjusted accordingly.

Creating a 'no or low' commission structure should help the non-bank investment fund groups compete better with bank-sponsored funds. To encourage direct marketing, the MoF and CNB is encouraged to review the regulations surrounding this sales method and relax them where responsibly possible. The working group is also encouraged to consult with the investment fund industry to determine if the legal form Sverensky Fond could be revised to offer a better alternative to the current legal forms, and if so then draft the needed reforms.

- Strengthening the Pension Fund Sector. There are several options to reform the pension funds so that they can be a more credible source of replacement income. It is recommended that the range of allowable investment securities be expanded to include private equity, private placements and infrastructure finance bonds. The Czech Moravian Guarantee and Development Bank (CMZRB) could develop financial guarantee instruments to support this. More pension assets need to be migrated from Transformed funds into higher yielding Participant funds (or, if adopted, into the ISAs). This could be done via a voluntary approach but supported by a government information campaign. For example, a younger scheme member could be permitted to move, say, up to half of their contributions from the Transformed fund into the Participant fund, to allow a less conservative investment strategy to be pursued. A key element in achieving this would be to eliminate the 'no losses' guarantee provision for the contribution/accumulation period, and have it applied only from retirement onwards (to preserve the capital paid out to the pensioner). Regarding the retirement phase, the MoF is encouraged to consider new mechanisms to allow phased withdrawals. This implies programmed withdrawals or using lifetime annuities provided by an insurance company. Lastly, allowing better use of asset pooling methods for fund management and accounting could reduce administration costs and boost yields.

- Building Financial Reporting Transparency. If market participants were required to report using IFRS, it would help make the market more transparent to outsiders. However, before moving to this stage of mandatory use, the MoF is encouraged to perfect and finalize its mechanism (translation tables) to convert from Czech Accounting Standards (CAS) to IFRS, to directly generate the required tax reports. Once the 'cost' side of the equation has been perfected and rolled out, thus greatly reducing the compliance burden, the MoF can extend the requirement to a wider range of enterprises. Within the medium term, it is recommended that policy-makers reassess whether to require investment funds and/or pension funds to use IFRS.
- Linking the Market to the Factoring Sector. There are ways to link the factoring sector with the capital market to make both segments stronger. The use of invoice receivables is encouraged, via third party arrangers such as investment firms, to securitize such assets into fixed income or bond instruments. The use of reverse factoring is also encouraged because it implies higher credit ratings and easier packaging. It is recommended that Investment funds holding factored receivables be allowed.
- Deepening Government Securities Trading. The working group is encouraged to consult with market traders to determine if government securities trading levels are hampering the development of a reliable yield curve and, separately, with the MoF Debt Management Department to explore tenor consolidation. The development of a fuller yield curve is important to investment managers and other decision-makers.

The suggested actions are listed in Table 1 below, divided into short, medium and long-term priorities, and into main and additional recommendations.

Table 1: List of Recommendations

Short-Term Activities (< 1 year)	Medium-Term Activities (2-3 years)	Long-Term Activities (> 3 years)
Reducing the Regulatory Burden – Building Supervisory Capacity		
• Main: Reiterate and reinforce the CNB's mission, as defined in the law, for development of the capital market, and prioritize this responsibility among the other assigned tasks. • Main: Encourage participation in EU-wide committees impacting capital market regulation, so that the Czech market's needs and specificities are better reflected at EU level. • Main: Require a simple notification by issuers when conducting private placements or other offerings relying on exemptions to the prospectus requirement, to allow the securities regulator to keep an overview of instruments issued in the Czech Republic and to oversee the correct application of the public offering rules.	• Main: Eliminate unnecessary regulatory burdens and costs applied at the local level, and streamline information requested from firms, including for supervisory and statistical purposes. • Additional: Consider a system to second staff to ESMA and other European authorities.	• Main: Review the securities distribution system and build effective supervisory actions with a view towards better comparing costs to the investor to performance returns and sanction abusive behaviors.
Building Content for the System		
• Main: Examine the remaining inventory of State-Owned Enterprises (SOEs) to see which can be privatized with a tranche reserved for retail investors, and commit to a firm timeline for doing so. • Main: Encourage SOEs to meet their debt financing needs through the capital market, consistent with their need to obtain the most efficient financing.	• Main: Allow specific corporate bonds as eligible collateral for bank / CNB refinancing transactions. • Additional: Allow short term government debt securities as collateral for member operations on the PSE. • Additional: Link the functionality of the CSD with the CNB's depository (connect the two operations electronically).	• Additional: Consider expanding the eligible collateral categories to covered bonds and other structured products.
Making the Market More Attractive for Issuers		
• Main: Redouble efforts on outreach to potential issuers, including management education, targeted videos, workshops for potential issuers and supplementary handbook on capital markets • Additional: Verify full flexibility of allowed terms for preferred shares and corporate bonds • Additional: Review the recent experience by covered bond offerors to identify improvements and streamlining to the process.	• Main: Consider abbreviated form registration choices.	

Short-Term Activities (< 1 year)	Medium-Term Activities (2-3 years)	Long-Term Activities (> 3 years)
Making the Market More Attractive for Investors		
• Main: Require reporting companies, under law, to notify the CSD of all corporate events so that it may pass on this information to securities holders. • Main: Require large and medium sized issuer information to be provided in English. • Main: Require applicable laws and rules to be translated into English. • Additional: Launch a program promoting financial literacy, possibly including educational video series on capital markets for investors.	• Main: Consider an Individual Savings Account regime, with tax incentives for contributions and account holder control over investment decisions. • Main: In order to make the market more attractive to foreign investors, amend the CMA and Civil Code to recognize the 'chain of nominees' concept. • Main: Prepare a due diligence package on the PSE/CSD and post it to the web. • Additional: Consider the creation of a "Corporate Governance Scorecard" and award winners in publicized events, in order to raise awareness of corporate governance and positively incentive any reputational exposure of new listed issuers.	• Additional: Create a web-based "Securities Information Center". • Additional: Explore ways to make the EUR/CZK hedging mechanisms more efficient. • Additional: Seek to elevate the Czech market's MSCI rating and incorporate the evaluation criteria within the capital market development roadmap as desired outcomes.
Promoting SME Access to the Market		
• Main: Organize specialized, targeted issuer outreach program for SMEs, to include workshops for potential SME issuers with supplementary handbook on capital markets. • Main: Review the EC's June 2017 report on tax incentives to support SME development, to determine which concepts might be incorporated into the Czech Republic's capital market development strategy going forward.	• Main: Authorize a tax transparent limited partnership legal entity form with proper gain/loss accounting, or reform the KSIL form. • Main: Grant VC and PE funds tax transparency. • Additional: Adopt specialized valuation guidance in order to allow publicly-held VC and PE funds.	
Encouraging the Use of Investment Funds		
• Additional: Review the regulatory requirements surrounding direct marketing of funds' securities to encourage investor access to collective investments.	• Main: Eliminate taxation of foreign fund investors on Czech fund income. • Additional: Study whether the legal form Sverensky Fond could be revised to encourage its greater use and/or result in lower administrative costs and operational flexibility.	• Main: Consider eliminating the 5% profits tax on investment funds, only if the Government determines for other reasons to revise the minimum holding period regime.

Short-Term Activities (< 1 year)	Medium-Term Activities (2-3 years)	Long-Term Activities (> 3 years)
Strengthening the Pension Fund Sector		
• Main: Expand the range of investable securities, to include private equity, private placements and infrastructure bonds. • Additional: Better exploit asset pooling methods for fund management and accounting.	• Main: Provide targeted incentives to migrate the Transformed Fund assets into higher growth Participant Funds and/or ISAs. • Main: Modify the minimum return guarantee provision to eliminate the year by year measurement.	• Additional: Design broader, low cost options for annuities and phased withdrawal products.
Building Financial Reporting Transparency		
• Main: Perfect and finalize the translation tables for using IFRS to generate the required tax reports. • Main: Continue and complete the current pilot program for testing the translation tables for large enterprises.	• Additional: Require investment firms and fund managers to report using IFRS. • Additional: Reassess the application and need for investment funds and pension funds to use IFRS.	
Linking the Market to the Factoring Sector		
• Main: Encourage Securitization of Invoice Pools by Third Party Agents as Arrangers.	• Main: Permit Investment Funds to invest in Factored Receivables.	• Main: Develop reverse factoring as a financial instrument. • Additional: Allow SME Receivables to be listed.
Deepening Government Securities Trading		
• Additional: Consult with the market traders to obtain their views on the yield curve.	• Additional: Consult with the MoF Debt Management Department to explore tenor consolidation.	

II. BACKGROUND

A. ASSESSMENT GOALS AND FUNDING

14. **This Capital Market Assessment is designed to assist public sector authorities and market participants in further developing the Czech capital market**. Its aim is to provide an analysis of the market that will help inform a realistic and useable roadmap going forward.

15. **This Assessment is not the first activity in this regard; instead, it joins with and supports prior efforts**. In May 2015, the Czech Capital Market Association (AKAT) collected proposals from market participants for developing the market and presented them to the MoF. In response, the MoF organized several meetings among market participants and other stakeholders, including the CNB (the securities regulator), business associations, and infrastructure institutions, to discuss the suggestions. Subsequently, with a view towards developing a strategy that could be considered by the Czech government, both the AKAT and the MoF embarked on market studies that could underpin the recommendations. However, these analyses were deemed insufficient and thus the process of developing an integrated strategic document for the government came to a halt.

16. **In parallel (and on a pan-European basis) the EC announced plans to form a Capital Markets Union (CMU)**. This is viewed as a key element to completing the European Economic and Monetary Union and one of the pillars of the Investment Plan announced by the Juncker Commission in November 2014. The CMU's objective is to build a single capital market to unlock resources for investment across Europe, enhance financial system stability and deepen financial integration. In September 2015, the EC adopted its CMU Action Plan, which sets out 33 actions aimed at establishing an integrated European capital market by 2019. The recent mid-term review of the CMU action plan reports on the good progress made so far with around two-thirds of the 33 actions delivered in twenty months as well as setting out nine new priority actions.[4]

17. **As part of its Action Plan, the EC is supporting national capital market authorities through its Structural Reform Support Service (SRSS), whose mandate is to support growth-enhancing structural reforms**. As such, the SRSS provides the necessary framework and funding for technical assistance in the area of capital market development, with the ultimate goal of increasing the opportunities for investment, making the financial system more stable, resilient and competitive, all of which contribute towards strengthening economic growth.

18. **The SRSS's country-specific approach for supporting national capital market authorities is based on a three-step approach**:

    (a) Providing a comprehensive analysis of the Member State's capital market and identifying national impediments to further development;

    (b) Where necessary, developing arrangements to access EU market infrastructure; and

    (c) Funding efforts to deepen and widen capital market access in the Member State.

[4] See https://ec.europa.eu/info/publications/mid-term-review-capital-markets-union-action-plan_en

19. **Within the SRSS framework, the MoF obtained funding for a World Bank assessment of the country's capital market, to include recommendations for the short, medium and long term**. The assessment: (a) evaluates the national capital market, (b) identifies obstacles and challenges for further development, and (c) proposes actions to increase the market's breadth and depth. The MoF's goal is to prepare a strategic document, supported by this independent assessment, to inform public policy on developing the Czech capital market, and gain the necessary support within the Government and other authorities to give traction to the strategy.[5]

B. FOCUS OF THE RECOMMENDATIONS

20. **The focus of this Assessment is on the development of the domestic capital market, considering the national and regional context**. The focus follows the first of the SRSS's three-step approach described previously, that is, to provide an analysis of the Czech capital market and identify national impediments to further development. This was reinforced with the initial discussions with the MoF and other authorities and market participants, leading to the conclusion that the development of the domestic capital market was a sensible approach, given the country and regional context. As outlined below and explained in more detail in subsequent sections in the document, while the Czech Republic is a relatively small Member State, significantly integrated with the EU, and with prospects of joining the Eurozone in the future, the nature of its real sector and of its investor base, and the existing market and regulatory infrastructure make the further development of the domestic capital market an effort worth undertaking.

21. **Although cross-border access with other EU capital markets was considered during the technical discussions, this was seen as a less pressing issue**. As described in more detail in Section V.A, there appears to be strong inward access by foreign issuers and market participants. Foreign equity listings make up 43% of the PSE's market capitalization. Four of the sixteen trading members are foreign firms. Outward access also does not appear problematic for the largest Czech companies. For example, at YE 2016 there were seven Czech companies listed on the Warsaw Stock Exchange.

22. **Instead, the main focus of the study was whether the domestic capital market is best addressing national needs**. In other words, the overarching question was how the Czech capital market can serve the needs of national companies and investors that are not being met by the international financial centers. In light of this, the goal of the recommendations provided as part of this Assessment is not how to transform the Czech capital market into a major financial center, but instead how to further develop it to meet the needs of the Czech economy. The 30 main and 21 additional recommendations are intended to provide practical, needed change to help this market fill its national niche.

[5] This Assessment is informed by technical discussions held with authorities and market participants during two weeks spanning February-March, to be further elaborated during one week in June, and by information collected by/provided to the WB team throughout the duration of the project.

III. WHY SHOULD THE CZECH REPUBLIC FOCUS ON CAPITAL MARKET DEVELOPMENT?

23. **During technical discussions, a concern consistently expressed was that high-level policy-makers do not view developing the Czech capital market as a priority item**. These statements imply that policy-makers do not perceive capital markets as a potential driver of economic growth. That said, in political economy terms, the needs to develop the capital markets are:

24. **First, the capital market helps direct investment into the real economy in ways that the banking system simply cannot**. It can supply both equity and long-term debt financing for real sector companies that the banking system cannot. It often brings good corporate governance. It builds profitability and jobs. It creates economic growth that is supported not only by debt but also by ownership investment (equity). The reason for all this is that capital market investors are interested in building companies and wealth, not simply in whether the loan will be repaid. Stronger capital markets lead to stronger national economic success.

25. **Second, the capital market creates economic opportunities for the ordinary citizen that would be otherwise denied to him/her**. The capital market provides the chance to participate in a wide range of investment opportunities that –in the absence of the capital market- would be available only to the wealthiest portion of the population. The capital market opens the door to investing in companies, groups of companies, and many other types of assets. Without the capital market, the ordinary citizen is left to invest in bank deposits paying minimal yields (in some cases less than inflation). The capital market provides the chance to be a participant in the businesses of the nation, and a chance to build wealth, either as a direct investor or as an indirect investor through investment funds. Stronger capital markets provide more wealth-building opportunities for the ordinary citizen.

26. **Third, the capital market greatly reduces the financial risks (fiscal risks) to the State budget, as more diversified financial sectors have a greater absorption capacity in case of shocks**. The capital market spreads systemic risk within the financial system. It is an antidote to bank-centric structures where the great majority of credit risk rests within the banking system itself *and exposes the Government to high levels of fiscal risk in the case of bank failures*. Even in cases where a country (such as the Czech Republic) employs a deposit insurance fund, the State budget is still the ultimate backstop. A well-operating capital market reduces the risk to the deposit insurance fund first, and then to the State budget. *Thus, the benefit of a well-developed capital market is that it reduces the contingent liability for the State budget*.

27. **The review of the Czech economy relative to its peers and the structure of its financial sector included in the sections below indicates that each of these policy drivers apply strongly**. More specifically, the data included in the main text and annexes of this report indicate that a broader, deeper capital market could significantly boost the Czech economy, provide productive investment outlets for a substantial amount of pent up savings, and reduce the concentration of credit default risk within the financial system. Each aspect is discussed in more detail immediately below.

A. THE LINK BETWEEN STRONGER CAPITAL MARKETS AND STRONGER ECONOMIC GROWTH

28. **The capital market performs a simple function: it serves to match persons holding savings with entities wishing to raise capital.** The capital market is simply a conduit. It is a financial plumbing system. All the other entities surrounding this 'matching function' –such as the stock exchange, depository and regulator– are designed to make the market safer, cheaper and more efficient, thus making it more attractive for participants.

29. The capital market serves differing types of investors:

- **Domestic savers - individuals and households**. These are so-called 'retail investors'. As a nation, the Czech Republic saves at least CZK 1,236 billion per year (EUR 46 billion). These savings need 'investment homes'.
- **Foreign investors - institutions or individuals**. In theory, the amount of foreign funds available for the Czech capital market is unlimited.
- **Pension funds**. These are long-term investors that must find an investment home for their participants' contributions made today, until pay-out time in the future. Pension funds require high grade investments, consistent with their fiduciary obligations. In the Czech Republic's case, these are the Transformed and Participant pension funds with total combined assets of CZK 402.12 billion (EUR 14.88 billion).
- **Life Insurance companies**. Because life insurance companies take in premiums today that will need to be paid out in the future, they too must find an investment home for these resources. Life insurance companies have a longer-term investment horizon than property and casualty companies. Today, the Czech Republic's life insurance industry holds CZK 492.5 billion in assets (EUR 18.2 billion).
- **Commercial Banks**. When banks have deposits in excess of loans placed, they must find an investment home for this 'excess liquidity'. Because the deposit base is shorter term than the base for pension funds and life insurance, the type of investments banks seek is shorter term also. As discussed below, the Czech Republic's banks have excess liquidity of CZK 1,130 billion (EUR 42 billion), even after their investments in government securities.

30. **The generic capital market serves differing types of issuers, who can offer equity and debt instruments, either publicly or through private placements**. Again, each of these is applicable in the Czech Republic.

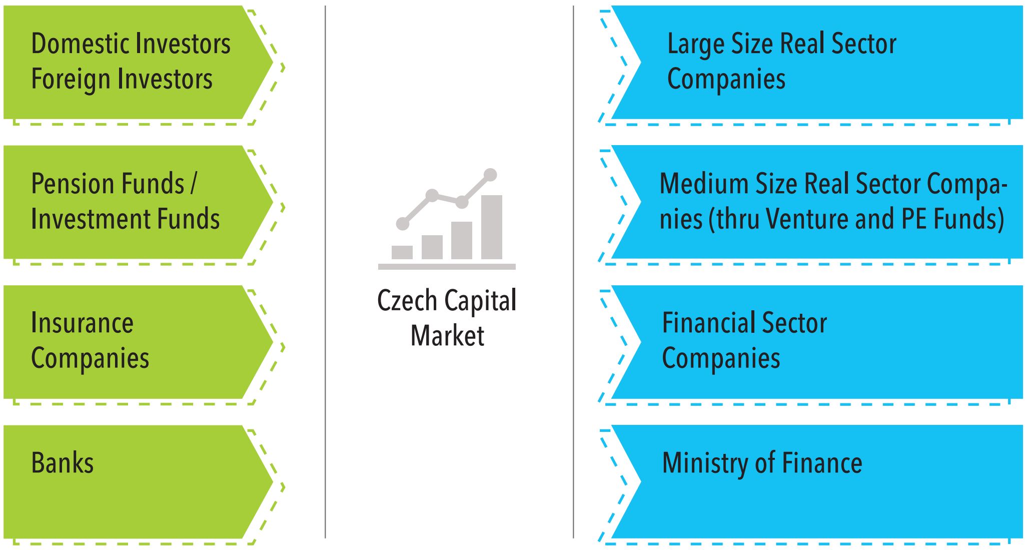
- **Large-sized real sector companies**. As of December 2016, there were 25 equities listed on the PSE with a total market capitalization of CZK 1,044 billion (EUR 38.6 billion). The total amount of public securities offerings from 2008 through 2016 was CZK 653.6 billion (EUR 24.2 billion).
- **Medium-sized real sector companies**. This set of companies is usually too small to merit an offering directly through the securities markets, as it is not cost efficient. Instead, their financing needs tend to be serviced by private equity firms that may or may not be publicly-held. There are 6,794 medium sized enterprises in the Czech Republic with an average shareholder's equity of CZK 134.5 million (EUR 5 million). The need to enhance their access through the capital market is discussed below.

- **Financial sector companies**. Banks and leasing companies are listed separately from the real sector companies because the nature of their financing needs is different. Banks may need to issue securities such as covered bonds and securitizations.

- **The Government of the Czech Republic**. Within the country, the MoF is the largest issuer, with CZK 1,519.3 billion (EUR 56.2 billion) in marketable government securities outstanding as of YE 2016. The impact of government securities activities on the rest of the securities markets is discussed below.

In sum, the conduit function of the Czech Republic's capital market can be depicted as follows (Figure 1):

Figure 1: The Czech Capital Market - Investors and Issuers

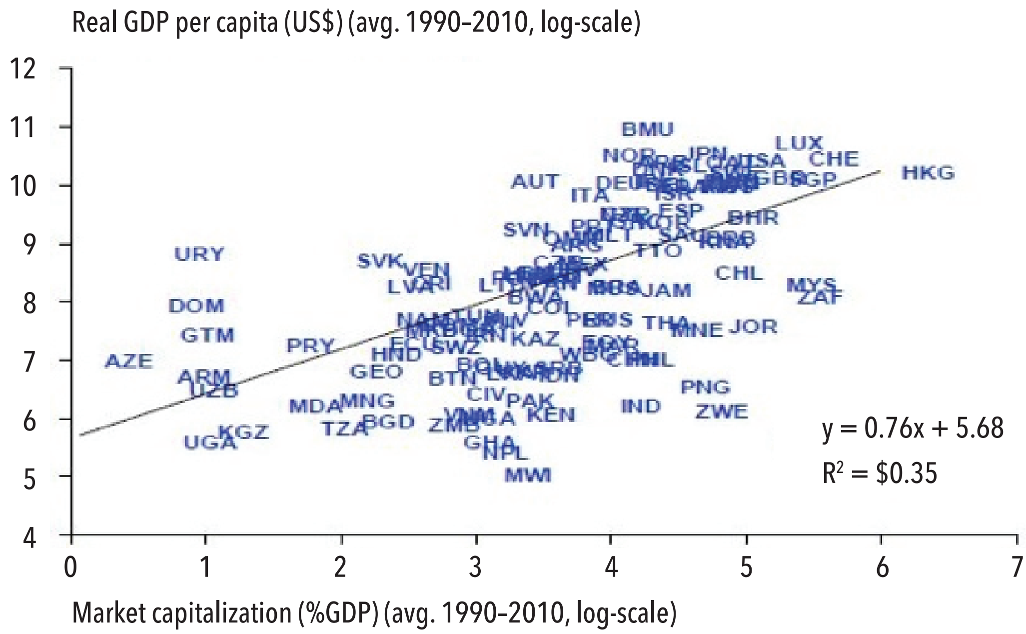


Source: WB Project Team Graphic

31. **Because the capital market matches investors to enterprises, it directly enhances the amount of investment into the economy**. This facilitated investment leads to growth in enterprises. And, again, it should be emphasized that, unlike the banking system, the capital market provides both equity and long-term debt financing for real sector companies. Enterprise growth leads to economic growth overall (increases in GDP), and just as importantly, it leads to job creation within the companies themselves. Thus, investments through the capital market are *a vital, positive force for increasing the material standard of living.*

32. **This correlation between the health of a country's capital market and its economic size has been demonstrated in numerous studies**. These are summarized in Annex 2 and in Figure 2 below. There is a strong connection between the amount of resources invested (as expressed by market capitalization) and overall GDP levels.

Figure 2: Global Correlation: Market Capitalization to GDP per capita



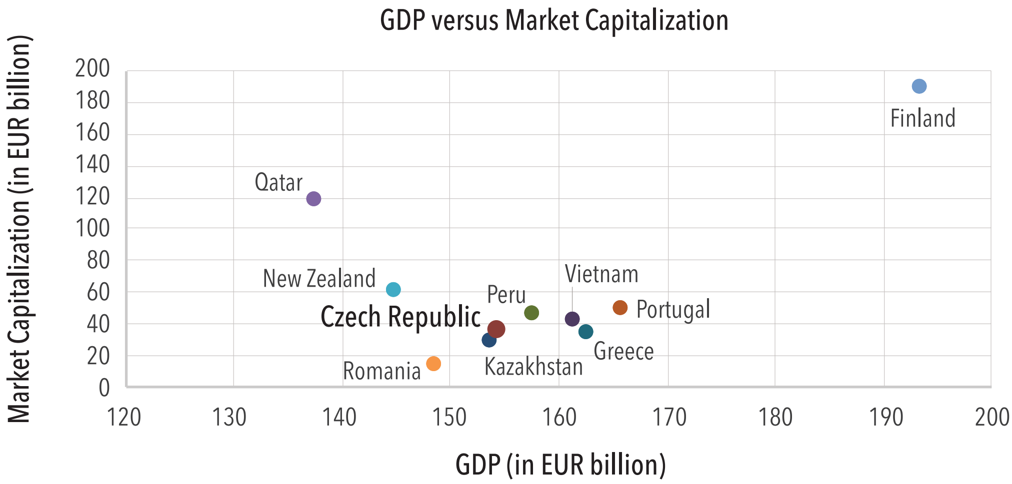
Sources: World Bank Development Indicators; Financial Development and Structure Database; Milken Institute.

33. **Where does the Czech Republic fit along this economic growth curve?** How does its capital market compare to its peers? And to what extent could an improved capital market contribute more to the Czech Republic's economic growth if it were broadened and deepened?

34. **To address these issues, a benchmarking exercise of the Czech Republic's capital market was performed against four sets of comparative countries.** These are: (a) GDP peers, (b) GDP per capita peers, (c) Members States entering the EU on or after 2004, and (d) all EU Member States. The full results are set out in Annex 3.

35. **When compared to similar sized economies around the world, the Czech Republic's capital market is undistinguished.**[6] It falls below the peer group's median and is surrounded by markets recognized as second or third tier (Figure 3).

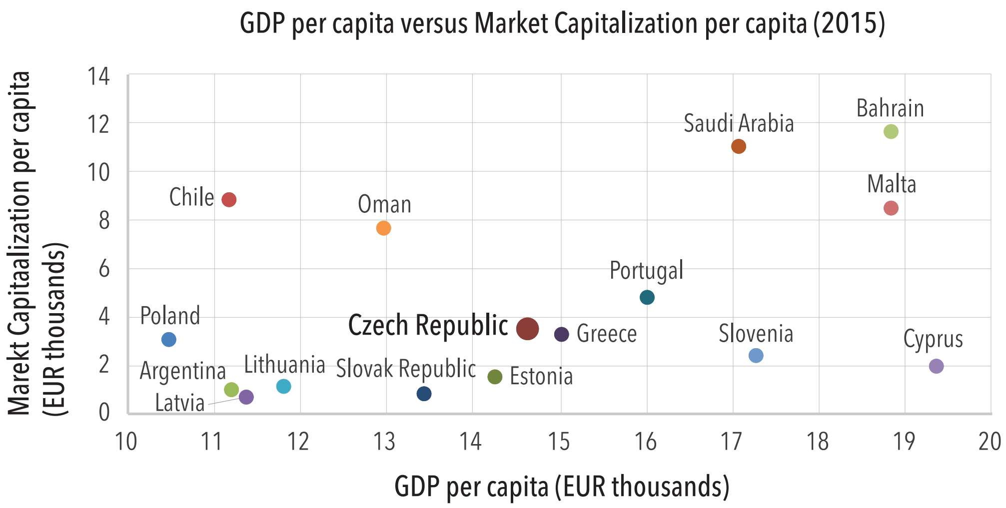
Figure 3: Comparison to GDP Peers – Mkt Cap to GDP (2015)



Source: World Bank Development Indicators; Financial Development and Structure Database.

36. When the focus shifts to GDP per capita -essentially taking out the population factor of the equation- the Czech capital market begins to compare more favorably to its peers. It occupies the median of the Market Cap per capita data set (Figure 4). In other words, its capital market penetration into the economy is better when viewed on a per citizen basis.[7]

Figure 4: Comparison to GDP per capita peers – Mkt Cap per capita to GDP per capita



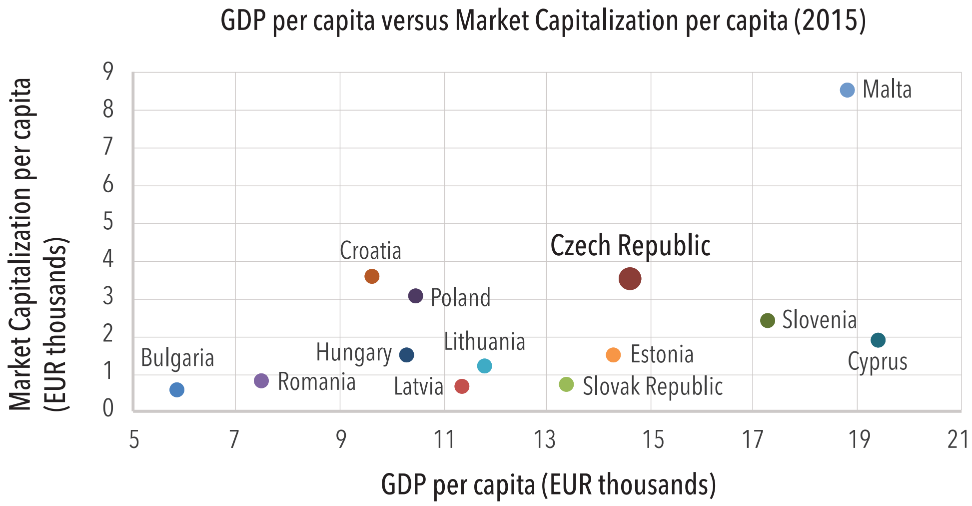
Source: World Bank Development Indicators; Financial Development and Structure Database.

[6] The 'GDP peer countries' included all countries with a GDP +/- EUR 40 billion from the Czech Republic's 2015 GDP of EUR 154.3 billion. This resulted in a dataset of 10 countries.

[7] The 'GDP per capita peer countries' included all countries with a GDP per capita +/- EUR 4,000 from the Czech Republic's 2015 GDP per capita of EUR 14,623. This resulted in a dataset of 16 countries.

37. **The Czech market compares best within the peer group of the 13 most recent EU entrants.** It ranks highest among the CEE countries, both with regards to: (a) GDP per capita to Market Cap per capita (with the exception of Malta, see Figure 5), and (b) GDP versus Market Cap (with the exception of Poland).[8]

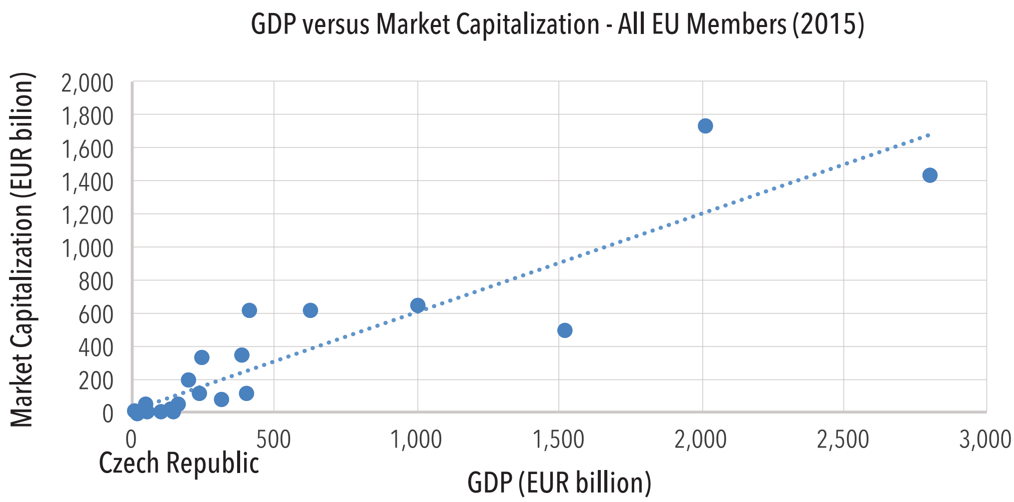
Figure 5: Comparison to 13 Most Recent EU Entrants – Mkt Cap per capita to GDP per capita



Source: World Bank Development Indicators; Financial Development and Structure Database.

38. **The comparisons weaken considerably when the other EU Members are added to the data set.** In this case, a picture of two tiers of capital markets clearly emerges, with the older members and larger economies eclipsing the new entrants (Figure 6). The Czech Republic may be a leader in capital market development among the new entrants, but its capital market lags by almost a power of ten behind the leading economies of the UK, Germany, France, Spain, Italy and the Netherlands. The 13 new entrants occupy the extreme lower left corner of the GDP vs. Market Cap graph, almost indistinguishable among each other, while the remaining countries fill out the broader trendline.

Figure 6: Comparison to All EU Members – Mkt Cap to GDP



Source: World Bank Development Indicators; Financial Development and Structure Database.

[8] This graph is presented in Annex 3.

39. **In summary, the overall messages from the market development benchmarking are clear.** The Czech market stands out within the group of 13 new EU entrants, placing high or at the top of the various metrics. At the same time, it is much smaller than the capital markets for the remainder of the EU member countries, in some cases by a power of ten. At its current level of operation, the Czech capital market is simply not in a position to support the country's economic growth into the next (upper) tier of EU economies. It may well be that the other factors for the economic growth of the Czech Republic exist but this key element –the ability to channel investment into equity and long-term debt financing- is missing. This factor alone provides a strong policy reason to focus on developing Czech capital market.

40. **The counter argument to this point is that the Czech Republic can continue to rely on a bank-centric financial system and that the country's growth can be debt-driven.** This ignores the fact that debt-driven strategies are inherently limited, a fact disguised by the recent decade of quantitative easing. However, as liquidity shrinks, interest rates rise, and the availability of long-term, low rate borrowing decreases significantly, the need for equity investments will become clearer. And, the time horizon of the lending that banks are willing to make will shorten. Thus, it is important to develop a strategy for the Czech capital market in a timing that can take advantage of this shift.

B. PROVIDING WEALTH BUILDING OPPORTUNITIES FOR THE GENERAL PUBLIC

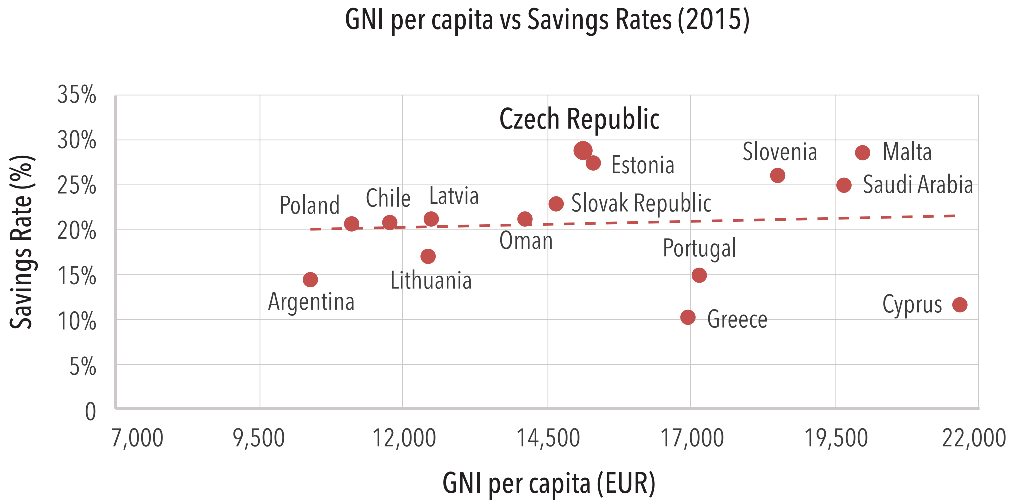
41. **The Czech Republic possesses high savings rates.** To understand the latent demand for capital market investment products, the savings practices of the Czech Republic were benchmarked against several sets of peer countries. Essentially, the question is whether there are excess resources in the system that are not required for basic consumption, and instead can be used for investment.[9] The full results of the savings practices benchmarking exercise are set out in Annex 4.[10] Two important points are worth noting here.

42. **First, with a national savings rate of 28.71% of Gross National Income (GNI), the Czech Republic has the highest savings rate of any of its GNI per capita peers** (Figure 7).

[9] The concept is that once the amount of latent demand has been determined, the analysis can move on to questions of market structure, financial literacy and inducement.

[10] The Czech Republic was compared against its: (a) Gross National Income peers, (b) GNI per capita peers, (c) Member States entering the EU on or after 2004, and (d) all EU Member States.

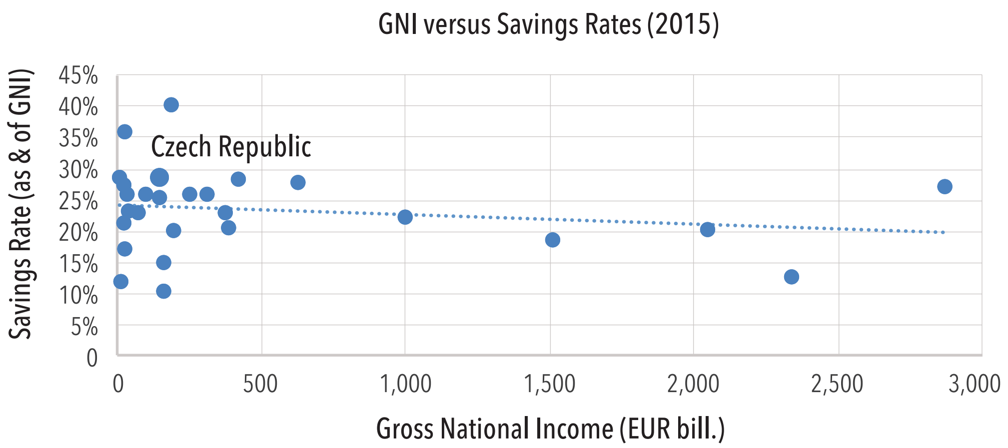
Figure 7: Savings Rates Comparisons to GNI per capita Peers



Source: World Bank Development Indicators; Financial Development and Structure Database.

43. **Second, and more importantly, the Czech Republic's savings rate is the third highest in the EU, surpassed only by Ireland (40.0%) and Luxembourg (36.1%)** (Figure 8).

Figure 8: Savings Rate Comparisons to All EU Members – GNI to Savings Rate.



Source: World Bank Development Indicators; Financial Development and Structure Database.

44. **In overall terms, the savings amounts for the Czech Republic for 2015 were as follows** (Table 2):

Table 2: Savings Levels within the Czech Republic (2015).

Domestic savings rate (% of GDP)	Domestic savings (current EUR bill.)	Domestic savings rate (% of GNI)	Domestic savings (current EUR bill.)
33.49%	€ 51.66	28.79%	€ 41.5

Source: World Bank Development Indicators; Financial Development and Structure Database.

45. **By any measure this is a substantial sum of money.** The question remains: what were the destinations of these savings (*i.e.,* where were these resources placed)?

Table 3: Savings Destinations within the Czech Republic (2015)

Savings Flows 2015		EUR million	% of Placement
Net Savings of 28.79% of GNI for 2015	=	€ 41,502	-
Growth in Bank Deposits 2015 vs 2014	Minus	€ 15,491	33.87%
Life Insurance Premiums 2015	Minus	€ 1,191	5.05%
Net Inflows to Pension Funds 2015	Minus	€ 2,309	2.60%
Public Securities Offerings 2015	Minus	€ 22	0.05%
Net Inflows into Investment Funds	Minus	€ 20	0.04%
Excess Investable Funds	=	€ 22,469	58.38%

Sources: CNB ARAD data and 2015 Financial Supervision Report

46. **Table 3 above clearly indicates that much of the domestic savings is placed in Czech banks.** But very little finds its way into the non-bank financial institution (NBFI) sector, and almost none finds its way into the capital market, either through inflows into investment funds or by direct purchases of offered securities. This, by itself, indicates a 'disconnect' between the needs of investors on the one hand, and the ability of the Czech capital market to provide attractive investments, on the other. The savings are there, but the Czech capital market is not able to capitalize on this opportunity.

47. **The fact that a further 58% of savings are 'unaccounted for' speaks to another question, i.e., whether these resources are leaving the country for other opportunities.** This EUR 22 billion in savings is either placed locally in categories not captured by the list (such as real estate) or is being invested in products offered by foreign firms pass-ported into the Czech Republic for destinations outside the country. Clearly, some unquantifiable portion of these excess investable funds is placed into real estate. But, it appears unlikely that the entire EUR 22 billion was invested into real estate in 2015 alone. Thus, there is some portion –amount undetermined, but clearly substantial– that is exiting the Czech Republic via pass-ported investment firms from other countries.[11]

48. **Does this mean that the second policy driver for developing the capital market (providing equal investment opportunity for all Czech citizens) has already been met?** Perhaps so, but this bears further study. *If* Czech investors can find suitable investment returns outside the country, they cannot be said to be disadvantaged. But the secondary questions are: (a) whether they have realistic access to these cross-border investments, and (b) whether Czech investors would in fact prefer to invest in the local market, not abroad. So, the question of whether the Czech general public has equal investment opportunity on the terms it desires remains open.

[11] And the question of 'lost investment funds' again appears. This relates to the first policy driver (building economic growth) as opposed to the second driver (equal economic opportunity).

C. REDUCING THE DEPOSIT INSURANCE FUND'S AND STATE BUDGET'S FISCAL RISK

49. **The third policy driver for building the capital market –reducing the financial risk to the Deposit Insurance Fund and the fiscal risk to the State budget– would appear to apply strongly to the Czech Republic.** As the savings flows set out in Table 3 above imply, the country's financial sector assets are highly concentrated within commercial banks.[12] This is borne out by the data for 2016, which indicates the system is heavily bank-centric (Table 4).[13]

Table 4: Financial Sector Composition (2016)

Financial Sector Composition at YE 2016			
	CZK (bill.)	**EUR (bill.)**	**% of Total**
Commercial Bank Assets	6,020.00	€ 222.80	74.42%
PSE Equity Market Capitalization	1,044.46	€ 38.66	12.91%
Insurance Industry Assets	492.50	€ 18.23	6.09%
Pension Fund Assets	402.12	€ 14.88	4.97%
Real Estate Fund Assets	96.10	€ 3.56	1.19%
Credit Union Assets	34.20	€ 1.27	0.42%
	CZK 8,055.19	€ 299.40	**100.00%**

Sources: CNB ARAD database, PSE 2016 Fact Book

50. **For purposes of understanding the fiscal risk this poses to the State budget, it is critical to understand that most of the EUR 223 billion of assets held by banks are in the form of loans to customers and other credit extended.** In contrast, while the remaining components have investment risk, it is not primarily in the form of credit default risk. As most loans to customers, which carry credit default risk, are financed with deposits, this means that almost all the credit default risk in the Czech financial system lies with the Deposit Insurance Fund, which is implicitly backed by the State Budget.[14]

51. **However, if the Czech capital market was more developed, some of this credit default risk could be taken out of the banking system and spread more widely within the economy.** When corpo-

[12] Historical financial sector composition data is contained in Annex 6.

[13] A few items should be noted regarding Table 4. First, it does not include some minor components of the financial sector, such as microlenders. Second, the figure for the insurance industry includes both the life and non-life sectors. Third, there is some degree of overlap between the pension fund sector and the PSE Market Cap, as pension funds can be assumed to be investing in listed securities. Fourth, the inclusion of the real estate fund sector is an attempt to capture the element of real estate that is wrapped and held on the form of securities. But this does not represent direct investments in real estate.

[14] Although there seems to be no explicit rule for the State to backstop the Deposit Insurance Fund, it is fair to assume that in case of a large deposit payout for which the Fund resources are insufficient, the State would be eventually involved, and thus, would have an implicit contingent liability. According to the 2015 Annual Report of the Financial Market Guarantee System, which administers the Deposit Insurance Fund, CZK 3 trillion of deposits were insured, which is 73.8% of total deposits (CZK 4.1 trillion). In turn, total deposits represented 82.2% of total liabilities (CZK 4.9 trillion), thus the ratio of insured deposits to total liabilities was 60.7%. Moreover, as of end-2015, the Deposit Insurance Fund had CZK 56.5 billion in assets, representing 1.88% coverage of insured deposits. Therefore, any large deposit payout would involve the State eventually.

rate bonds are issued, banks are essentially disintermediated. The end-savers are directly connected to the end-borrowers, with the end-savers taking on the default risk directly. Thus, developing the corporate bond market helps diffuse the loss of a credit default making the shock less impactful to the financial system and the economy as a whole. The same is true for the use of securitizations. In these cases, credits are aggregated into a pool with interests in the pool being sold to investors. Again, the original lender is disintermediated because the credit is sold to the 'new lenders'. And, again, the impact of a default is diffused through the economy making any significant default less impactful.[15]

52. **How much credit default risk could be shifted from the banking system to the capital market?** The answer depends directly on the capacity of the corporate bond and securitization components of the capital market. In theory, the amount is unlimited but in practical terms, using the capital market to shift credit risk applies only to a percentage of the total.

53. **In sum, this third policy driver –reducing financial risk for the Deposit Insurance Fund and the contingent fiscal risk for the State budget– provides a strong basis for focusing on capital markets development.** Admittedly, it speaks to the interest of the State rather than economic growth prospects or providing economic opportunity for the general public. Nonetheless, it is still a valid and pressing policy consideration.

[15] It should be noted here that the use of covered bonds (also known as mortgage bonds) does not reduce credit default risk in the banking system as the credits extended are pledged, not sold, against the bonds issued to generate liquidity. The original credit risk remains with the bank or mortgage lender.

IV. CURRENT FINANCIAL SECTOR ENVIRONMENT

54. **In order to understand the prospects for the Czech capital market, it is critical to understand how it fits into the overall context of the Czech financial sector.** This is because the banking industry and NBFI sectors are significantly intertwined today, both in terms of operations and products offered. It is also necessary given that the Czech Republic operates on a universal banking concept. Thus, this section begins with a high-level review of the financial sector's overall structure.

A. BANK-CENTRIC STRUCTURE

55. **As touched on by the above material, one of the main features of the Czech Republic's financial system is that it is highly bank-centric.**[16] There are at least three ways to measure this:

- Savings destination flows. This is depicted in Table 3 above which provides a 2015 breakdown of savings distribution within the Czech Republic. Historical savings flows are depicted in Annex 5.
- Financial sector asset composition. In econometric terms, this is a 'stock' concept (assets on hand as of certain closing dates), not a flow concept as in the previous case. This is depicted in Table 4 above (note the caveats in footnote 13). Annex 6 provides more details.
- Shareholders' equity of the market participant firms. This relates not so much to the AUM by each type of market participant (both bank and NBFI), but to their operational capacity. It is a measure of market strength – 'who can do what' in terms of innovation and product sponsorship.

56. **This latter metric reinforces the bank-centric message.** A clear majority of the capital strength inside the Czech financial system rests with commercial banks (Table 5). This pattern has been the case since at least 2008. Annex 7 presents the historical data.

[16] This aspect may be 'striking' but is not 'surprising'. The fact that many EU countries, and especially the former Eastern bloc countries (having now well-completed their banking sector reforms), still operate under a model of a bank-centered financial system is a reflection of their inherited financial sector and real sector business cultures. This 'inheritance' must be taken into consideration when suggesting methods to enhance the Czech capital market.

Table 5: Comparative Shareholders' Equity Levels for Market Participants (2016)

Total Shareholder's Equity by Industry Segment (2016)		
	CZK (bill.)	EUR (bill.)
Commercial Banks	541.61	€ 20.04
Insurance Industry	82.59	€ 3.06
Pension Management Companies	8.90	€ 0.33
Credit Unions	4.81	€ 0.18
Investment Firms	3.45	€ 0.13
Fund Management Companies	2.88	€ 0.11

Source: CNB ARAD data

57. **This level of bank dominance within the financial sector raises a few key questions for the Czech capital market's future:**

(a) Are banks using their dominant position to dissuade potential corporate issuers from accessing the capital market?

(b) Do banks dominate the investment firm industry, and if so to what effect?

(c) Do banks dominate the fund management industry, and if so to what effect?

(d) Do banks dominate the pension fund management business, and if so to what effect?

Each of these important questions are addressed in the sections below.

B. LIQUIDITY LEVELS

58. **A second striking aspect of the Czech Republic's financial system is its high level of liquidity.** Analysis of the 2015 financial statements of 18 Czech commercial banks indicates that the system contains a substantial portion of idle, unused resources.[17] While it is clear that this presents numerous negative impacts for the banking sector, the focus below is only on the impact this liquidity is having on the capital market, and how it could be harnessed for the future.

59. **To quantify liquidity for this portion of the analysis, the 'lending to available funds' ratio was calculated for each of the 18 banks.** In general, the calculation of 'available funds' starts with a bank's Total Assets and then subtracts all illiquid resources. For this exercise, available funds were calculated as shown in Table 6. Within this, two methods are used: (a) a 'narrow' scope, which includes lending to customers compared to available funds, and (b) a 'broad'" scope, which includes

[17] The 18 banks included in this review are listed in Annex 8. These included chartered banks domiciled in the Czech Republic and the branches of foreign banks reporting on an unconsolidated basis. Czech banks providing their financial statements in Czech language only were excluded, as were the branches of foreign banks not reporting on an unconsolidated basis. Together, the 18 banks reviewed comprise 76.27% of total assets in the banking system, and thus are deemed a reliable gauge for the liquidity exercise. For purposes of depicting the data, each bank was assigned a random code.

lending to both customers and banks compared to available funds. For purposes of the discussion below, a notional ratio of 80% is used as indicating a bank approaching liquidity constraints.[18]

Table 6: Calculation of Available Funds

Included in 'Available Funds' (Liquid Assets)	Not Included in 'Available Funds' (Illiquid Assets)
Cash and Balances with Central Bank Loans to Banks Loans to Customers Financial Assets Accounts Receivable	Required Reserves with Central Bank Prepaid Expenses Equity Investments Construction in Process Property Plant and Equipment Deferred Taxes Other Assets

Source: WB Project Team Methodology

60. **Only two of the 18 banks exceed the 80% threshold under the narrow method.** As a group, they lend only 56.55% of available funds to their customers. In total, this results in ***CZK 995.7 billion*** (EUR 36.8 billion) in idle funds, or 22% of the Czech Republic's 2015 GDP (Table 7).

61. **The picture resulting from the broader method is less severe, but points in the same direction.** All 18 banks studied lend some of their excess funds to other financial institutions, and thus the broader measure of their excess funds is lower, but not by much. Even under this metric the results are 67.79% lending to available funds, with CZK 532.8 billion (EUR 19.7 billion) in idle funds or 11.6% of 2015 GDP (Table 7).

Table 7: Banks' Excess Liquidity (CZK)

Bank IDCode	Available Funds (CZK thousands)	Lending to Available Funds (Customers)	Excess Funds (CZK thousands) Narrow Method	Lending to Available Funds (Customers and Banks)	Excess Fund (CZK thousands) Broad Method
12	50,822,424	26.14%	27,371,157	29.42%	25,707,294
1	98,691,000	26.15%	53,145,800	30.84%	48,513,800
11	30,608,000	29.59%	15,429,400	30.44%	15,168,400
15	866,278,000	37.94%	364,330,400	58.01%	190,488,400
3	85,117,120	42.59%	40,352,108	79.18%	698,605
14	43,312,000	45.47%	14,955,600	95.72%	(6,810,400)
16	140,302,000	49.92%	42,199,600	52.53%	38,538,600
2	867,178,000	57.15%	198,164,400	61.08%	164,044,400
18	20,859,456	61.97%	3,760,685	96.28%	(3,396,021)

[18] There is no precise limit indicating liquidity constraint. The target percentage depends on the bank and the national system. This said, as the bank reaches the 80% threshold, it begins to lose large pockets of liquidity within the balance sheet.

8	537,360,000	62.15%	95,892,000	81.99%	(10,683,000)
13	714,986,000	67.76%	87,514,800	75.39%	32,925,800
4	74,672,000	68.01%	16,423,800	71.08%	14,127,800
10	35,547,625	76.55%	1,225,605	85.19%	(1,844,908)
6	239,012,615	76.59%	32,056,896	78.28%	28,009,241
17	126,207,000	78.72%	1,615,600	78.81%	1,498,600
9	8,639,552	79.61%	33,405	89.06%	(782,354)
5	84,580,000	86.09%	3,304,000	90.37%	(315,000)
7	15,201,839	93.54%	(2,058,539)	100.00%	(3,040,367)
Total	**4,039,374,631**	**56.55%**	**995,716,718**	**67.79%**	**532,848,889**

Source: Individual 2015 financial statements for the commercial banks

62. **For purposes of this Assessment, the question becomes: where do all these excess funds go?** Ideally, they could be funneled into the capital market as a source of investment funds. But this is not currently the case. Out of a total of CZK 4,039 billion in available funds, the uses are shown in Table 8. Thus, currently only 6.29% of the banks' available funds for operations was directed to the capital market. Yet there are ways that the capital market can better serve the needs of banks. See Section VII.B. 'Building Content for the System' for more details.

Table 8: Banks' Use of Available Funds (CZK)

	Amounts (CZK thou)	% of Total
Available Funds	4,039,374,631	
Lending to Customers	2,284,121,160	56.55%
Purchases of Government Securities	625,092,451	15.47%
Idle Funds at CNB (non-reserves)	416,844,166	10.32%
Lending to Other Institutions	454,356,117	11.25%
Investments in Non-Government Securities	254,242,509	6.29%
Total		**99.88%**

Source: World Bank staff calculations based on 2015 bank financial statements

C. INTEREST RATE ENVIRONMENT

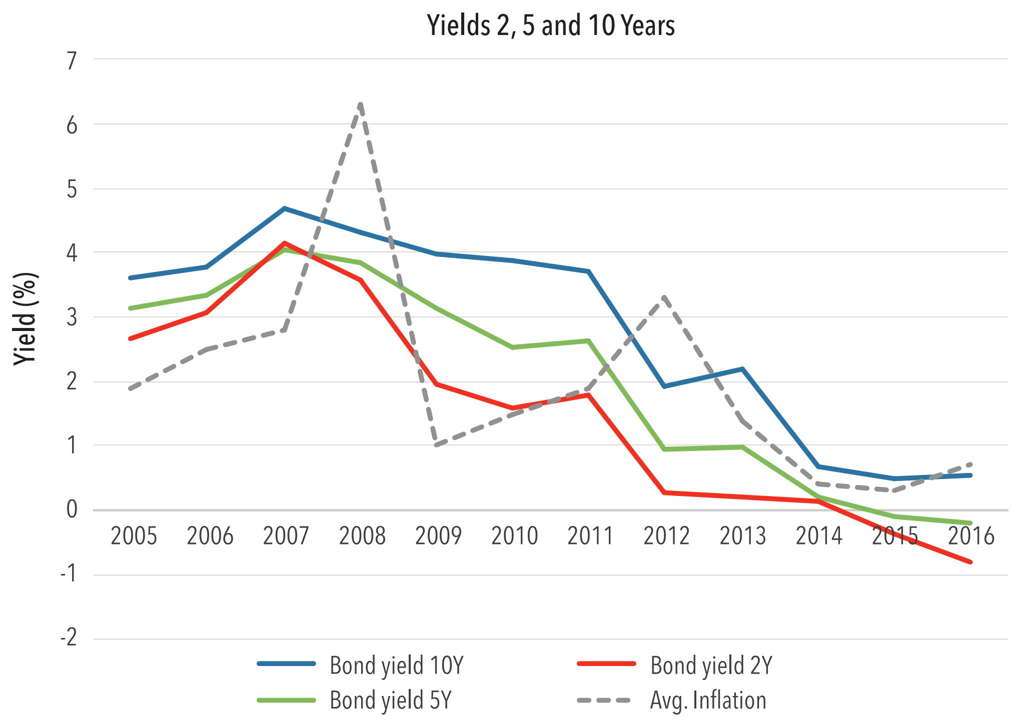
63. **A third striking aspect of the financial system is the interest rate environment.** Yields on government securities and borrowing rates in the interbank market have been falling steadily since 2008. Yields on government bonds with 5-year maturities and less have gone negative in real terms (*i.e.,* after inflation) since 2011, and have been negative even in nominal terms since 2015 (Table 9 and Figure 9).

Table 9: Selected Borrowing Rates and Yields versus Inflation

Year	PRIBOR				Bond Yields			Avg. Inflation
	1M	3M	6M	1Y	2Y - CZ	5Y - CZ	10Y- CZ	
2008	3.61	3.89	4.01	4.16	3.58	3.83	4.30	2008
2009	1.44	1.64	1.90	2.20	1.95	3.14	3.98	2009
2010	1.00	1.22	1.57	1.80	1.59	2.52	3.89	2010
2011	0.94	1.16	1.45	1.70	1.78	2.62	3.70	2011
2012	0.33	0.50	0.68	0.88	0.26	0.94	1.92	2012
2013	0.29	0.38	0.49	0.61	0.19	0.97	2.20	2013
2014	0.25	0.34	0.41	0.51	0.13	0.22	0.67	2014
2015	0.20	0.29	0.37	0.46	(0.38)	(0.11)	0.49	2015
2016	0.20	0.29	0.36	0.45	(0.81)	(0.21)	0.53	2016

Source: CNB ARAD Database

Figure 9: Yields versus Inflation (2005-2016)



Sources: CNB ARAD Data and MoF 2016 Government Debt Management Report

64. This dynamic is both negative and positive for the Czech capital market. On the one hand, it makes borrowing from banks a far less expensive alternative than issuing corporate bonds in the capital market. When rates are low, the transactional costs of a corporate bond offering make up a larger portion of the total cost of funds. The difference in the total cost of funds between bank borrowing and bond issuance become more pronounced. The capital market is hard pressed to be a competitive source of funding.

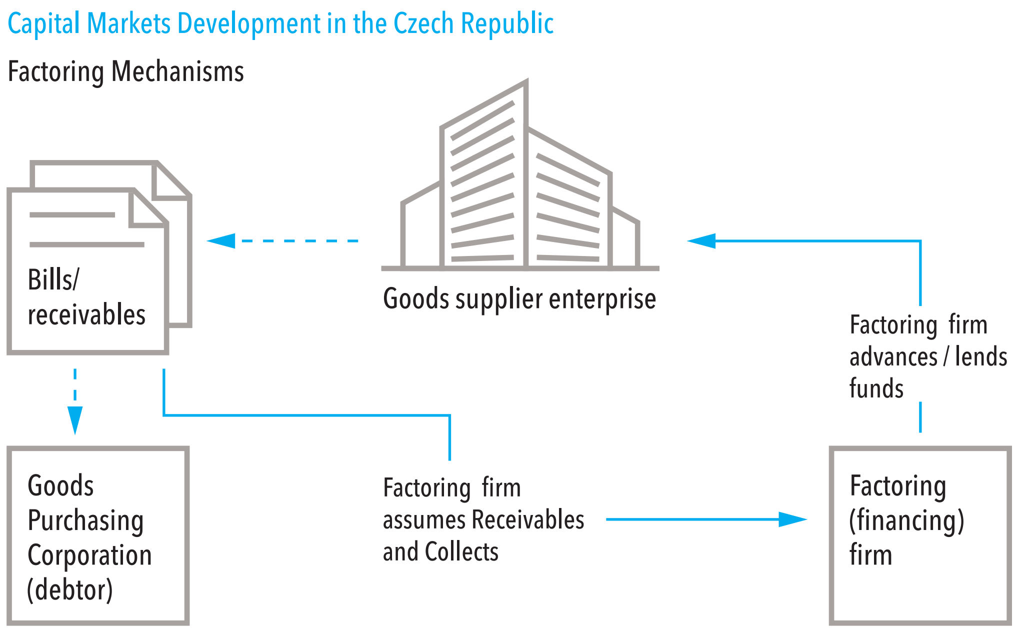
65. However, given that rates are expected to rise with the reversal of quantitative easing, this provides a rare opportunity for the capital market. It is difficult for banks to make long term loans because of asset/liability mismatch concerns. Yet, corporate treasurers in this environment should be looking to lock in low-cost, long-term funding. This is where the capital market can step in to meet the needs of the real sector. Thus, the idea of building the corporate bond market segment of the capital market is particularly timely. See Section VII.B. 'Building Content for the System' for more details.

D. FACTORING ACTIVITIES

66. **There is a fourth aspect to the overall financial system worth noting: accounts receivable factoring.** This is not so much an 'operating environment issue' as it is a possible linkage to the securities market.

67. **In a factoring transaction, an SME uses the accounts receivable it holds from its customers as collateral or guarantee to obtain advance credit for working capital purposes.** It is a promising mechanism that allows SMEs to count on sufficient liquidity at all times for their operations, and to effectively obtain funds while the bills owed to them remain unpaid. The charge for this financing may be the 'discount method' (where the funds advanced are less than the value of the accounts receivable) or a 'financing fee'. Typically, the factoring mechanism works as depicted in Figure 10. (A full description of the factoring industry in the Czech Republic is attached in Annex 12.)

Figure 10: Classic Factoring Mechanism



Source: WB Project Team Graphic

68. **Factoring in the Czech Republic enjoys legal certainty (contrary to the experience in some other countries).** The Civil Code allows transferability of receivables to a different creditor. Further, a recent update to the Code no longer requires that invoices be specifically identified as the underlying collateral for advance funding, and allows the receivables to be transaction non-specific and revolving in nature (given their short-term duration) within a changing pool of 'assets'. The only provision in this latest legal change is that the receivables must at least specify the debtor firm(s) they pertain to. Under the Code, the assignment of the receivable bill does not require approval by the debtor party (the owing party).

69. **The Czech factoring industry is mostly made up of banks with a factoring arm, with one non-bank independent factoring firm.** As can be seen in Table 10 below, factoring-based credit is offered for domestic business, as well as export and import transactions of SMEs.

Table 10: Factoring Activity in the Czech Republic

EUR million – Dec. 2016	By Type of Company (Finance Recipient)				Market Share
	Domestic	Export	Import	Total	
CSOB Factoring	793	438	0	1,231	25%
Factoring CS	779	394	6	1,179	24%
Factoring KB	936	417	26	1,379	29%
Unicredit Factoring	245	167	125	538	11%
Raiffeisen Bank	228	176	0	405	8%
Bibby Financial Services	80	36	0	117	2%
Total	3,062	1,629	157	4,848	100%

Source: CSOB Factoring

70. **The accounts receivable which are factored typically have durations of 30-90 days (*i.e.*, this is the amount time between presenting the invoice and payment).** Thus, factoring firms typically use this time range to calculate the financing rate for advanced funding. Regarding fees, it is estimated that SMEs pay 0.4%-0.5% of the outstanding receivables as an origination fee. The financing rate for the actual funds advanced (or fee as implied discounting rate) is approximately Pribor+2.4%. Defaults on the receivables portfolio seem relatively low, estimated at 3%.[19] The possibilities of leveraging the factoring industry through the capital market are discussed at Section VII.I. 'Linking the Market to the Factoring Sector', below.

[19] These estimates were provided by CSOB Factoring.

V. COMPONENTS OF THE CZECH CAPITAL MARKET

71. **As explained below, the Czech Republic's corporate and government securities markets both possess all the required components for operation.** Although additional functionality and some restructuring is advisable, there is no need to create new entities.

A. ELEMENTS OF THE CORPORATE SECURITIES SYSTEM REGULATORY ENVIRONMENT

72. **The market is overseen by the MoF and the CNB. The MoF is the lead Ministry in creating the legal framework, including the adoption of laws and regulations that transpose EU Directives and Regulations impacting the capital market.** The CNB is the capital market regulator/supervisor (it is the consolidated bank and NBFI supervisor), and in this role, it also adopts rules impacting capital market operations. In addition to its supervisory responsibilities, the CNB is also charged with development of the capital market, investor protection and encouraging investor awareness (perhaps to be read financial literacy).[20]

73. **As a Member of the EU since 2004, the Czech Republic is subject to the overarching EU regulatory framework applied to the capital market.** By any measure this regime is complex and detailed. A review of the various EU legal authorities impacting the capital market reveals no less than 31 Directives, 87 Regulations and hundreds of Delegated Regulations.[21] A listing of the main applicable legal authorities is included in a 5-page table in Annex 19.

74. **Strictly speaking, the EU regime leaves little discretion to the Member States as they adopt ('transpose') the various legal authorities into the national law.** In specified cases, Member States may choose to impose requirements greater than those under the EU-wide regime, but may not reduce or eliminate provisions otherwise applying to the full Union. This idea of "gold-plating" (imposing requirements greater than the EU's) carries with it considerable dangers. In an environment where EU-wide compliance costs are already high, any costs associated with implementing an additional local requirement makes that State markedly less attractive for participants. Thus, as discussed below, the primary exercise for reducing the regulatory costs within the Czech Republic revolves around understanding those requirements that are not EU-mandated but instead self-imposed.[22]

[20] See Article 2 of the Act on Supervision of Capital Market (15/1998 Sb.), although market development is envisaged through capital market supervision.

[21] For instance, there are more than 40 DR in relation to MiFID II/MiFIR only. The Regulation No 231/2013 the Alternative Investment Fund Management links to fourteen other different Directives and two Regulations. http://www.cfasociety.org/czechrepublic/Newsletters/1410%20CFA%20Society%20Newsletter%20-%20October%202014.pdf

[22] This is, for example, the approach that the MoF is willing to take while translating MiFID II into the new Capital Market Act.

75. **The EU regime has been mostly translated into the Czech regulatory environment under the Capital Market Undertakings Act (CMA) (2004), and by amending a series of other laws and decrees.**[23] There are additional laws and regulations applicable to financial services and the Czech capital market, such as the Bonds Act (2004), the Business Corporations Act (2012), the Civil Code (2012), the Act on Investment Companies and Investment Fund (2013), and the Securities Commission Act (1998).

76. **A consistent theme running throughout technical discussions with market participants was that the regulatory costs imposed on the Czech capital market, mostly through EU rules, are damaging its growth.** These are more difficult to absorb for the Czech capital market, compared to other developed EU financial centers, placing the Czech capital market at a competitive disadvantage. Annex 1 presents additional notes on the regulatory environment surrounding the capital market.

77. **Moreover, the EU regulatory environment is constantly changing.** The existing set of directives and regulations applicable to the financial services industry are revised at the EU-wide level on regular, short intervals (every five/seven years), therefore continuously with an ongoing review of one major piece of EU capital market regulation. Not only does this present a continuing challenge for the private sector in terms of updating their compliance systems. It also means the MoF and CNB must constantly review the items under their responsibility for upgrade. In addition, EU capital market requirements may be disproportionate to Czech capital market needs.

TRADING MECHANISM, CLEARANCE AND SETTLEMENT

Table 11: Number of PSE Listed Securities (2016)

Type	Number of Listings
Shares	25
Bonds	115
Structured Products	71
Investment Shares and Units	37

Source PSE 2016 Annual Report

78. **The Czech Republic possesses a well-developed securities market infrastructure.** Despite the need to upgrade and innovate on an ongoing basis in this industry, there is no question of the infrastructure's ability to meet any realistic level of demand.

79. **Trading is primarily facilitated by the PSE, which is the largest and oldest securities market organizer in the country.** It currently has 16 members and 4 categories of listed securities. Trading parameters are described in Section VI.B below. The PSE and its subsidiaries form the PX group. Its

[23] EU regulations are directly applicable in each EU Member State and do not need to be translated into local laws and regulations.

most significant subsidiary is the Central Securities Depository Prague (CSD).[24] The PSE is owned by the Central and Eastern Europe Stock Exchange Group AG which also owns the Vienna Stock Exchange.[25]

80. **The CSD maintains the central register of dematerialized securities and performs clearance and settlement for trades conducted on the PSE and OTC.** It offers both direct accounts (where ownership is maintained directly in the name of the beneficial owner) and member accounts (where ownership is held in the name of a CSD member as nominee). The CSD also acts as share registrar for issuers, based on a contractual relationship. It is the registrar for government bonds, but not for Treasury bills.

81. **Access by foreign issuers and market participants into the Czech market does not appear to be a constraint.** As of YE 2016, the PSE had 11 foreign equities listed (with market cap of CZK 448 billion) and 14 domestic equities listed (with market cap of CZK 600 billion). Thus, the domestic/foreign listing population was roughly evenly divided. Of the PSE's 16 trading members, 4 were foreign firms. The CSD maintained 892 active Legal Entity Identifier numbers for foreign companies (15% of the CSD's total).

82. **Similarly, it appears that the Czech Republic's largest companies can access other capital markets within the EU.** For example, at YE 2016 there were seven Czech companies listed on the Warsaw Stock Exchange. The largest of these, CEZ, is dual listed on the PSE.

83. **There are two operational aspects of concern regarding the custodian segment.** First, as a result of the intersection of articles 91-115 of the CMA and 525-544 of the Civil Code, the net result is that Czech law does not recognize nominee ownership below the second level. The holder of the account at the CSD (in this case the custodian) is deemed to be 'the owner'. This of course ignores modern 'chain of nominees' holding structures within the global custodial networks. Custodians have resorted to contractual side agreements with the ultimate beneficial owners to resolve issues such as tax liability. And thus to a certain degree there are 'work-arounds'. But the uncertainty this legal treatment injects into the Czech market is viewed by the custodians as undercutting its competitiveness. This can and should be addressed by way of a revision of the legal provisions.

84. **Second, unlike other markets, the Czech CSD is not used as the central focal point for distributing notices of corporate events.** The Business Corporations Act requires posting the news to the issuer's website and sending the notice to the securities holders at their registered address.[26] The CSD's service for sending notices to securities holders, if conducted, is based on the registrar agreement between the CSD and issuers. Not all the issuers whose securities are maintained at the CSD have such an agreement. And, even in cases where there is an issuer/CSD agreement, not all events are properly notified. This is a breach of contract, but not breach of law.

[24] The PX Group also owns 33.33% of the Power Exchange Central Europe, a.s. (PXE), which is a trading platform for electricity trading in the Czech Republic, Slovakia, Hungary, Poland and Romania. In cooperation with Central European Gas Hub AG (CEGH), it operates an exchange for natural gas delivered to the Czech market, and provides end-customers with the option to purchase electricity and natural gas via electronic auction.

[25] There is another operation known as the RM System – Czech Stock Exchange, owned by Fio Bank. It is primarily aimed at SMEs and the retail investor. As of 2016, it had a market cap of CZK 70,025.21 billion (EUR 2,591.6 billion), 61 listed equities, 22 listed corporate bonds, and 17 members.

[26] See the Business Corporations Act (90/2012 Sb.), Article 406.

85. **This presents particular difficulties for custodians, who must relay corporate event news to their nominee owners.** Under this system, a group of service providers has arisen who search the newspapers daily for publication of notice and then sell that collected data to the custodians (who must pass this information on to the clients). However, these companies do not guarantee the accuracy or completeness of their reports. This entire notification scheme leads to at least two bad results: (a) not all corporate events are notified to the securities holders, and (b) custodians incur unnecessary costs.

86. **From a financial viewpoint, the CSD –not the PSE– is the main profit-making unit within the exchange complex.** Taken together, its two categories of post trade services contribute 79.82% of consolidated revenues (Table 12) with the exchange contributing the remainder.[27]

Table 12: PX Group Revenues by Type (2016)

Financial Sector Composition at YE 2016	CZK	EUR	% of Total
CSD			
Revenue from Keeping Central Register (ex. settlement fees)	281,995,000	€ 10,436,528	62.26%
Revenue from Settlement of Trades	79,576,000	€ 2,945,078	17.57%
Exchange			
Stock Exchange Information	38,157,000	€ 1,412,176	8.42%
Stock Exchange Fees	24,776,000	€ 916,950	5.47%
Administrative Fees	21,941,000	€ 812,028	4.84%
License Fees for Trading and Other Services	6,515,000	€ 241,118	1.44%
Total	**452,960,000**	**€ 16,763,879**	**100.00%**

Source: PSE 2016 Annual Report

87. **This is not unusual among securities market infrastructures.** And, this has an impact for developing a growth strategy for the PX Group as a whole. While building the breadth and depth of a capital market is usually expressed in terms of secondary trading levels, perhaps a better measurement is the amount of corporate securities in the system overall as represented by the registrar's records. This reflects how many companies are using the capital market for funding, and the number of investors participating in the market. But it also reflects the financial health of the infrastructure, and whether it has the capacity to fund further innovation and growth. Thus, the goal for developing the Czech capital market is not necessarily to increase trading alone as much as it is to increase participation in offerings. See Section VII.B. 'Building Content for the System' for more details.

88. **For purposes of this Assessment, and given the emphasis on the SME sector, it is also important to note that the PSE imposes specialized admission criteria for SMEs wishing to be admitted on the official market.** This floor is open to companies that have a market capitalization of at least EUR 1 million, 25% free-float, and have been in operation for at least 3 years. The PSE also operates

[27] Much of this is due to the fact that the CSD is the registrar for literally thousands of classes of dematerialized securities that are not listed on the exchange but rather change hands outside the organized market. Thus, the high proportion of revenues from this aspect should not be read as an indication that the CSD fees for PSE listed securities are overly high.

a Multilateral Trading Facility (MTF) with two segments, including one dedicated to SMEs ('Start market').[28] This market operates under a lighter listing regime where no approved prospectus is necessary.[29]

INVESTMENT INTERMEDIARIES

89. **As of year-end 2015, there were 62 investment firms registered on the Czech capital market.**[30] The bank/non-bank breakdown as well as the domestic/foreign breakdown can be measured in a few ways (Table 13).

Table 13: Investment Firm Industry Composition (2015)

Licensed Investment Firm Segment Composition (2015)	Number of Firms	Number of Clients	Number of Clients (%)	Clients Assets (CZK bill.)	Clients' Assets (%)
Domestic Banks	13	880,400	73.62%	2,774.0	73.04%
Domestic Non-Bank Investment Firms	20	277,500	23.21%	490.6	12.92%
Branches of Foreign Banks	15	25,700	2.15%	273.2	7.19%
Branches of Foreign Non-Bank Investment Firms	14	11,200	0.94%	1.2	0.03%
Domestic Asset Management Companies	9	1,000	0.08%	258.8	6.81%
Total	**71**	**1,195,800**	**100.00%**	**3,798**	**100.00%**

Source: CNB Market Supervision Report 2015

90. **These figures underscore that indeed the investment firm industry is dominated by banks.** Together, domestic and foreign banks have 75.77% of clients and hold 80.23% of total client funds. The trading and fund management patterns are discussed in Section VI.B. below.

INVESTMENT FUNDS AND FUND MANAGERS

91. **The Czech capital market has a small but growing investment fund industry.** As of YE 2015, there were 195 mutual funds (contractual plan) and 92 investment funds (corporate form). Almost three quarters of the mutual funds (140) were available for the general public. All the corporate form funds were for qualified investors only.

---

[28] For example, companies that do not qualify to be listed on the regulated market – see https://www.pse.cz/en/market-data/statistics/statistics-files/key-data/

[29] https://www.pse.cz/uploads/u/pse/Ostatni_dokumenty/IPO-brochure.pdf , page 3

[30] The Domestic Asset Management companies have investment firm powers embedded within the licenses to provide this service for their asset management clients, and thus they are included in the asset breakdown.

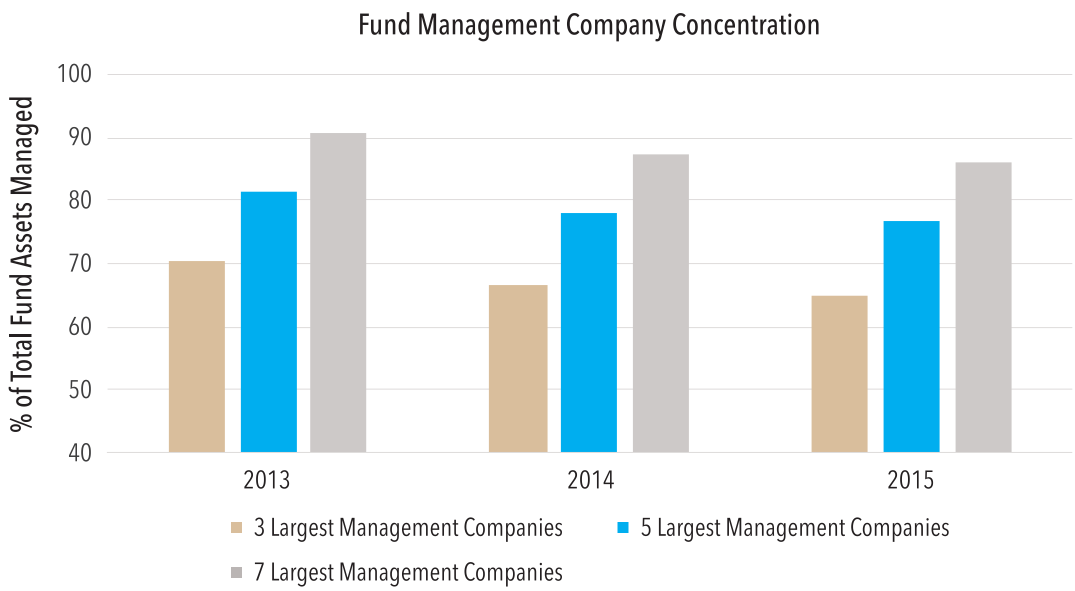
Given that the PSE has 16 members, this means that 46 investment firms either do not trade through the PSE or have clearing arrangements with member firms.

92. **The market does not appear to contain investment funds structured as trusts.** According to the MoF, there is a specialized legal form authorized –the Sverensky Fond[31] but it does not appear to be used. At this point, it is unclear if revising Sverensky Fond form would provide advantages over the current contractual plan and/or corporate forms.

93. **Total assets within the publicly available funds were CZK 224.1 billion (EUR 8.29 billion) at YE 2015.** This was an increase of 25.9% y-o-y and 87.3% since YE 2012. Thus, it is clear the industry is growing rapidly. The most popular types of funds are 'mixed funds' with 40.1% of the total assets, followed by 'bond funds' (34.6%), 'equity funds' (19.0%) and 'real estate funds' (5.4%).[32] These latter figures support a theme running throughout the discussions with authorities and market participants, that the Czech public is equity-averse and that developing this segment of the capital market will take time. See Section VI.B. below for more details.

94. **The fund management business itself is concentrated.** Three to seven firms manage most of the assets within the investment fund segment (Figure 11). Still, it would not appear that this raises competition questions. The cross-border nature of the investment fund industry within the EU means this market is not stand-alone.

Figure 11: Fund Management Company Concentration (2013-2015)



Source: CNB Financial Market Supervision Report 2015

95. **Two important tax considerations apply to investment funds and should be noted.**

- First, investment funds pay a 5% profits tax at the entity level.[33] This applies to both contractual

---

[31] These undertakings are not incorporated investment companies. They are constituted in the form of funds under contract law (as common funds managed by management companies).

[32] The remainder of the categories held less than 1% of total assets.

[33] This 5% rate applies to "Qualified Investment Funds" which are essentially listed funds and open-end funds investing primarily in securities. See §17b of the Income Tax Act (586/1992). Otherwise, the funds pay a 19% corporate rate.

plan (mutual fund) and corporate form (investment fund). Thus, investment funds are not 'tax transparent' under the Czech tax system. Indirect investors pay tax twice, once at the fund level and then again at the investor level upon distribution. This contrasts with the direct investor who pays tax only once, upon receipt of dividends, interest or capital gains.[34]

- Second, investors are exempt from capital gains tax on holdings sold, if that holding has been owned for three years or more. This has encouraged the use of 'accumulation funds' where the fund does not make any distributions of income but instead reinvests those resources into the fund itself. In this manner, if the investor holds three years or more and then sells the units (shares), then both the income derived and the capital gain is tax-free. Thus, while it does not appear that the 3-year rule was devised to solve the lack of tax transparency, this is in effect the result for domestic persons holding longer than 3 years. However, it does not resolve the taxation of foreign holders.

PENSION FUNDS

96. **Given certain unique issues surrounding the pension fund segment, and that its AUM are larger than the investment fund industry, it is appropriate to note it separately.**[35] There are two types of private pension funds in the Czech Republic available to the general public: (a) Transformed funds and (b) Participant funds. Both types are voluntary (Pillar III) funds.[36]

97. **The most notable feature of Transformed funds is that, by law, they are designed to prohibit negatives rates of return.** If the fund's yield falls below the zero percent level, the fund's management firm is liable to make up the difference. This of course significantly impacts the manager's investment decisions (and is discussed further below). The Transformed funds hold 95% of total pension fund assets, with approximately 4 million participant accounts. There are eight such funds, five of which hold the bulk of the segment's assets. Three are bank-managed, four are managed by insurance companies, and one is managed by an independent local firm. Since 2013, new entrants are barred from Transformed funds, although existing members continue to contribute.

98. **Participant pension funds were established in 2013.** Participant fund managers are not subject to the 'no losses' guarantee. Participant funds hold about 5% of total pension fund assets, with approximately 500,000 participant accounts.

99. **Participant funds currently have four types of portfolios differentiated by level of investment risk.** One such type, the 'conservative fund', has a similar portfolio composition to the Transformed funds, and is meant to avoid volatility and portfolio losses. Thus, the prohibition against new entrants in the Transformed funds is partially offset by a parallel fund in the Participant category.

---

[34] Some of the tax transparent legal forms used in other jurisdictions to resolve this issue (such as limited partnerships and generic trusts) do not exist within the company law. Thus, the choice of legal entity cannot be used to avoid the double taxation. See Section VII.F. 'Encouraging the Use of Investment Funds' for suggestions in this regard.

[35] See Annex 18 for a detailed discussion of the pension fund segment.

[36] The short-lived Pillar II (mandatory) funds were closed in 2013, with only Pillar III funds left in the system.

100. **The Government has a public Pillar I (social security type system) which includes a basic benefit as well as a salary-based defined benefit.** Contributions to Pillar I are 25% of salary, as well as a medical benefit which adds an additional 3% contribution.

101. **Pension fund assets have been growing significantly since 2006.** The Transformed funds average y-o-y increase has been CZK 23.8 billion (10.2% per year) while the much smaller Participant funds have averaged CZK 5.64 billion (Table 14).

Table 14: Pension Fund AUM Growth (2006-2016)

	Transformed Funds (CZK bill.)			Participant Funds (CZK bill.)		
Year	Assets under Management	Amount of Increase	Y-o-Y Growth (%)	Assets under Management	Amount of Increase	Y-o-Y Growth (%)
2006	145.95	-	-			
2007	167.20	21.25	14.56%			
2008	191.72	24.52	14.67%			
2009	215.87	24.15	12.60%			
2010	232.43	16.55	7.67%			
2011	247.60	15.18	6.53%			
2012	273.32	25.71	10.39%			
2013	295.79	22.47	8.22%	1.28	-	-
2014	332.53	36.74	12.42%	4.96	3.67	287.12%
2015	359.58	27.05	8.13%	10.34	5.38	108.57%
2016	383.919	24.33	6.77%	18.21	7.86	76.07%

Source: CNB ARAD Data

102. **The State provides three important incentives for participating in pension funds.** First, the State provides matching contributions for individuals investing in voluntary pension funds, in a monthly amount up to CZK 230 against participant's monthly contributions of up to CZK 1,000 (if participant contributions exceed CZK 1,000, there is no incremental government matching amount). Second, participants can deduct pension contributions from taxable income up to CZK 24,000 per year. Employers can deduct about double that amount for their contributions on behalf of employees. Third, once retired, if the payout of the funds is phased over a 10+ year period, withdrawals are not taxed.

103. **Fees chargeable to pension funds are strongly regulated.** For Transformed funds, the management fee is capped at 0.8% of AUM and the performance fee is capped at 10% of earnings. Participant fund fees vary by the risk level of the portfolio. The most conservative fund has an AUM fee cap of 0.4% and a performance fee cap of 10%. The other three Participant funds have AUM fees capped at 1.0% and performance fees at 15%. The fund managers must also absorb, within these fee limits, any fees charged for the purchase of specific securities (transaction fees, up-front fees to purchase UCITS funds, etc.). The experience of the pension funds, including participation levels and rates of return are discussed in Section VI.F. below.

POTENTIAL ISSUERS (ENTERPRISE POPULATION)

104. **In addition to exploring the demand side for capital market products, it is also important to explore the supply side.** The focus turns to the potential issuers: the enterprises. The Czech Republic uses the same definition criteria for determining micro, small, medium and large sized enterprises as the EU. This is a combination of (a) number of employees, and (b) financial size, measured either by revenues or total assets (Figure 12). Enterprises are considered within a category if they meet any two of the three criteria.

Figure 12: MSME Criteria

Size Category	Number of Staff	Revenues	Total Assets
Large	≥ 250	> € 50 million	> € 43 million
Medium	< 250	≤ € 50 million	≤ € 43 million
Small	< 50	≤ € 10 million	≤ € 10 million
Micro	< 10	≤ €2 million	≤ € 2 million

Source: EU Recommendation 2003/361

105. **Large Enterprises.** It appears that the Czech economy possesses numerous large enterprises, in sufficient numbers to support broader participation in the capital market. The following are the breakdowns of 'large enterprises' grouped by sector as of YE 2015 (Table 15).

Table 15: Large Enterprises by Sector

Category	Number of "Large" Enterprises	Average # of Employees	Average Revenues (CZK thou)	Average Total Assets (CZK thou)	Average Debt/Equity Ratio
Mining and Quarrying	14	1,722	5,786,356	7,847,098	0.44
Manufacturing	859	654	3,592,917	2,288,925	0.76
Energy	24	667	21,283,580	34,002,970	0.79
Water supply, Sewage and Waste	31	657	1,581,555	2,755,269	0.44
Construction	54	623	3,547,378	2,707,984	1.37
Wholesale and Retail Trade	186	863	5,282,368	2,126,827	1.13
Transport and Storage	104	1,156	2,887,697	3,492,522	0.82
Hospitality and Food Service	21	604	814,158	720,604	5.08
Information and Communication	54	746	3,775,979	5,253,485	0.68
Professional, Scientific and Technical	50	437	1,139,299	3,406,908	0.28
Administrative and Support Services	142	693	483,331	229,636	0.84

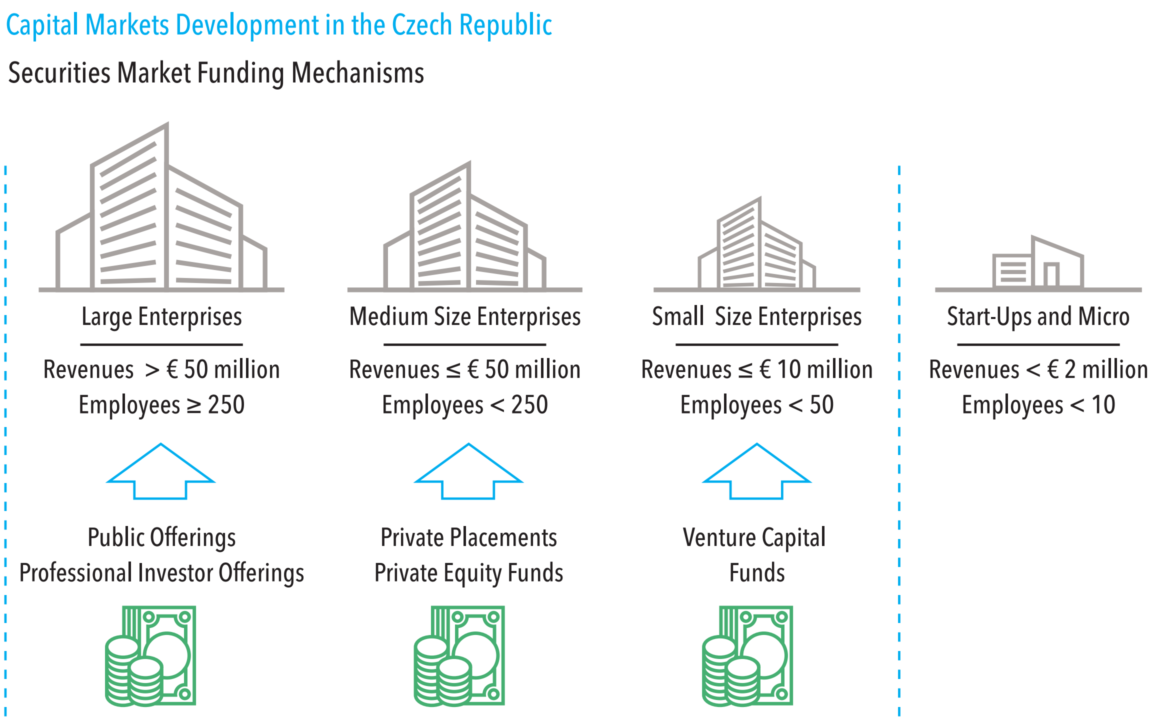
Human health and Social Work	79	781	768,427	642,771	0.57
Arts, Entertainment and Recreation	11	460	1,607,085	2,489,534	3.58
Other Services Activities	11	398	1,016,303	531,255	1.00
Totals	1,640	720	3,437,634	2,724,607	0.77

Source: MoF Data collated from the Czech Statistical Office.

106. **Thus, the number of potential issuers for the Czech capital market is not a constraint. There are numerous companies with the sufficient scale to be credible candidates.** Moreover, companies in 10 out of the 14 sectors have average debt-to-equity ratios of 1 or lower. This makes them good prospects for both debt and equity offerings.

107. **Small and Medium Sized Enterprises.** Although the capital market tends to be viewed as a financing tool only for the largest sized companies within an economy, this is not correct. In fact, there are many ways in which the capital market structure can help small and medium sized companies raise debt *and equity* capital (Figure 13).

Figure 13: Capital Market Assistance to Enterprises



Source: WB Project Team Graphic.

108. **Thus, it is important to note the level of medium-sized enterprises within the Czech economy.** Again, the data indicate numerous medium-sized Czech enterprises that could be grown to a level where they access the capital market directly. And with an average debt-to-equity ratio of 1.01, these companies would appear to be able to issue debt and equity (Table 16).

Table 16: Medium Enterprises by Sector

Category	Number of "Medium" Enterprises	Average # of Employees	Average Revenues (CZK thou)	Average Total Assets (CZK thou)	Average Debt/Equity Ratio
Mining and Quarrying	28	114.4	347,757	396,122	0.35
Manufacturing	2,992	104.2	298,232	221,307	0.58
Energy	71	106.1	5,025,970	3,275,824	1.91
Water supply, Sewage and Waste	136	101.0	241,191	289,540	0.28
Construction	518	92.1	313,506	232,222	0.72
Wholesale and Retail Trade	910	91.4	1,047,342	427,383	1.03
Transport and Storage	427	98.5	277,251	203,633	0.55
Hospitality and Food Service	186	85.7	132,019	214,058	1.34
Information and Communication	248	101.6	327,060	245,391	0.91
Real Estate	58	88.0	324,652	925,127	1.82
Professional, Scientific and Technical	337	92.5	300,582	745,035	3.39
Administrative and Support Services	552	92.1	238,633	117,039	1.10
Human health and Social Work	41	70.7	86,158	99,731	0.21
Arts, Entertainment and Recreation	187	101.8	117,059	106,563	0.62
Other Services Activities	64	91.8	292,661	673,671	1.50
Professional, Scientific and Technical	39	84.6	118,884	74,608	0.74
Totals	**6,794**	**98.4**	**431,537**	**306,361**	**1.01**

Source: MoF Data collated from the Czech Statistical Office.

109. **It is also possible that these medium-sized enterprises could access the capital market indirectly through private equity and venture capital firms.** This is where the status of this segment comes into play regarding the capital market as a whole.

110. **Financial Sector Firms. Lastly, it is important to examine banks and leasing companies separately from the real sector.** Both types of enterprises have the need to manage their corporate finance structure using common shares, preferred shares and corporate bonds. In this regard, their needs are identical to real sector companies. However, due to the nature of their businesses they also

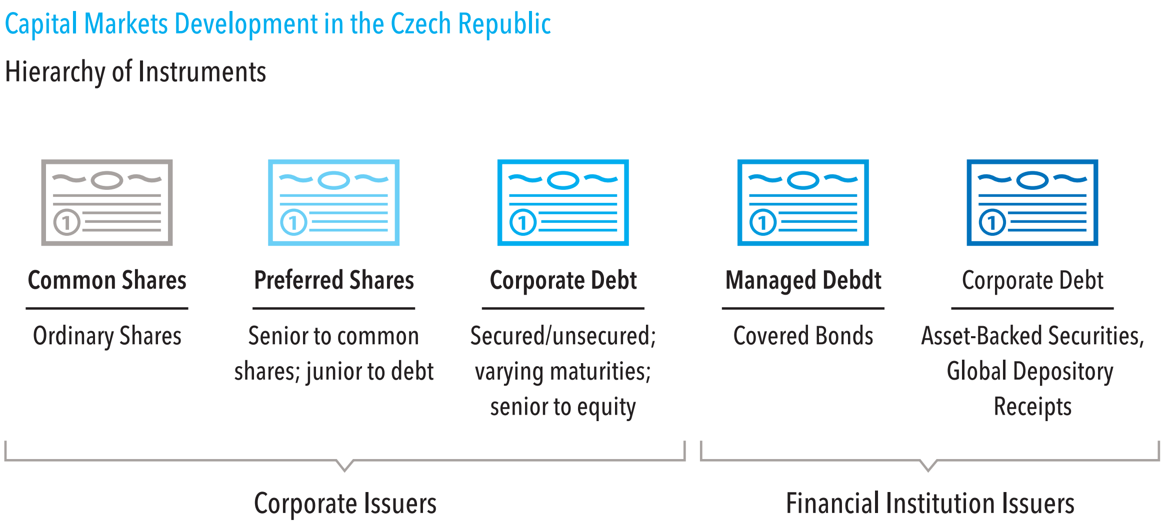
[37] The data for (a) Real Estate and (b) Education sectors did not indicate the number of firms larger than 'medium'. Thus, it may well be that there are several firms listed as 'medium' that in fact qualify within the 'large' category.

have the need to manage their liquidity levels. The potential use of covered bonds (including mortgage bonds) and/or securitizations comes into play in this case.

- Covered bonds are used when banks or leasing firms have reached their liquidity limits but not their D/E ratio limits. This represents a borrowing and generates new cash.
- Securitizations are used when banks or leasing firms have reached both their liquidity and D/E ratio limits and cannot issue more bonds. Securitizations are a sale of assets and thus also generate new cash.

Accordingly, lenders and lessors are potential issuers not only of shares and corporate bonds but also of 'structured products' (Figure 14).

Figure 14: Hierarchy of Securities



Source: WB Project Team Graphic

111. **As noted above, the financial statements of 18 Czech commercial banks were reviewed, including their liquidity and leverage levels.** This, together with banks' financial performance metrics as set out in Annexes 9 and 10, suggest that only a few banks need to issue covered bonds and securitizations. Thus, banks' need and appetite for issuing further covered bonds and securitizations needs to be explored further.

112. **At the same time, it would not appear that leasing companies operating within the Czech Republic are candidates for issuing either asset-backed bonds or securitizations.** Most of the leasing industry is dominated by banks. These lessors have lines of credit supplied by their mother banks that allow them to manage their liquidity needs. See Annex 13 for leasing industry data.

FINANCIAL REPORTING REGIME

113. **The Czech financial reporting regime has overarching impacts for both the enterprise population and the capital market participants.** This translates into questions of uniformity and transparency of company financial reports. It also greatly impacts the understandability of the reports by foreign investors. Thus, this topic is a critical ingredient for the overall success of the Czech capital market.

114. **For purposes of this Assessment, it is important to note that only listed companies are required to report using IFRS.** Other enterprises are not required -simply due to their size- to use IFRS and in fact use Czech Accounting Standards (CAS) for maintaining their required books, records and tax reporting. Capital market participants such as investment firms and fund managers may but are not required to use IFRS, nor does IFRS apply to investment funds.

115. **Currently, it would appear that the choice to use IFRS is highly driven by the extra cost involved in maintaining 'two sets of books'.** Based on the technical discussions, it does not appear that it is possible to maintain records under the IFRS system and then simply translate those entries for required tax reporting. Instead, two systems of entry are required, one to generate IFRS financial statements and the other to generate the required tax reporting. Thus, the perception at least is that financial reporting in IFRS implies significant additional costs.

116. **This may be changing under a program currently underway within the MoF's Tax Department.** The MoF staff advised that it has developed a translation chart that allows adjustments directly from IFRS records into the required tax accounting and reporting. The staff also advised it is testing this system in a pilot program with larger enterprises. If this proves successful, it is intended that the translation chart be applied to other categories of enterprises.

117. **The need to fully implement this 'translation chart' approach is highly important to developing the right policy choices, as it directly impacts the 'cost' side to the cost/benefit analysis.** Without the translation chart approach, enterprises may indeed be required to maintain two sets of accounting records. If, however, the translation can be made directly from IFRS records to the tax reports, then the costs will be significantly streamlined.

118. **A second effort underway at the MoF is the development of a new law on accounting, specifying which entities must and can use IFRS.** According to the Tax Policy and Methodology Department, a draft is being prepared that will require large entities to use IFRS and allow medium-sized companies to do the same. The recommended sequencing of these efforts and requirements is discussed in Section VII.H 'Building Financial Reporting Transparency'.

B. ELEMENTS OF THE GOVERNMENT SECURITIES SYSTEM

119. **Given that the government securities system envisions only one issuer (the MoF on behalf of the Government) and involves only debt securities, its structure is simpler than the corporate securities system.** The CNB, acting as fiscal agent for the government, is both the creator, operator and regulator of the government securities market. The MoF fulfills the role of the issuer, determin-

ing what issues will be offered, when and in what amounts.[38] And it is also responsible for the laws governing public debt. But it does not adopt regulations on the operation of the secondary market. The regulator's role falls directly to the CNB.

120. **As of YE 2016, there were 12 primary dealers.** This designation carries with it two main responsibilities: (a) the obligation to purchase at least 3% of the nominal value of the government securities sold at auction during four consecutive quarters, and (b) to fulfill the quoting obligations on the secondary market.

121. **Secondary trading in medium to long term government securities can be conducted in two ways: (a) through the MTS system, and (b) OTC.** The MTS system is the 'designated electronic trading system' authorized by the CNB and operational since 2011. It handles purchases and sales carried out on the 'official' secondary market (such as inter-dealer trades, and Ministry operations such as tap sales, buy-backs and 'switch' operations). The MTS runs separate from the PSE but clears its trades through the CSD.[39] The OTC market, the larger of the two segments, is also cleared through the CSD. This segment handles purchases and sales of government securities outside of the official platform.

122. **Treasury bills are not held at the CSD and thus are not tradeable –to the extent they trade at all– through the MTS.** Transactions must be done OTC and cleared at the CNB's depository.

123. **As of YE 2016, the Czech Republic had CZK 1,613.4 billion (EUR 59.7 billion) in total State debt of which CZK 1,519.34 billion (EUR 56.23 billion) is considered 'marketable'.** Thus, 94% of the State debt is in some tradable form. The categories of marketable government securities are as follows (Table 17):

Table 17: Composition of Marketable Government Securities (YE 2016)

	CZK bill.	% of Total
Total Marketable Debt (of which)	1,519.30	-
Medium and Long-Term Government Bonds (Domestic)	1,301.62	85.67%
Medium and Long-Term Government Bonds (Foreign)	213.51	14.05%
Treasury Bills	4.20	0.28%
		99.88%

Source: WB Project Team Graphic

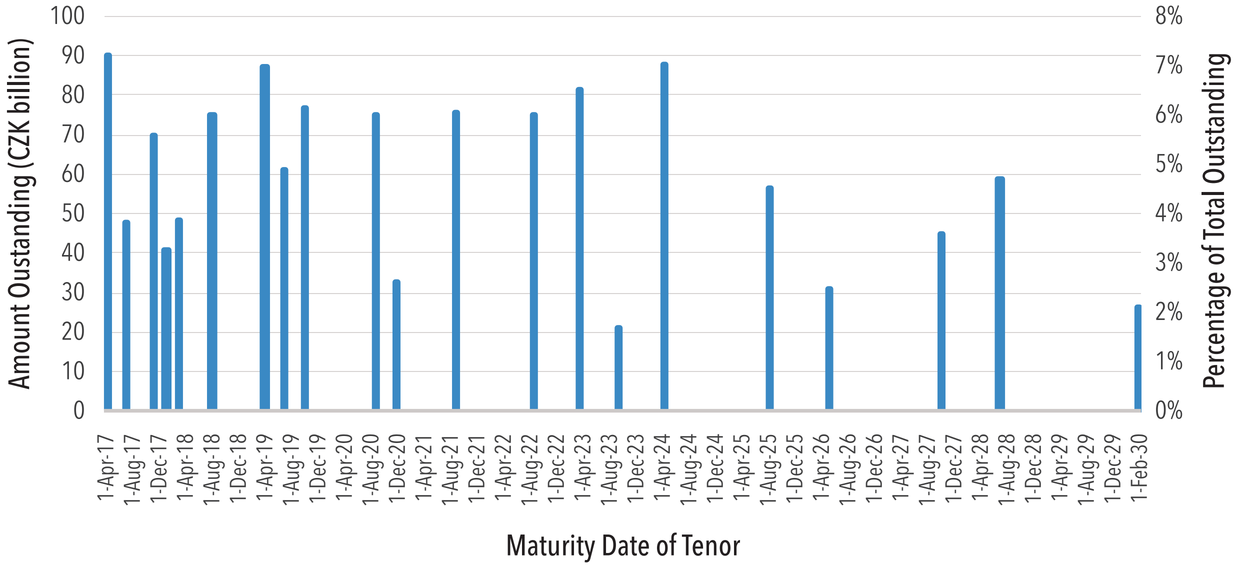
[38] The MoF's Government Debt Management Report (published annually) contains a comprehensive guide to its policy and fiscal goals in terms of debt issuance, as well as describing the operations of the primary and secondary markets. http://www.mfcr.cz/en/themes/state-debt/publications-and-presentations/government-debt-management-annual-report/2016/the-czech-republic-government-debt-manag-27631. Given the MoF's detailed Report, it is not necessary to restate all that information here. The points made regarding the government securities market are given as context for the findings of this Assessment and the suggestions for improvements.

[39] The MTS is a service provided by the London Stock Exchange Group. http://www.mtsmarkets.com/products/mts-cash/cash-markets/czech-republic

The fact that 86% of marketable securities is denominated in CZK and tradable domestically is su portive of the corporate securities market in that the secondary market liquidity for government securities (such as it exists) is within the local market and helps support pricing.

124. **The amounts of the various issuances of medium to long term government securities outstanding is set out in Annex 11.** At YE 2016 there were 23 tranches outstanding with remaining time to maturity ranging from 2 months to 40 years. However, it should be noted that 97% of the amount outstanding has remaining maturity of 13 years or less. Figure 15 shows the distribution of the tenors by maturity date and amount outstanding (for purposes of the depiction the 20 year and 40 year bonds are excluded).

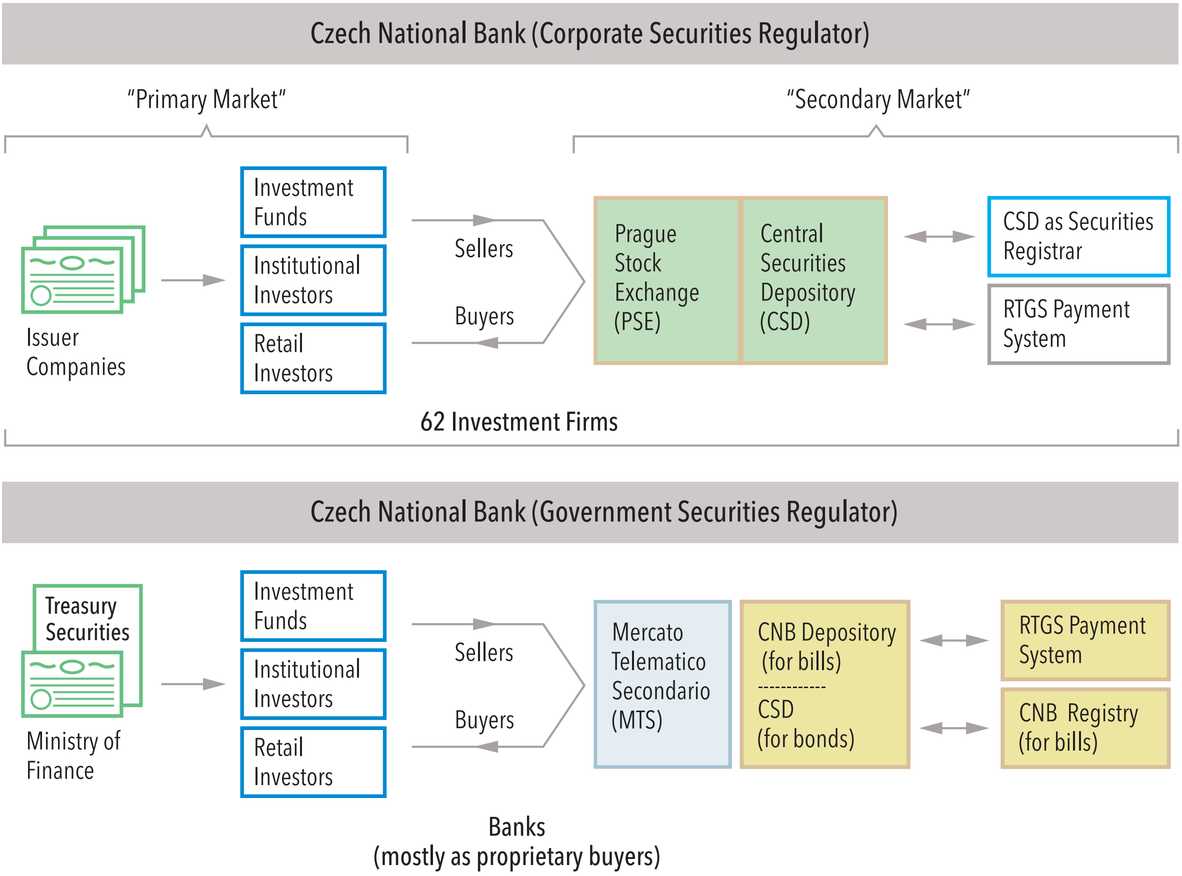
Figure 15: Amounts of Tenors Outstanding and % of Total



Source: MoF Debt Management Report 2016, Table 32

125. **This distribution of tenors reflects the goals of the MoF's Debt Management Department.** During technical discussions, the department made it clear that their primary concerns are targeting: (a) the average maturity of the portfolio, (b) the average "refixing" of the portfolio, and (c) a stable redemption profile. The risk identification methods and the management matrix are more fully discussed within the Government Debt Management Report. But for purposes of this Assessment, the question is whether this distribution of tenors helps or hurts the wider capital market. This is discussed in Section VI.G.

Figure 16: Components of the Czech Republic's Capital Market



VI. ACTIVITY LEVELS AND LESSONS LEARNED

A. DEVELOPMENTS IN THE REGULATORY ENVIRONMENT

126. **The CNB has dedicated time and resources to ensure that market participants and investors are confident in the Czech market.** Most publicly available information evidences a supervisory focus on prudential supervision. At the same time, the CNB's 2015 supervisory plan indicates that some actions have also been taken with regards to business conduct.[40]

127. **During technical discussions, the most often cited obstacles to developing the Czech capital market were: (a) the high level of compliance costs and the disproportionality of some EU requirements, (b) constantly shifting requirements primarily at the EU level, and (c) the short reaction times allowed to implement required changes.** In this regard, the broad focus was not so much on decisions made by Czech national policy-makers but on the EU-wide mechanisms[41] (See Annex 1 for a detailed review of the EU regime and the impacts for the Czech Republic). At the same time, there was some concern that the Czech Republic has also imposed additional national level requirements that may look inappropriate for this market's needs. Industry has cited fund licensing and investment firm reporting as two examples. A more consistent approach to licensing requirements for similar activities or investment products should be encouraged.[42] Efforts to publish appropriate comitology should be pursued.

128. **Compliance costs are already high.**[43] The ability of the largest market participants to absorb compliance costs is exacerbating concentration in the Czech financial sector and thus threatening competition. This trend is most prevalent in the banking, insurance, and asset manager groups.[44] The result is a decreasing diversity of participants and the products and services offered to the public. It also leads to a concentration of similar risks across the Czech financial sector, and therefore raises substantial systemic risk concerns.

129. **Along these lines, the current capital requirements were described as overly complex and not particularly fit for risk-inherent market activities, such as SME investments.** Market participants

---

[40] See https://www.cnb.cz/en/supervision_financial_market/news/index.html and http://www.cnb.cz/miranda2/export/sites/www.cnb.cz/en/supervision_financial_market/aggregate_information_financial_sector/financial_market_supervision_reports/download/fms_2015.pdf

[41] Over the last few years, market participants have also been required to adapt their process and expertise to new Czech regulations (central evidence of accounts, central register of contracts), as well as EU regulations (EMIR, MiFID, MAR, benchmark regulation, PRIIPs, SFTR), and to non-EU regulations (Dodd Frank Act).

[42] It is recognized that under EU approaches, some reporting may be requested in addition to those expressly imposed by EU rules for its statistical needs or for specific historical or local reasons.

[43] Although it is difficult to quantify this cost precisely, market participants referred to the significant need to revise local IT systems and devote more staff to compliance departments. The observed trend is exponential, with an average of 126 pages of legislation in 2000 against 904 in 2016, just for primary legislation. http://www.cfasociety.org/czechrepublic/Newsletters/1410%20CFA%20Society%20Newsletter%20-%20October%202014.pdf

[44] For instance, market participants pointed out that if a local entity does not have significant support from an EU-wide group, it is difficult to understand and implement new requirements correctly without using foreign law/consultancy firms, which adds to compliance costs, and which can become significant for smaller/individual entities.

indicated that existing capital rules are pushing financial sector end-buyers towards more standardized products, which in the longer run, has a detrimental effect on local market liquidity, and to some extent even impacts purchases within the government securities market by pushing trades to the most liquid tenors.

130. **Czech financial market participants also cited the inflation in rules and regulations, again primarily at the EU level.** For these firms, the challenge is to understand the implications of the numerous new rules while transposing them under very short deadlines (*e.g.,* 10 months for MiFID II from the effective publication date). This requires substantial legal resources and IT investment to a level that may not be sustainable for smaller firms. Moreover, these regulatory costs can render the business models of stand-alone (single industry segment) firms unsustainable, unless the firm has a dominant position or is backed by a larger institution.[45]

131. **The most common frustrations from higher compliance costs relate to the upcoming regulations on financial markets (MiFID II/MiFIR package) and market infrastructure (EMIR).** The point made is that the new requirements do not mitigate, much less cure, the perceived deficiencies in the current market. For example, the new conduct rules under MiFID II substantially increase the required amount of risk reporting to clients. Market participants respond that higher disclosures cannot compensate for low levels of investor financial literacy. They further add that, in fact, the more information an investor receives, the less likely that s/he will read any of it, leading to a false sense of protection for retail investors. Regarding the new EMIR clearing requirements, the participants noted that, currently, derivatives clearing is achieved through b2b swaps with their parent companies, given that individual membership with a major clearing firm is too costly for Czech firms. The technical management of the new margin requirements at transaction level was also identified as an example of 'over-regulation', as proper credit risk assessment can be effectively made at the global level.

132. **Further, according to market participants, the new rules do not appropriately address market growth issues, and operators are left with open technical questions.** The vagueness of the new rules on (a) distribution of financial instruments to investors, and (b) credit risk assessment for derivatives were cited as two examples of such unresolved areas.

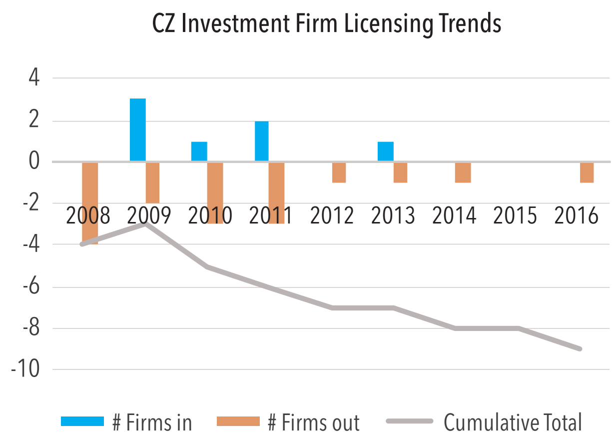
133. **To respond to the question about the efficacy of the regulatory framework, a review of the rules is warranted.** The take-away conclusion from industry discussions is that they are trying to deal in good faith with the current and changing regulatory requirements. However, there are doubts about the efficacy of current/future rules. Specifically, for purposes of this Assessment, there appears to be an urgent and critical need for Czech policy-makers to reexamine which of the rules impacting the market derive from the EU level and which are imposed locally, to understand how much latitude there is to eliminate unnecessary burden.

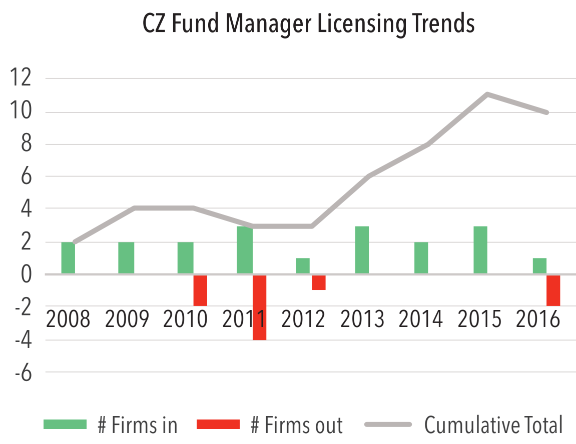
134. **It appears that the first focus of this streamlining review should be on the investment firm segment.** This licensing data supports the suggestion that the heavy level of regulation is driving the Czech investment firms out of the business. However, the same cannot be said for the fund manager segment. Figure 17 indicates a *net increase* of Czech licensed fund managers. Thus, a note of caution

[45] As one market participant put it, 'we are totally in defensive mode'. Another described it as 'struggling with the Tsunami of EU regulation'.

should be taken when comparing the anecdotal evidence to the entry/exit trends.[46] Annex 14 indicates the financial parameters of the firms obtaining and surrendering their licenses.

Figure 17: Czech Firm Licensing Trends - Entries and Exits





Source: CNB data

B. PSE ACTIVITY

135. **Even though the Czech Republic possesses an extremely well developed market infrastructure, there is a broadly held view that the activity on the PSE over the last 10 years has been disappointing.** And, in fact, this was one of the drivers for developing the earlier strategies proposed by the MoF and AKAT mentioned in Section II Background above.

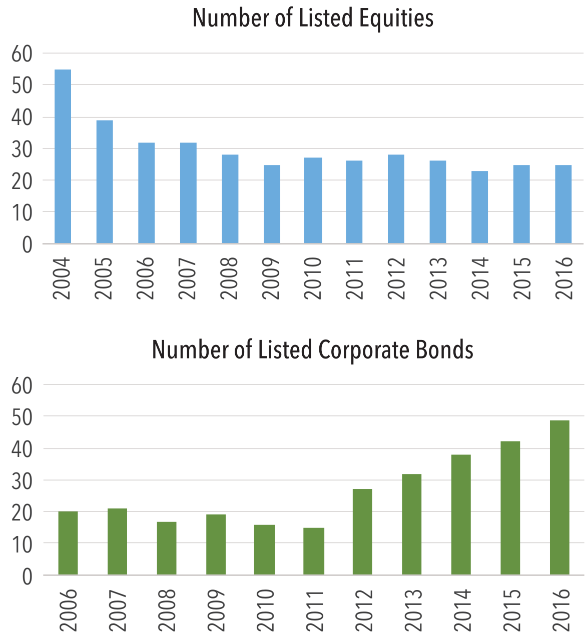
136. **The number of listed equities has been rather constant since 2008, while the number of listed corporate bonds has increased** (Figure 18).[47]

[46] This data does not include exits due to mergers. In addition, simply counting the number of Czech firms entering and exiting the market does not take into consideration their relative size.

[47] However, discussions with market participants hinted at the notion that the bond listings are driven by tax considerations. This aspect needs to be explored further.

Figure 18: PSE Listings 2004-2016

	Number of Listed Equities	Number of Listed Corporate Bonds
2004	55	not available
2005	39	not available
2006	32	20
2007	32	21
2008	28	17
2009	25	19
2010	27	16
2011	26	15
2012	28	27
2013	26	32
2014	23	38
2015	25	42
2016	25	49



Source: PSE Annual Reports

137. **Meanwhile, the market capitalization patterns indicate a decidedly two-phase market.** From 2004 through 2007, even though the number of listed equities was falling, the equity market capitalization was rising, indicating rising prices that more than offset the falling number of equities listed. This shifted in 2008 when the number of listings stabilized and so did the equity market capitalization. Thus, there has been little movement since 2008 on both the number of equities listed and the overall pricing. Annex 15 presents data and graphs on equity market capitalization.

138. **The two-phase pattern is also supported by the trading data (Figures 19 and 20).** Annual trading volume in equities peaked in 2007 at CZK 1,013 billion (EUR 38 billion) but now is 5x less at CZK 168 billion (EUR 6.2 billion). In other words, equity trading levels are at 16.6% of the levels from 9 years ago, the result of a steady, pronounced decline.[48] The decline in annual trading volumes in corporate bonds began even earlier. From 2004 to 2005, volumes decreased 70%. Since then, it has fallen a further 19% from the peak. For 2016, trading in corporate bonds was CZK 4.15 billion (EUR 153 million). Relevant data underpinning these graphics can be found at Annex 15.

Figure 19: Equity Trading Volumes

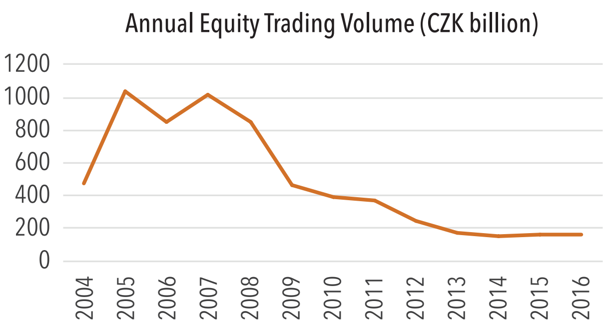
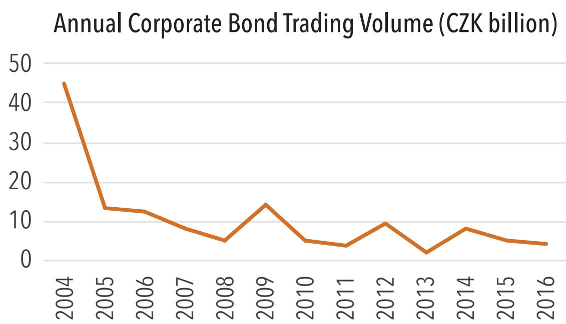


Figure 20: Corporate Bond Trading Volumes



Source: PSE Annual Reports

[48] A note of caution is appropriate here. The PSE advised that four blue chip equity issues account for roughly 95% of equity trading and thus trading in the other listed equities may not have material impact.

139. **Taken together, the three metrics –number of listings, market cap and trading levels– point to the overall difficulties that the exchange faces.** This Assessment aims to provide and interrogate the main explanations for these difficulties.

140. **Regarding equities, the narrative from the PSE itself, backed up by discussions with other market participants, is that the equity market's reputation is tied up with the results of the mass privatization program.** The widespread view is that the program (with the first round conducted in 1992 and a second round conducted in 1995) did not benefit the ordinary Czech citizen in the way it was envisioned and communicated to the general public. In addition, although the exchange had roughly 1,700 companies listed as a result, these were: (a) delisted over time as they failed as enterprises, (b) 'taken private' often through less than transparent means, or (c) simply failed to meet the listing requirements. Whatever the cause of their disappearance, the practical result was the same from the perspective of the ordinary shareholder –loss of the investment. This has obviously affected the idea for Czech retail investors of investing in shares of companies today.

141. **A second explanation given is that the Czech public are risk averse in their investment choices.** They prefer insured and guaranteed products even if the return is low. The fact that equity funds make up only 19% of overall total funds support this suggestion. Past this, however, it is difficult to test objectively the idea that the Czech public is sour on equities due to risk appetites. Only a statically valid survey could begin to explore this.

142. **Regarding corporate bonds, and according to market participants, the lack of participation on the exchange can be traced to the dominance of banks.** The main complaint is that banks use their position to dissuade corporate clients from issuing corporate bonds (much less equities). Capital market participants view this as a clear conflict of interest, as in some cases it may be better for companies to fund themselves with longer term debt or issuing shares, rather than more short-term bank credits. But this complaint is not borne out by the data, at least completely. Corporate bond listings are in fact growing. And while the amount of new bonds listed is not keeping pace with growth in corporate bank credit, there are some companies choosing to issue bonds.

143. **A more likely explanation is that issuing bonds is more expensive than taking bank credits.** Information from technical discussions indicates that the cost of bank credit for the leading companies is 2-3%, while the effective cost of issuing corporate bonds (rate charged plus transaction costs) is 5-6%. For short-term debt (perhaps up to 3 years), the capital market is simply non-competitive. In order to grow this segment of the market, participants must look to where the capital market has the advantage. And, as suggested in Section VII.B. 'Building Content for the System', there are two important facets to be exploited: (a) the banking system cannot issue long term debt, and (b) corporate bonds are liquid assets whereas bank credits are not (or at least without further transaction costs to the bank).

144. **Regarding trading levels, it does not appear that bank dominance is the issue, instead, high liquidity is the root determinant.** This is a buy and hold market. Banks, as the main participants in the proprietary side of trading, need to find (eligible) investment homes for their funds. The same holds true for the investment funds and for pension funds. Thus, mostly all the segments of the Czech financial system are looking for attractive places to place funds and keep them there (i.e., not trade them). This helps explain the 80:20 split in profits between the depository and the exchange.

145. **The experience in the government securities market reinforces this conclusion.** As noted below, secondary market trading levels are low. Banks place 15.47% of their available funds in government securities and a further 10.32% at the CNB in idle funds, the latter fact pointing to a lack of investable instruments (at least in the eyes of banks' credit and market risk managers).

146. **The make-up of trading between bank investment firms and non-bank investment firms indicates this is a market-wide problem.** The Czech non-bank investment firms hold 54% of client managed funds and execute 68% of the total trades on behalf of clients. Yet they constitute only 1.55% of the proprietary trading. Thus, the non-bank investment firms are contributing to the trading only from the client side. Banks, almost in reverse contrast, hold 10% of managed client funds and execute 26% of the total trades on behalf of clients. That is a respectable contribution. But the main impact of bank investment firms is from the proprietary trading side where they contribute 87% of the total trades (Table 18).

Table 18: Investment Firm Trading Activity (2015)

Category of Firm (All figures in CZK bill.)	Managed Client Funds		Trades for Clients		Proprietary Trades	
Domestic Banks	68.5	9.76%	4,571.7	26.19%	36,289.2	87.36%
Domestic Non-Bank Investment Firms	381.7	54.40%	11,824.9	67.73%	644.7	1.55%
Branches of Foreign Banks	0.0	0.00%	988.9	5.66%	4,604.2	11.08%
Branches of Foreign Non-Bank Investment Firms	0.0	0.00%	11.0	0.06%	0.0	0.00%
Domestic Asset Management Companies	251.5	35.84%	62.7	0.36%	0.0	0.00%
Total	**702**	**100.00%**	**17,459**	**100.00%**	**41,538**	**100.00%**

Source: CNB ARAD

147. **In sum, it is difficult to test why the equity market suffers a lack of participation, measured in terms of either issuances or trading.** The reasons given during technical discussions do not lend themselves to objective study past the idea of surveys. Even if it is true that banks dissuade potential issuers, this does not address the lack of secondary trading. The reasons for that lie elsewhere.

148. **For bonds, it may well be that banks take advantage of their customer relationships to dissuade companies from issuing long-term debt.** But at the same time the business case for issuing short to medium-term bonds, as opposed to lower cost bank credit, is not compelling. To grow the corporate bond segment, the capital market providers and participants –and the legislative and administrative policy makers– need to adopt a new tack.

C. CORPORATE SECURITIES OFFERINGS

149. **A review of the registered securities offerings since 2008 tells a similar story.** Again, equities played only a nominal role. Bond offerings exceeded equities offerings by a significant margin. But the peak periods were somewhat different (Table 19).

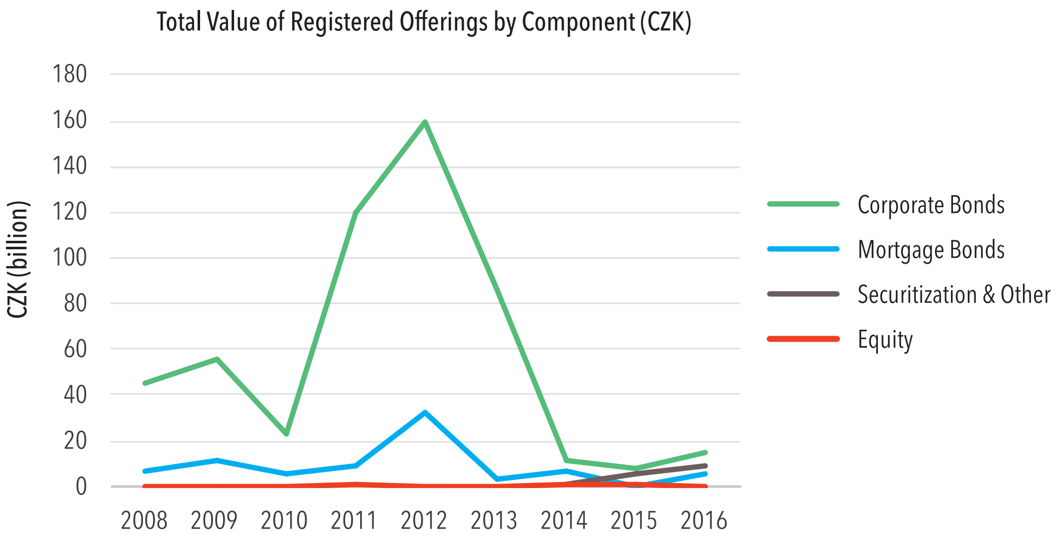
Table 19: Registered Securities Offerings (2008-2016). All Amounts in CZK bill.

Year ended	Equities	Corporate Bonds	Mortgage Bonds	Securitizations & Other	Total
2008	0.0187	44.8454	7.0000	–	54.5444
2009	0.2335	55.4232	10.8696	–	70.1477
2010	0.2104	22.6520	5.3000	–	29.6644
2011	0.5533	119.4468	9.0000	–	135.4695
2012	0.0907	159.1312	32.2514	–	201.5191
2013	0.0000	86.5286	3.8000	–	94.8700
2014	1.0488	11.0931	7.0000	1.0000	20.9804
2015	1.1093	7.4829	0.0000	6.0642	15.0025
2016	0.0000	15.3774	6.1000	9.0925	31.4076
	3.26	**521.98**	**81.32**	**16.16**	**653.61**

Source: CNB Data

150. **Moreover, the role of covered bonds, securitizations and other miscellaneous products comes into focus.** The bulge in corporate bond offerings in 2012 was echoed by the increase in mortgage bonds, albeit at lower levels.[49] Also of note is the advent of 'securitization and other' offerings which have increased significantly over the last three years.[50] The market for fixed income securities greatly exceeds the market for share offerings (Figure 21).

Figure 21: Registered Securities Offerings by Component (2008-2016)



Source: CNB Data

[49] The peak in 2012 was mainly caused by advantageous tax treatment for bonds issued that year.

[50] During technical discussions, the PSE stated that all the upsurge in the 'securitization and other' category consisted of listings of perpetual corporate bonds. Since these cannot be classified as 'bonds' under the applicable law they are listed within this miscellaneous category. There were no securitizations during this period.

151. **There are two aspects relating to the private placement segment that bear noting:** (a) the nature of the regulatory scheme, and (b) the recent rise of private offerings. Together, they support two suggested actions described in Sections VII.A and VII.C.

152. **First, the EU-wide regime regulating securities offerings has been transposed into the Czech system but with a resulting gap.** Article 34 of the CMA exempts securities offerings from registration if the total value does not exceed the equivalent of EUR 1,000,000 (calculated over a rolling 12-month period). Article 35 of the CMA also exempts offerings from the prospectus requirement: (a) if solely addressed to qualified investors, or (b) addressed to 150 persons per EU Member State (other than qualified investors), if the minimum investment per person is EUR 100,000 or greater, or if the price per unit is equal to EUR 100,000. Thus, there are two main categories of exempt offerings, those that are small in total amount, and those where the required investment itself is large.[51]

153. **Recognizing that the qualified investor exemption can be for any amount, this still leaves a 'missing middle' for sales to retail investors.** In this middle zone, the options for a company would appear to be either a full-blown registration or no offering at all. For example, it would not appear possible to conduct an offering of shares to the retail market for more than EUR 1,000,000 where the investment per unit is EUR 1,000 without a full registration. This poses serious ramifications for SMEs in terms of their access to the capital market. The transaction costs of a full registration would appear to be prohibitive when spread over a small offering amount.

154. **Second, recent changes to the law have created a 'private bond regime'.** Amendments made in 2012 to the Bonds Act eliminated the oversight and sanctioning authority of the CNB in cases where the bond issuance is neither being admitted to trading on a regulated market nor considered a 'public offering' triggering the prospectus requirement. Within these exemptions, there is no obligation for the issuer to notify the CNB when bonds are issued. This leaves the CNB with no tools to police whether the exemption is being abused. More importantly, under the exemption, any breach of duties by the issuer may only be remedied by means of private law. In other words, the CNB, in its role as the securities regulator, does not have investigative or sanctioning power over bonds issued in this manner.

155. **Moreover, the mandatory information to be provided to the investor under this exemption is also simplified.** The issuer must only specify itself, the type of bond, its form, nature and basic rights and conditions attached (for example, transferability, convertibility and/or preemptive rights), its ISIN identification number, the par value of the bond, the amount of the interest payment or the method used to determine the interest payment, the date(s) of interest payments, and the maturity date(s) of the bond's par value. *There is no requirement to provide financial statements.*[52]

156. **Depending on the commenter, the private bond regime is either a 'huge boost' or a 'huge danger' for the market.** Because there is no central, official source of information on the amount and variety of the bonds issued under this exemption, it is difficult to assess which view is correct. This

[51] This information was provided by market participants as the current CMA is not available in English. The draft version of the updated CMA (currently under review to translate MiFID II), which will be available in English should refer to Regulation 190/2011 which indeed corroborates this information on public offerings.

[52] An argument can be made that when the offering is made to qualified investors the amount of required disclosure can be driven by market forces. However, the exemption does not apply only to qualified investors and in fact can be completely addressed to the retail market.

said, information from the local financial press indicates the exemption is being widely used. A listing of data for 2014-2015 contains 19 bond offerings with maturities ranging from 2-10 years and paying rates starting at 3.2%, but with many as high as 12%.

157. **In parallel, there has been growing use of the 'crowd funding' mechanism.** According to the industry, this relies on the exemption for offerings under EUR 1 million, and most of the securities sold under this approach are convertible notes. The market has a 'Crowd Funding Association' with 32 members. A leading crowd funding sponsor claims a total of 12 offerings for 2016 for a total of CZK 58 million (EUR 2.1 million) with an average size of CZK 5 million (EUR 185,000). According to the industry, volumes for 2017 are expected to double.

158. **There may be an overlap between what has been characterized as the 'private bond regime' and the crowd funding trend.** One mode supposedly relies on the limited number of purchasers, while the other supposedly relies on the maximum amount of the offering. Regardless, Sections VII.A and VII.C. contain some suggested ways to keep the benefit of these exemptions, but add some policing abilities for the CNB.

D. INVESTMENT FUND FLOWS

159. **A bright spot in the market is the inflows into investment funds.** From 2014 to 2015, total AUM within the funds grew at 25.9% to a total of CZK 224.1 billion (Table 20). This continues a positive inflow trend existing since 2012.

Table 20: Investment Fund Inflows (2014 y-o-y 2015)

Investment Fund Growth y-o-y (2014 to 2015)	2014 AUM (CZK bill.)	2015 AUM (CZK bill.)	% Increase (y-o-y)	% of Total 2015 AUM
Mixed Funds	64.2	89.9	28.6%	40.1%
Bond Funds	65.1	77.5	16.0%	34.6%
Equity Funds	29.5	42.7	44.7%	19.0%
Real Estate Funds	6.0	12.2	51.0%	5.4%
Others	1.3	1.8	n/a	0.9%
Totals	**166.1**	**224.1**	**25.9%**	**100.0%**

Source: CNB Financial Market Supervision Report; WB staff calculations

160. **Still, the overall amount of resources within the investment fund sector remains relatively low for an economy the size of the Czech Republic's.** Some of this may be due to the tax treatment of investment funds versus direct investment (suggestions on this are included at Section VII.F. 'Encouraging the Use of Investment Funds'). Also, the cause may relate back to the ownership of the management companies and whether overall there is strong bank or investment firm focus on building this industry (Table 21).

Table 21: Assets under Management (top 7 firms)

Status	Management Company	TOTAL (CZK)	Market Share	Cumulative Market Share
Bank	Erste Asset Management, GmbH	93,345,647,413	35.59%	35.59%
	Investicni Kapitalalova KB, a.s.	44,815,204,537	17.09%	52.68%
Bank	Generali Investments CEE, a.s.	21,935,529,451	8.36%	61.05%
Bank	ČSOB Asset Management, a.s.	18,394,170,124	7.01%	68.06%
Bank	Raiffeisen a.s.	17,520,680,873	6.68%	74.74%
	Conseq Funds, a.s.	15,356,005,920	5.86%	80.60%
	REICO, a. s.	13,830,812,982	5.27%	85.87%
	Total	**262,248,351,095**		

Source: AKAT data

161. **On the regulatory front, Czech policy-makers should be aware that changes to the EU regulatory regime will impact how the non-bank investment fund management companies are marketed.** As described in Annex 1, MiFID II contains a new set of prohibitions –known as the Inducements Rules– which impact flows of fees and charges to clients. These new rules essentially provide that distribution fees may not be collected by agents, which of course is a radical change to existing models for some investment funds. This change can be expected to drive agents to focus their businesses towards distributing more 'rewarding' products which are not subject to the MiFID rules (e.g., insurance products), which offer similar features to the final investor. To the extent that bank-sponsored investment funds may internalize their distribution costs, this may not impact their distribution schemes. But for the remaining non-bank fund groups relying on external distribution, the impact will be profound. (Section VII.F. 'Encouraging the Use of Investment Funds' provides some suggestions in this regard).

E. TRENDS FOR SMES, PRIVATE EQUITY AND VENTURE CAPITAL

162. **Discussions with market participants indicated that access to finance for Czech SMEs is not as challenging as expected.** There are a variety of methods for SMEs to obtain debt financing. Chief among these is a program conducted by the CMZRB guaranteeing up to 70% of a loan to an SME. According to the SME Association, the process takes one week and is relatively simple. Thus, SME borrowing under the program is 30% at commercial rates and 70% subsidized. B2B lending also appears healthy, with the Association estimating 2016 levels at CZK 2 billion (EUR 74 million). As discussed previously in Section VI.C., there is also a nascent bond market growing. While all this is welcome news, it does not consider the types of equity investments that can help an SME move to the next level. This is where the VC/PE segment comes into play.

163. **There is an association of VC/PE firms: the Czech Private Equity & Venture Capital Association (CVCA).** This has roughly 65 members, 15 of which are firms themselves (with the remainder being persons and entities such as legal and accounting professionals affiliated with the industry). The CVCA has been active in seeking ways to develop the VC/PE segment, as well as the larger

investment fund industry. It has made several recommendations, many of which are included in this Assessment.

164. **According to the CVCA, levels of VC/PE investments are low. Investments from VC/PE funds amounted to EUR 2.6 billion during 2009 through 2013.** However, according to the CVCA, the Czech Republic lags behind not only Western European countries, but also some CEE countries with regard to the level of VC/PE investment relative to GDP.[53]

165. **One reason for these lower levels appears to be the absence of large institutional investors in the VC/PE funds.** One might expect the insurance and pension fund industries –with their longer investment horizons– to be significant participants, but this does not appear to be the case.[54] Instead, it appears that the EBRD and European Investment Fund have been the leading large investors (but with the EBRD no longer investing new funds after the 2007 decision of the government of the Czech Republic to graduate). Section VII makes some recommendations to allow institutional investors to participate more in VC/PE investments.

166. **While there are at least 15 PE/VC firms operating in the Czech Republic, according to the CVCA, there are no private equity or venture capital *funds* domiciled in the country that follow the classic PE model.** The reason for this, at least according to the anecdotal evidence gathered during technical discussions, is that the tax treatment for investment funds is non-competitive with other jurisdictions (Member States). Private equity and venture capital funds are taxed at 5% at the fund level, while in many other jurisdictions (especially financial centers, such as Luxembourg) the tax rate at the entity level is 0%.

167. **Moreover, the Czech Republic's company law does not include a tax transparent Limited Partnership legal form.** Even in jurisdictions where corporations are taxed at the entity level, PE and VC funds can organize under the so-called GP/LP form (the limited partnership). The LP is a 'tax transparent' entity, not paying taxes at the entity level but reporting taxes due from the partners and withholding. Thus, it is a 'tax reporter', but not a 'taxpayer'.[55]

168. **Again, upcoming changes to the EU regulatory regime surrounding the capital market may negatively impact SMEs' ability to raise capital.** The reason is that, under the new approach, research reports will need to be requested and paid for by the client or its asset manager, not by the sponsoring agent. Given this, it is difficult to understand how research on smaller companies, who are unknown to the public, will find its way into the hands of those investors or asset managers. This in turn directly impacts the smaller companies' ability to obtain capital market financing.

169. **Moreover, as the Inducement Rules prevent cross-subsidizing research costs, major investment banks should be expected to further streamline their research budget allocation and concen-**

[53] The CVCA cites the European Venture Capital Association's 2013 Yearbook, noting that for 2013, total PE investments in the Czech Republic amounted to 0.09% of GDP, with VC investments at 0.002% of GDP. In contrast, the European average was 0.253% for PE investments and 0.024% for VC.

[54] For example, the CVCA notes that for 2013, 37% of all European funds invested in private equity investments came from pension funds.

[55] According to the CVCA, although the Act on Investment Companies and Investment Funds authorizes the form known as "KSIL", this is not tax transparent. The KSIL is fully taxed on long-term dividends and capital gains and, at the same time, capital losses from PE investments (long term substantial shares) are not tax deductible against profits.

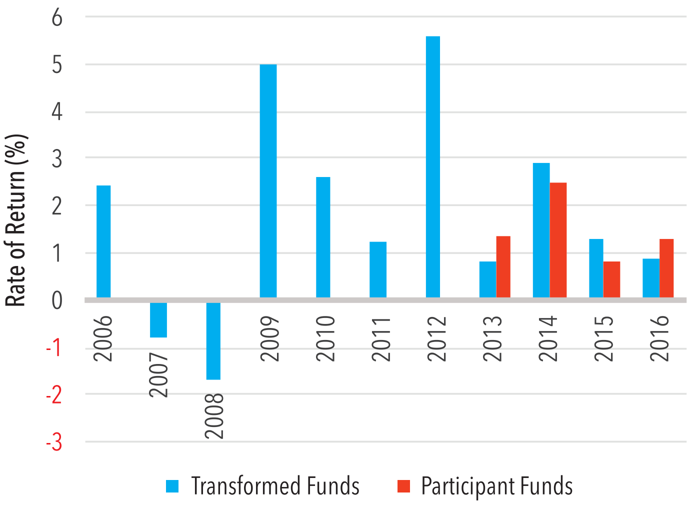
trate their resources on the most profitable EU companies. In a Czech market dominated by a few major banks whose decision centers are located in other EU jurisdictions, allocation of resources to produce research on Czech companies is already a challenge. The Inducement Rules stand to make this situation worse. There seems to be few options for the Czech market to avoid this impact.

F. TRENDS IN THE PENSION FUND SECTOR

170. **There are several trends within the pension fund segment that call into question its long-term viability and its potential contribution to capital market development.** First, rates of return for the two types of funds have averaged less than 2% for the last few years (Figure 22).

Figure 22: Rates of Return for Pension Funds (2006-2016)

	Rates of Return (%)	
Year	Transformed Funds [56]	Participant Funds [57]
2006	2.43	
2007	(0.78)	
2008	(1.71)	
2009	5.01	
2010	2.61	
2011	1.26	
2012	5.61	
2013	0.81	1.34
2014	2.90	2.47
2015	1.29	0.84
2016	0.85	1.31



Source: CNB ARAD data.

171. **Second, while AUM overall have been growing notably, individual contribution levels remain low.** The average monthly contribution to Transformed funds, for example, is estimated to be CZK 600 or CZK 7,200 annually (about EUR 317). The average level of pension savings is estimated at CZK 100,000 or EUR 3,800. The level of returns, coupled with these low contribution rates, raise concerns regarding the replacement incomes that can be generated by the overall pension scheme or how Pillar III could better complement Pillar I if fiscal issues demanded it.

172. **Pillar I is a defined benefit system and is estimated to generate approximately 48% of final gross salary as replacement income.** OECD norms typically recommend at least a 60% replacement income as an adequate post retirement pension. However, it appears that Pillar III can just make up for this shortfall but not contribute much more to the target.

[56] Includes realized profit plus unrealized profit/loss (changes in valuation)

[57] Performance comparable to performance of investment funds.

173. **Under current rates of return and savings levels, Pillar III *can only be expected to generate a further 15.8% of the worker's final salary as replacement income.*** The average wage in the Czech Republic for the first quarter of 2017 was CZK 27,889. Assuming: (a) a 33 year work life, (b) pension fund returns of 2% (the average over the last 11 years), (c) a salary contribution of CZK 1,150 (around 5% of salary) from the worker, along with (d) a matching contribution by the government of CZK 230, and (e) another contribution of the same amount (CZK 1,150) by the employer (generous assumptions), Figure 23 below shows that, at retirement, and using a phased withdrawal of the accumulated investments accrued to that date, the worker would receive 15.8% of his/her final salary as a pension from the Pillar III.

Figure 23: Pillar III Pension Projections

Third Pillar Pension Projections (in CZK, except where noted)	
Monthly wage	27,889
Annual wage	334,668
Annual Final Wage in 33 years	887,652
(at 3% wage growth)	
Monthly pension contribution - worker (5%)	1,150
Government matching contribution	230
Employer matching contribution (5%)	1,150
Annual Basis - Total Pension Contributions	30,360
Accumulated Pension Assets after 33 years	2,260,927
(at 2% investment rate of return)	
Additional return on pension assets after retirement	549,346
Total assets until death	2,810,273
Phased withdrawal (Pension) over 20 years	140,514
Annual 3rd Pillar Pension / Final Salary Level	15.8%

Source: World Bank Calculations

174. **The root cause for this dilemma is the 'no losses' guarantee.** Although the portfolio composition limits for pension funds would appear to allow sufficient risk taking to boost yields, the minimum guarantee 'chills' the fund manager's willingness to invest in anything other than the safest instruments. Again, this is particularly impactful, as 95% of pension fund assets are in Transformed funds. For example, for Transformed funds, the regulatory equity limit (domestic and overseas) is 70% of the portfolio, but the funds invest only 0.12%. Similarly, the limit on investment/UCITS funds is 70%, but only 1.85% of the portfolio is invested in this category. The bulk of investment of Transformed funds is in public sector bonds (78% of total assets) followed by private sector bonds (12%) and bank deposits (7.4%). With this investment orientation, the pension funds cannot generate enough yield to provide meaningful replacement income.[58]

[58] At the same time, the data clearly shows that fund balances are not being transferred out of Transformed funds into Participant Funds (as is allowed under the rules). Again, this relates to the narrative during technical discussions that the general public prefers to protect their savings (i.e., the contributed principal) even at the risk of low returns.

175. **This orientation also hampers developing the Czech capital market.** Because pension funds (*with CZK 402.12 billion (EUR 14.88 billion) in total assets as of 2016*) do not pose strong demand for higher yielding private sector bonds, equities or other securities, they cannot be viewed as drivers for greater participation. Section VII.G 'Strengthening the Pension Fund Sector' suggests several reforms to strengthen the pension fund sector, to make it a more potent driver for capital market development.

176. **The 'no losses' guarantee aspect may pose a separate threat to the system.** If it is perceived (realized) by the general public that Pillar III will not provide meaningful replacement income, one can expect participation to decline. This will occur anyway with Transformed funds, as contributors begin withdrawing funds as they retire, and new entrants are not permitted. If this occurs, and the funds begin to experience more and more pay-outs as the system matures, overall AUM can be expected to decline. This may be exacerbated by lower future yields. As the low interest rate environment persists, the funds will have their higher yielding bonds mature. Overall returns will fall and so too the level of performance fees. These factors, taken together, mean the pension fund management business may become quite unprofitable. The segment may see a radical reduction in the number of fund managers, with an impact on the competitiveness of the industry.

G. TRENDS IN GOVERNMENT SECURITIES MARKET TRADING

177. **For purposes of this Assessment, the reason for focusing on government securities trading is that it forms the basis for pricing all other types of securities within the corporate securities market.** To the extent that the government securities market provides a reliable benchmark for all maturities of debt, it increases the efficiency of the corporate market. There are basically two sources of information in the government securities market that inform the corporate side: (a) yields-at-auction and (b) yields in secondary trading.

178. **Yields-at-auction do not seem numerous enough to be –by themselves– a reliable data set.** During 2016, the CNB conducted 43 auctions of government bonds and 23 auctions of Treasury bills. This on its face might indicate sufficient data to build a yield curve. For the 1-year and shorter market auctions –averaging two per month– this data provided some guidance. But the frequency of the bond auctions, given that they covered 10 separate tenors at an average of 3½ auctions per month lend doubt as to whether a reliable yields-at-auction curve was possible. Discussions with the MoF indicates they do not believe so.

179. **The focus then shifts to whether the secondary trading results support a reliable yields-at-market curve.** And here the dispersal of the tenors and the relative amounts within each tenor comes into play. One pitfall observed in other government securities markets is a tendency to have numerous tenors outstanding with low amounts of debt in each. This results in tenors that are simply too thin to support secondary trading in any one class.

180. **As indicated at Figure 15 above, there are 23 bond tenors outstanding, with no tenor constituting more than 7% of the total outstanding amount.** The amount within each tenor ranges roughly from EUR 1-3 billion. For a market such as the Czech Republic, it is difficult to argue objectively that the number of tenors or that the thinness in each tenor is inhibiting trading. But the 'feel' of the situation is that it is not helping. It means that with EUR 1 billion outstanding and 20 commercial

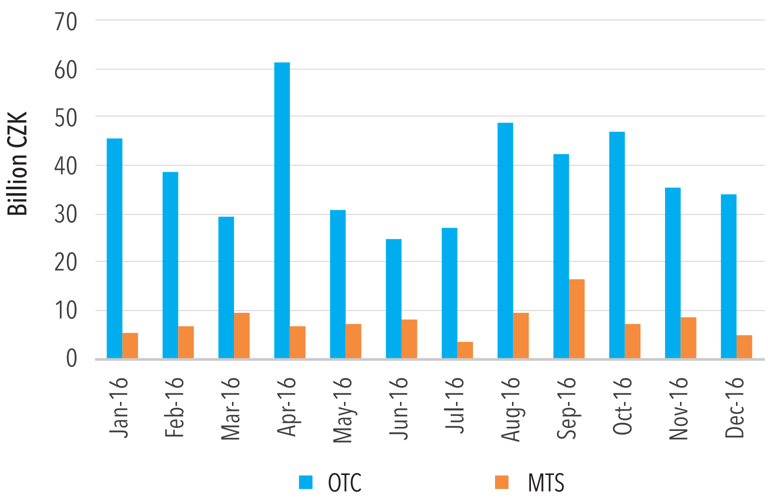
banks holding positions the average holding would be EUR 50 million. In the scheme of the government securities markets this is not a large sum.

181. **Another question is whether the distribution of the tenors contains the benchmark maturities that government securities traders like to see.** Nominally the benchmark tenors might be 1, 2, 5, 7 and 10 years out. There is discussion of benchmark bonds in the Government Debt Management Report but it would appear this is driven by debt management techniques instead of yield curve creation.

182. **All the above said, secondary trading on the MTS is rather thin.** For 2016, monthly trading volumes on the MTS for the medium to long term government securities ranged from CZK < 970 million to 10 billion (EUR 35.9 to 370 million). This equates to monthly turnover of less than 0.6% of the outstanding amount. Taken on annual basis, this is less than 7.3% of the outstanding, again underlining the usual 'buy and hold' nature of the debt securities market.

183. **The OTC segment is larger and the trading volumes for 2016 were healthier.** According to the CSD data, it appears monthly trading ranged from CZK 25 to 61 billion (EUR .925 to 2.26 billion). Here the monthly turnover rates are healthier, ranging from 1.9% to 4.7% (Figure 24).

Figure 24: Monthly Government Securities Trading (2016)



Source: CSD Data

184. **Still, the unresolved question is whether the market believes that the level of trading supports a reliable yield curve.** During the discussions, the CNB, MoF, and most importantly the traders, all indicated they were using the Svensson model for yield curve calculation and were not bothered by the interpolation required. If the market feels that more depth of trading would materially help pricing, then the MoF should explore ways to consolidate the tenors to build depth of outstanding amounts within each. See Section VII.J. 'Deepening Government Securities Trading' for more details.

VII. FOCUS AREAS FOR SUGGESTED ACTION

185. **Given all the above, there are certain steps the Czech Republic can take to increase the use of its capital market by issuers, to make it more attractive to investors, and to build breadth and depth of liquidity.** It should be made clear, however, that there is no single “magic” solution. Instead, the Assessment indicates there are numerous parallel actions that can be taken that should result in objective progress.

186. **These suggestions are made against the current backdrop of high liquidity in the financial system and low yields and borrowing rates.** Thus, some of these suggestions apply today and some are proposed in order to be prepared for (and take advantage of) a change in the financial system climate.[59] These suggestions can be organized around certain broad focus areas.

187. **Because these initiatives cut across several institutions and subject matter specialties it may be advisable to form a working group under the leadership of the MoF to address these reforms / improvements in an integrated manner.** By including the private sector as well as the interested public bodies the working group can address these questions not only from a policy and architectural viewpoint, *but also how these changes can be implemented in a practical and impactful way at the business operational level.*

188. To ensure adequate coverage, the working group should include representatives from:
- MoF
- CNB post-trade operations (depository)
- CNB securities market supervision
- PSE
- CSD
- RM System
- AKAT
- CVCA
- SME Association
- Securities law experts
- Accounting experts
- Research Specialists

Depending on the tasks at hand subgroups from the above can be assigned.

[59] In general, the expectation is that liquidity will decrease is based on the expected tapering of the quantitative easing (QE) programs by the US Federal Reserve System and the European Central Bank (ECB). While this may take some time, given the scale of these programs and the fact that they have been in place for more than a decade, the desire to reduce QE has been indicated by both central banks. The expectation that rates will rise in the Czech Republic is also based on the inflation outlook with inflation now running at 2.6% y-on-y.

A. REDUCING THE REGULATORY BURDEN – BUILDING SUPERVISORY CAPACITY

189. **Given the emphasis on compliance costs during the technical discussions, there appears to be an urgent and critical need for the Czech policy-makers to explore how this can be responsibly reduced.** This effort needs to take place at two levels and cover several aspects.

190. **Recommendation: Encourage the Participation in EU-Wide Committees Impacting Capital Markets Regulation.** While it is true that the EU regime grants Member States little leeway on transposing EU-wide directives and regulations this does not mean that the Czech Republic is left simply to react to whatever is determined. There are numerous working groups at the EU level relating to the development of the EU-wide capital market regulation. The Czech Republic needs to take a more active part in this process.[60] Part of the driver for this is self-defense of the Czech capital market. But part also results from the fact that the Czech capital market is amongst the largest of the EU 13 most recent entrants. In a sense, it is the 'capital market' leader for the new entrants with smaller markets and should represent these interests – perhaps combining with *Visegrad* partners on certain issues. Also, authorities should consider a system to second staff to ESMA and other European authorities.

191. **Recommendation: Eliminate Unnecessary Regulatory Burdens and Costs Applied at the Local Level,** in order to responsibly reduce any regulatory burden placed on the Czech capital market, and encourage authorities in their effort to keep the wording of the rules as close as possible to the original EU versions.[61] In addition, authorities are encouraged to streamline information requested from firms, including for supervisory and statistical purposes.

192. **Recommendation: Review the Securities Distribution System and Build Effective Supervisory Actions.** A first step should be to level the regulatory treatment applicable to saving products that are distributed to the same category of investors.[62] This should not take the form of a 'quick fix' by regulatory action (as was the case of placing a cap on the remuneration of pension fund distributors). Rather, supervisory actions could be taken to assess a sample of saving products presenting similar features;

    1. Comparing the average remuneration applied by manufacturers and distributors, with the average level of performance, and

    2. Comparing the average returns paid to investors compared to the effective service or the risk undertaken.

    This type of assessment will allow market authorities to identify potential abuses in distribution fees applied and to take any necessary corrective actions. Sanctions could be made through the publi-

[60] During technical discussions, the sense was that, while members of the MoF seem to take an active role in the working groups they participate in, the extent to which the CNB participates in European Supervisory Authorities such as ESMA could be improved, including a better information exchange with MoF on topics of mutual interest.

[61] An example can be found under the Decree No. 163/2014 Coll. on the performance of the activities of banks, credit unions and investment firms, which partly translated the requirement under Articles 13 and 18 of MiFID 1 (2004/39/EC) The latest version of this text was not available in English. The CMA is currently being revised to better translate MiFID II rules. This updated version of the CMA should also be available in English.

[62] At the EU level, some work has been undertaken within the PRIPS initiatives which aims to align the level of information available to an investor buying a UCITS fund or insurance based product, such as a unit linked products. However, efforts still need to be made to align conduct rules and investor protection measures, including for inducements or the liability of manufacturers and distributors, as existing requirements largely, if not exclusively, focus on financial instruments only.

cation of public warnings and studies for the public to make an informed choice. This may require some capacity building at CNB level, and for the CNB to develop an effective risk-based supervision of the market.

193. **Recommendation: Reiterate and Reinforce the CNB's Mission, as Defined in the Law, for Development of the Capital Market.** As noted above, in addition to its supervisory responsibilities, the CNB is also charged under Article 2 of the Act on Supervision of Capital Market with development of the capital market, investor protection and encouraging investor awareness (perhaps to be read financial literacy). However, for the outside reader the language is not clear or specific in terms of the relative priorities among the assigned roles. A discussion of the CNB's relative responsibilities vis à vis the capital market may bring into focus where the market development task fits within the spectrum.

194. **Recommendation: Require a simple notification by issuers when conducting private placements or other offerings relying on exemptions to the prospectus requirement.** Many of the offering exemptions contain limits on the number of purchasers or the amounts raised. Usually these speak in terms of the limit "over a rolling 12-month period". At the same time, persons relying on an offering exemption are not required to notify the CNB. Instead, using the exemption is based on the 'honor rule'. Thus, the CNB has no knowledge of who has conducted an exempt offering, except perhaps through general publicity. The simple solution is to require notice to the CNB when an issuer is relying on an offering exemption. This does not need to be complicated or overbearing; it simply needs to contain the basic information to allow the CNB to track compliance.

195. In sum, the recommendations for ***reducing the regulatory burden*** are:

Main Recommendations

- Eliminate unnecessary regulatory burdens and costs applied at the local level, and streamline information requested from firms, including for supervisory and statistical purposes.
- Review the securities distribution system and build effective supervisory actions with a view towards better comparing costs to the investor to performance returns and sanction abusive behaviors.
- Reiterate and reinforce the CNB's mission, as defined in the law, for development of the capital market, and prioritize this responsibility among the other assigned tasks.
- Encourage active participation in EU-wide committees impacting capital market regulation, so that the Czech market's needs and specificities are better reflected at EU level.[63]
- Require a simple notification by issuers when conducting private placements or other offerings relying on exemptions to the prospectus requirement, to allow the securities regulator to keep an overview of instruments issued in the Czech Republic and to oversee the correct application of the public offering rules.

Additional Recommendation

- Consider a system to second staff to ESMA and other European authorities.

[63] For example, in terms of financial research coverage.

B. BUILDING CONTENT FOR THE SYSTEM

196. **Given the structure of the PX Group (with the PSE owning the CSD) strategies for building this component of the capital market should speak to one of at least two goals.** The first goal is increasing the amount of corporate securities, structured products and investment funds handled by the CSD. This by itself builds financial strength within the infrastructure complex. And, it is probably more impactful in that the CSD is the main revenue producer. The second goal is increasing trading on the organized market. This also increases revenues, but more importantly provides a clear and positive touchstone for referring to the health of the capital market. While in economic terms the greatest benefit of a developed market is the capital formation process, this is a bit abstract. The level of securities offerings does not capture the imagination of the general public. Trading levels and securities indices are a more understandable metric. This said, both goals will increase the amount of funding achieved through the capital markets that can be reinvested by the system for growth and innovation.

197. **The strategies adopted should also seek to harness the strong areas of the financial system.** From the narrative above it is clear that the banks are the dominant force in the Czech financial sector. It is also clear that the government securities market far exceeds the corporate market. The strategic approach should seek to leverage off those facts. Where to focus then?

198. **One main aim should be on building participation in the fixed income market, specifically corporate bonds.** This approach recognizes the current make-up of the PSE listings. It also speaks to the overall approach of *converting bank credits into the corporate bond form*. In essence, this takes the assets in the system as they exist today and repackages them into a different structure.

199. **In the generic setting, lending in the form of bonds, as opposed to lending in the form of bank credits, carries several advantages for the banks:**

- The credit (in the form of the bond) is liquid, not illiquid.
- The credit (in the form of the bond) can be held only by the bank, or sold in part (creating a low-cost loan participation)
- The credit (in the form of the bond), even if extended for say 10 years, is not a long-term asset given that it can be sold. This reduces the bank's asset/liability mismatches and promotes risk management.
- The credit (in the form of a bond) may be evaluated by the ratings agencies. This provides an objective metric for valuing the credit.
- The bank does not lose its ability to collect information from the borrower, if it appoints itself bondholders' representative.
- While the borrower who issues a bond may be subject to additional disclosure requirements, this is not case when the borrower is already a reporting company.

200. **Why then do the banks not issue more credits in the form of bonds?** Part of the answer lies in the regulatory treatment of corporate bonds by the CNB, while part is simply habit. But by adjusting the business drivers surrounding the use of corporate bonds, the banks' appetite for using this form of instrument can be increased.

201. **Recommendation: Allow Specific Corporate Bonds as Eligible Collateral for Bank/CNB Refinancing Transactions.** A CNB document entitled "Official Information" (July 2011) specifies the categories of acceptable collateral for refinancing operations. The eligibility criteria set out in Article III.1 speak mostly in terms of Czech government securities, CNB debt and debt issued by EU Member States. Bonds issued by private entities holding a AAA rating are also permitted.[64] Article III.3 states that the list of actual approved issues shall be published by the CNB.

202. **Currently however, the only categories of bonds specified as eligible as collateral for CNB refinancing transactions are ECB bonds, Czech government securities and CNB bonds.** No corporate bonds are listed. By allowing Czech corporate bonds as eligible collateral, banks can be induced to issue credits in the form of bonds and/or buy more of this category in the open market.

203. **Clearly, corporate bonds present greater risk than the "zero risk" ECB/MoF/CNB issues, and thus the CNB will need to adopt differing parameters for using them as collateral.** This includes setting a different 'haircut' for the credit value of the collateral. The haircut could be based on the bond issuer's rating (such as from S&P, Moody's or Fitch), the financial parameters of the issuer, and/or the liquidity of the bonds themselves in the secondary market. But the point is that the criteria for using corporate bonds as collateral for refinancing will need to be different than zero risk issues and need to be set by the CNB.

204. **If corporate bonds are allowed as collateral for CNB refinancing this means they enter the capital market space.** If they are subsequently traded this provides better price discovery for the banks (more accurate valuation). This of course benefits the capital market itself.

205. **Recommendation: Allow Short-Term Government Debt Securities as Collateral for Member Operations on the PSE.** (This recommendation speaks to the strength of the government securities market rather than inducing banks to own corporate bonds). Currently, because ownership records are maintained at the CNB it is not practical to use them as collateral for PSE member operations. Other than this fact there is no policy objection to allowing this. If short term government securities are added as an eligible collateral class, this will add CZK 4.2 billion (EUR 155 million) in allowable assets into the capital market system.

206. **Recommendation: Link the Functionality of the CSD with the CNB's Depository.** Allowing corporate bonds as eligible collateral for CNB refinancings and allowing T-bills as collateral for PSE member transactions will likely require linking the two systems. (Although the CSD is a member of the CNB's payment system the two depositories do not have electronic interactivity on the securities ownership side of the records). Linking the functionality of the two depositories can be achieved by allowing each side to take needed actions such as place and remove pledges on securities. Technical discussions revealed that the IT experts have already indicated this is feasible.

207. **Recommendation: Consider Expanding the Eligible Collateral Categories to Covered Bonds**

[64] Including AAA corporate bonds in this section may be a bit misleading in that the standard practices of the ratings agencies are not to assign a rating for domestic private sector entities higher than the sovereign's rating. Given that the Czech Republic's Moody's rating is A1 and the Fitch and S&P ratings are AA- and A+ respectively it would appear difficult for a Czech company to achieve a AAA rating. Thus, while AAA corporate bonds are a theoretical possibility for eligible collateral under the Official Information, in practice this is a remote alternative.

and Other Structured Products. The approach of allowing corporate bonds as collateral for bank refinancing operations could be extended to covered bonds and securitizations. This might be considered following an evaluation of the experience of allowing corporate bonds, assuming this recommendation is accepted and acted upon. The need for the CNB to decide on eligibility criteria, haircuts and reserve requirements would apply with equal force to the two latter categories.

208. **However - as a note of caution – the bank financial data indicate that allowing covered bonds and securitizations as eligible collateral may not generate a large amount of new offerings.** There are a few banks that would appear to face liquidity constraints (lending to available funds exceeds 80%), and thus would be candidates for issuance. But in almost all these cases, these banks are part of a regional group. Their liquidity is provided by the mother bank – supplying funds when needed and absorbing excess funds as they occur. For these banks, liquidity is not 'tight' it is simply well-managed between the parent bank and the local bank. On a broader level, as set out in Annexes 8 and 10, the banking system is not currently facing liquidity constraints.

209. **Efforts to develop the equities segment should run in parallel to the fixed income segment.** A key area deserving focus is a renewal of privatization of SOEs. Although many of the eligible state assets have been sold already, the advice from the PSE is that there are still attractive SOEs left. Under this approach the privatization can be done by reserving a retail tranche to be offered the general public, to be subsequently listed on the PSE.

210. **Recommendation: Examine the Remaining Inventory of SOEs to see which can be Privatized.** The overall method -strategic investor, partial or full– should depend on the best results for the State. However, within each method, a tranche of the offered securities should be reserved for retail investors. The Government should commit to a firm timeline for restarting the privatization.

211. **Recommendation: Encourage SOEs to Meet their Debt Financing Needs through the Capital Market.** Even in cases where SOEs or wholly-owned agencies are not deemed eligible for privatization, these entities can still be urged to seek their debt financing needs via the corporate bond market, consistent with their need to obtain the most efficient financing. The data collected during the technical discussion indicates there may be as many as 7 such SOEs or Agencies.

212. In sum, the recommendations for ***building content*** are:

Main Recommendations

- Allow specific corporate bonds as eligible collateral for bank/CNB refinancing transactions.
- Examine the remaining inventory of SOEs to see which can be privatized with a tranche reserved for retail investors, and commit to a firm timeline for doing so.
- Encourage SOEs to meet their debt financing needs through the capital market, consistent with their need to obtain the most efficient financing.

Additional Recommendations

- Allow short-term government debt securities as collateral for member operations on the PSE.
- Link the functionality of the CSD with the CNB's depository.
- Consider expanding the eligible collateral categories to covered bonds and other structured products.

C. MAKING THE MARKET MORE ATTRACTIVE FOR ISSUERS

213. **Technical discussions indicated that it has been a significant challenge to generate interest from the real sector companies in coming to the securities market.** Some of the reasons cited concerned fears of required transparency. Some related to fear of loss of control (regarding common shares). But in the current environment it would appear that it is simply faster and cheaper to obtain bank credits. However, as the cost of credit rises, equities will become more attractive. The following suggestions are intended to take advantage of the shift in dynamic.

214. **Recommendation: Verify Full Flexibility of Allowed Terms for Preferred Shares and Corporate Bonds.** The fact that current laws enabling preferred shares and corporate bonds are not available in English made it difficult to determine officially if there is sufficient flexibility on the terms that can be set. Comments to the draft report claimed in the main that this was so. While there is no reason to doubt these statements, it remains to be confirmed by local experts that the laws allow corporate treasurers to tailor their preferred shares and/or corporate bonds in order to best meet their needs, subject to market demand.

215. **The next step in addressing this topic would be to review the law to see if the needed characteristics are authorized.** The elements to be included are presented in Table 22. Once this assessment has been made, decisions can be made on how best to implement any needed changes (adjustments to regulations or amendments to laws).

Table 22: Securities Features to be Authorized for Preferred Shares and Corporate Bonds

Regarding Preferred Shares	
1.	Require Par Value to be expressed in CZK
2.	Allow Dividends to be expressed in CZK or foreign currency
3.	Recognize and allow for both cumulative and non-cumulative approaches to dividends
4.	Recognize and allow for the concept of 'profit participating' dividends
5.	Allow for contingent voting rights
6.	Allow put and call features
7.	Allow for convertibility of preferred shares into other securities classes

Regarding Corporate Bonds	
1.	Allow for secured and unsecured bonds
2.	Allow the face value of the bonds to be set in CZK or foreign currency
3.	Allow required interest payments to be set in CZK or foreign currency
4.	Allow for variable interest bonds
5.	Allow for zero coupon bonds
6.	Allow for contingent voting rights
7.	Allow put and call features
8.	Allow for convertibility of bonds into other securities classes

Source: WB Project Team Suggestions

216. **Recommendation: Review the Recent Experience by Covered Bond Offerors to Identify Improvements and Streamlining to the Process.** The following are some suggested criteria for covered bonds and securitization offerings used in other jurisdictions:[65]

Table 23: Suggested Criteria for Covered Bonds and Securitization Offerings

Regarding Covered Bonds	
1.	Require the value of collateral cover to be ≥ 105% of the bond obligation.
2.	Require a collateral pool "controller" (analogous to the bondholders' representative) who will monitor the adequacy of the collateral coverage.
3.	Require the issuer to replace maturing, deteriorating or defaulting collateral.
4.	Allow the collateral pool to consist of assets from one originator only.
5.	Require the loans serving as collateral to have similar characteristics.
Regarding Securitizations	
1.	Require the use of a bankruptcy remote SPV.
2.	Allow the collateral pool to consist of assets from one originator only.
3.	Require the SPV assets to have similar characteristics.
4.	Require the use of a servicer (Securitization Fund Manager) of the SPV.

Source: WB Project Team Suggestions

The MoF has indicated that many of these aspects are already included in the legal regime. However, since the applicable laws and regulations are not available in English this could not be verified during the Assessment. The proposed working group should be able to take this matter up with relative ease.

217. **Recommendation: Consider Abbreviated Form Registration Choices.** On a related note, the current Czech regime on offerings seems to have several categories, but with a "missing middle". As discussed above, there are exemptions for (a) large purchasers, (b) professional investors, (c) small offerings (in terms of number of purchasers), and (d) small offerings (in terms of CZK amounts sold). Past these high/low parameters there is only the category of "registered prospectus".

218. **At the same time the data on the SME population indicates that there may be a sizable group of companies that wish to raise amounts above the minimums but cannot afford the full-blown prospectus path.** The MoF needs to consider whether an "abbreviated form" prospectus is needed. This is a registered offering but with reduced disclosure requirements. It speaks to the lower / middle tier issuer that wishes to come to the market but cannot afford the costs of a full registration. And, indeed, it would appear that the Czech Republic has room under the EU regime to adopt such an approach. The country's threshold currently set at EUR 1 million has been raised to as much as EUR 8 million under Regulation (EU) 2017/1129. Thus, it would seem logical that instead of granting a

[65] This makes the liability for repairing deteriorating and defaulting components clearer. Pools mixing collateral from several originators blurs the lines of liability, making the bonds less understandable.

full prospectus exemption, the MoF could set a range of greater than EUR 1 million (say perhaps up to EUR 3 million) for the abbreviated disclosure approach.

219. **Recommendation: Redouble Efforts on Outreach to Potential Issuers – with Strong MoF Involvement.** During the technical discussions, the PSE indicated that it is "talking to the companies" but not with the results they had hoped. While it is clear that the exchange faces 'sales hurdles' dues to several factors beyond its control, it also appears that a key ingredient is missing – the active backing by the MoF. In this regard a redoubling of the effort is recommended but with high profile MOF participation. This can be called an "Issuer Outreach Program" (IOP).

220. **The IOP should be executed by cross-sectoral team under the leadership of PSE, and not only including the MOF, but also professional intermediaries such as brokers, asset managers, auditors, lawyers and investor relations experts.**[66] The first step would be to identify the population of potential issuers and then meet with them to understand their perceptions of the securities market and the obstacles impeding their use of it. These discussions should include the entire range of financing that the capital markets can offer. Thus, the instruments covered should be both debt and equity and the offerings modes should include private placements, professional investor offerings as well as public offerings. The IOP team would then create a program of workshops and training materials to educate issuers about the benefits of raising capital and listing, and to increase their knowledge of the process. The team would then offer support and skills to help a select number of target issuers for offerings. Work could include one-on-one training in corporate finance, investor relations (before, during and after offerings), governance, compliance, legal aspects, and so forth. The overall goal is to increase the knowledge of issuers regarding the market and their participation in it.

221. In sum, the strategies for ***making the market more attractive to issuers*** are:

Main Recommendations

- Redouble efforts on outreach to potential issuers, including management education, targeted videos, workshops for potential issuers and supplementary handbook on capital markets.
- Consider abbreviated form registration choices.

Additional Recommendations

- Verify full flexibility of allowed terms for preferred shares and corporate bonds.
- Review the recent experience by covered bond offerors to identify improvements and streamlining to the process.

[66] Under similar programs in other jurisdictions the private sector participants have donated their time as part of their business development programs.

D. MAKING THE MARKET MORE ATTRACTIVE FOR INVESTORS

222. **Building content and making the market more attractive to issuers focuses on the supply side of the capital market equation.** However, the demand side also needs to be addressed. One main idea is creating tax-incentivized accounts. The remainder of the suggestions revolve around two broad themes: (1) building trust and confidence in the market by investors, and (2) providing better information flow.

223. **Recommendation: Launch a Program Promoting Financial Literacy. It appears that a first step for increasing investor interest is to raise the overall level of financial literacy.** In parallel with the issuer outreach program noted above, the PSE can - also with the involvement of the MoF – engage in a wider investor education and financial literacy program to include video spots focusing on different aspects of investing in the Czech Republic, and using modern social media outlets.

224. **Recommendation: Consider an Individual Savings Account Regime.** The Individual Savings Account (ISA) concept is widely used in developed markets. It is an account that grants tax deductions for contributions made, with a requirement that the funds be held for a minimum amount of time. Funds withdrawn later are taxed at standard income tax rates. Because an ISA grants control over the investment decisions to the account holder this could have a far greater impact to the capital market writ large. The interest in managing an ISA account can spill over to other types of accounts.

225. **To some degree this concept should be considered against the backdrop of the current pension system and the minimum holding period exemptions.** If the required holding period for the ISA is set to retirement age, then there might be friction between investing in an ISA or the Participant Funds. If the holding period for the ISA is set nearer to the current holding period rules, then the question becomes how this improves the current regime.

226. **Recommendation: Require Reporting Companies, Under Law, to Notify the CSD of All Corporate Events.** As discussed above in Section V.A., there is a 'hole' in the information flow between reporting companies and their securities holders. Essentially because the legal regime relies on notification by website, there is a strong chance that securities holders do not receive actual notice of events and their need to make choices (e.g., voting). This can be remedied by requiring all issuers whose securities are held at the CSD to inform the depository (acting as registrar). The CSD can then post this information to its website, pass it to the custodians (who will forward it to their clients), and also post it on the recommended Securities Information Center (see below).

227. **Recommendation: Create a Web-Based "Securities Information Center".** One of the observations made during the technical discussions is that information regarding the securities market is scattered in various places around the web. The PSE, CSD, MoF, CNB, AKAT, CVCA, Leasing Association and others all have information posted on their websites relating to their concerns but there is no consolidated information space for current and potential investors. Creating a "securities information center" is recommended, that would contain (1) end of day reports of all transactions, (2) description of all securities, (3) description of all issuers, (4) copies of all periodic reports, or jump links to site containing this information, (5) all relevant laws and regulations, and (6) prospectuses relating to public offerings. This operation should cover all securities offered and traded in the Czech Republic.

All the information posted on the site should be in both Czech and English. This will result in a one-stop shop for potential investors.[67]

228. **Recommendation: Consider the Creation of a "Corporate Governance Scorecard" and Award Winners in Publicized Events.** A tool used successfully in other markets is the "corporate governance scorecard" that compares the Corporate Governance practices of the public companies against a standard set of criteria. The results are publicized and the leading companies awarded prizes during media events. This has a few positive results: (1) it raises awareness of corporate governance generally, (2) it creates competition among companies who value their public image, and (3) it helps the investing public focus in on the companies treating their securities holders the best.

229. **Adopting the Scorecard approach for the Czech Republic should not result in additional compliance costs.** The Czech Republic operates on a 'comply or explain' regime for corporate governance matters. No new requirements or standards are recommended. The scorecard could be administered by the exchange (PSE) or the association of market participants (AKAT). Such programs in other countries have received donor assistance to create and launch the program and the European Commission's Structural Reform Support Service could be approached for support in this case.

230. **The technical discussions revealed that many important documents were available only in the Czech language.** This impedes any outsider's understanding of the Czech capital market and chills foreign investor interest. The overall goal should be to provide information in English relating to (a) companies, investment funds and other issuers, (b) all trading data and attendant market information, and (c) all laws, regulations, guidelines, instructions and infrastructure operating rules. Again, the goal must be to make it as easy as possible for foreign investors to enter the market and identify attractive investment choices.

231. **Recommendation: Require Large and Medium Sized Issuer Information to be Provided in English.** The MOF/CNB should adopt a rule requiring full parallel disclosure in English for all periodic reports and news releases by important issuers. This could include:

- Companies listed on the PSE.
- Investment funds (including Exchange Traded Funds) held by more than a stated number of investors (the precise parameters to be established by the MOF/CNB after study).
- Any company with more than a stated number of securities holders and a stated amount of assets (the precise parameters to be established by the MOF/CNB after study).

232. **Recommendation: Require Applicable Laws and Rules to be Translated into English.** The MOF/CNB should adopt internal rules (or, absent this, the CMA should be amended) requiring full parallel translation into English for all applicable laws, regulations, guidelines, and information released to the public. This should include the contents of databases and the MOF/CNB's website.[68]

[67] Market participants could also, within the Securities Information Center framework, create a series of informational videos to be offered through the securities information center and internet sites that allow uploading files (such as You Tube).

[68] This should not be read to indicate that the MoF's and CNB's websites are deficient but instead should be read to state that there were several important documents and databases in Czech only, limiting the universe of interested parties to access to such information.

233. **<u>Recommendation</u>: Amend the CMA and Civil Code to Recognize the 'Chain of Nominees' Concept, as Expected by Foreign Investors.** This will eliminate the current need for contractual 'work-arounds' and remove the current "question mark" surrounding ultimate beneficial ownership.

234. **<u>Recommendation</u>: Explore Ways to Make the EUR/CZK Hedging Mechanisms More Efficient.** The time and resources limitations for this assignment did not allow for an exploration of the currency hedging mechanisms and whether they can be improved. Clearly, since the Czech market operates using CZK, any increased efficiencies in the mechanism should result in less transactional friction for foreign investors.

235. **<u>Recommendation</u>: Seek to Elevate the Czech Market's MSCI Rating and Incorporate the Evaluation Criteria within the Capital Market Development Roadmap as Desired Outcomes.** Another step that can be taken to attract foreign investor interest is to improve the market's Morgan Stanley Capital International (MSCI) ranking. The Czech market presently is ranked as an "emerging market" under the MSCI Market Classifications. And, to a certain degree, this measures where the Czech market stands vis à vis the other EU capital markets. Thirteen of the EU markets are rated as "developed", and this correlates directly to the benchmarking contained in Section III. MSCI's ranking is important as it provides a shorthand due diligence result for investors considering entering this market. More importantly, the number of foreign firms allowed to invest in the 'riskier' "emerging markets" is much lower than those able to invest in "developed" markets. Thus, if the Czech Republic is able to elevate its rating then this should have a direct and positive impact on attracting more foreign investors.

236. **It is recognized that one criterion depressing the Czech market's rating relates to the number and size of large issuer listings.** For this reason, the Czech market may not be able to achieve 'developed' status. Nevertheless, the MSCI criteria contain valuable milestone indicators that should be included in the capital market development roadmap as desired outcomes. The recommendation is that market infrastructure institutions, led by the MOF, should organize a review of the needed steps to elevate the Czech market's status, and then move to support the execution of these steps.

237. **<u>Recommendation</u>: Prepare a Due Diligence Package on the PSE/CSD and Post it to the Web.** The PSE is designated by the US SEC as an eligible foreign securities market. This has a significant benefit as it opens the Czech market up as an investment destination for publicly-held US investment funds. However, fund managers must still perform certain due diligence before coming to the Czech market. Thus, the PSE/CSD should prepare a due diligence package (in English) that contains (a) analysis of the CSD compliance with Rule 17f-7, (b) all the relevant laws, regulations and operating rules, along with (c) an analysis of its compliance with all applicable international standards. This due diligence package should be posted to the PSE/CSD's website. All other applicable distribution channels should be explored.

238. In sum, the strategies for the ***making the capital market more attractive for investors*** are:

<u>Main Recommendations</u>

- Consider an Individual Savings Account regime, with tax incentives for contributions and account holder control over investment decisions.
- Require reporting companies, under law, to notify the CSD of all corporate events so that it may

pass on this information to securities holders.

- Require large and medium sized issuer information to be provided in English.
- Require applicable laws and rules to be translated into English.
- Amend the CMA and Civil Code to recognize the 'chain of nominees' concept, as expected by foreign investors.
- Prepare a due diligence package on the PSE/CSD and post it to the web.

Additional Recommendations

- Launch a program promoting financial literacy, possibly including educational video series on capital markets for investors.
- Consider the creation of a "Corporate Governance Scorecard" and award winners in publicized events, in order to raise awareness of corporate governance and positively incentive any reputational exposure of new listed issuers.
- Create a web-based "Securities Information Center".
- Explore ways to make the EUR/CZK hedging mechanisms more efficient
- Seek to elevate the Czech market's MSCI rating and incorporate the evaluation criteria as desired outcomes.

E. PROMOTING SME ACCESS TO THE MARKET

239. **Since it is unrealistic to expect SMEs to come to the market directly (due to their relatively small size), the system must look to SME sponsors to help them find the financing they need, grow and ultimately become a publicly-traded company.** These are the VC and PE firms described above. In this regard promoting SME access to the market is synonymous with promoting the VC and PE sectors.

240. **As noted above, while the Czech Republic has at least 15 VC and PE *firms*, it has no VC or PE funds domiciled in the country.** This is a disadvantage to the Czech Capital market. There appear to be two reasons for the lack of domiciled funds.

241. **Recommendation: Authorize a Tax-Transparent Limited Partnership Legal Entity Form. First, the generic legal form normally used in this industry –the LP- does not exist in the Czech Republic.** LPs tend to be used by privately-held funds with a relatively small number of investors but investing larger sums of funds. The interests in the LP are normally not transferrable or are restricted to investors with the same parameters. In other words, they tend to be qualified investor funds focused on SMEs. Thus, the LP form is especially applicable to VC and PE funds.[69] In addition the LP is tax transparent. The KSIL form does not appear to possess all these characteristics.

[69] In most jurisdictions, LPs are viewed as tax "pass through entities'. The realized income to the LP is deemed to be the income of the individual partners, with income tax paid by them *regardless of whether the partnership's income is indeed distributed to them*.

242. **Second, and far more persuasively, the 5% tax imposed on investment funds operates as a strong deterrent.** Unlike the general public which may not care about the 5% tax at the fund level, professional investors are highly sensitive to tax and operating cost issues.

243. **Recommendation: Grant VC and PE Funds Tax Transparency.** Thus, in order to create a realistic chance of having VC/PE funds created in the Czech Republic, these types of funds must be treated as tax transparent. There are two alternatives: (1) create a specific profits tax exemption for funds operating as VC or PE (with qualification requirements to be determined) and tax distributed income only, or (2) treat the LP legal form as a "pass through entity" with the partners taxed on all realized fund income or losses whether distributed or not.[70]

244. **Recommendation: Adopt Specialized Valuation Guidance in order to Allow Publicly-Held VC and PE Funds.** A third method to promote the use of PE and VC funds is to allow them to be publicly-held. This is to say that the investments made by the fund shall continue to be privately made (i.e., directly with the SME) but the ownership of the fund can be public (widespread). This may raise regulatory concerns on how the fund's holdings should be valued (since there is no available market for the securities and values are thus based on estimates). But this can be addressed through specialized guidance. The suggested action item in this regard then is that the MOF should (a) review the offering rules to ensure the public ownership of PE and VC funds is feasible, and (b) issue specialized guidance for valuing the fund's portfolio holdings and the related disclosures to investors.

245. **Recommendation: Organize Specialized, Targeted Issuer Outreach Program for SMEs.** The issuer outreach program described above could contain a special subsection devoted to SMEs, including: (1) a series of tailored videos focusing on capital market opportunities for SMEs as potential issuers, (2) a series of workshops/seminars for potential SME issuers, and (3) distribution of a handbook on capital markets tailored to SMEs going to capital market. The program could also include advisory services for pre-IPO stage SMEs.

246. **Recommendation: Review the EC's June 2017 Report on Tax Incentives to Support SME Development, to Determine which Concepts Might be Incorporated into the Czech Republic's Capital Market Development Strategy Going Forward.** The release date of the EC's report on effectiveness of tax incentives for venture capital and business angels to foster the investment of SMEs and start-ups did not allow for a full review and incorporation into the substance of this Assessment. However, this appears to be valuable work, especially within the context of a Member State attempting to determine which approaches are EU acceptable. To this extent the report's findings and recommendations should be reviewed to see how these concepts might fit into the overall capital market development strategy moving forward.

247. In sum, the strategies for the ***promoting SME access to the market*** are:

Main Recommendations

- Authorize a tax-transparent LP legal entity form with proper gain/loss tax accounting, or reform the KSIL form.
- Grant VC and PE funds tax transparency either by (a) creating a specific tax exemption (with

[70] A third alternative is to revise the accounting and tax rules for the KSIL.

qualification requirements to be determined), or (2) authorizing the LP legal form and specifying that it shall be tax transparent.

- Organize specialized, targeted issuer outreach program for SMEs, to include workshops for potential SME issuers with supplementary handbook on capital markets.
- Review the EC's June 2017 report on tax incentives to support SME development, to determine which concepts might be incorporated into the Czech Republic's capital market development strategy going forward.

Additional Recommendation

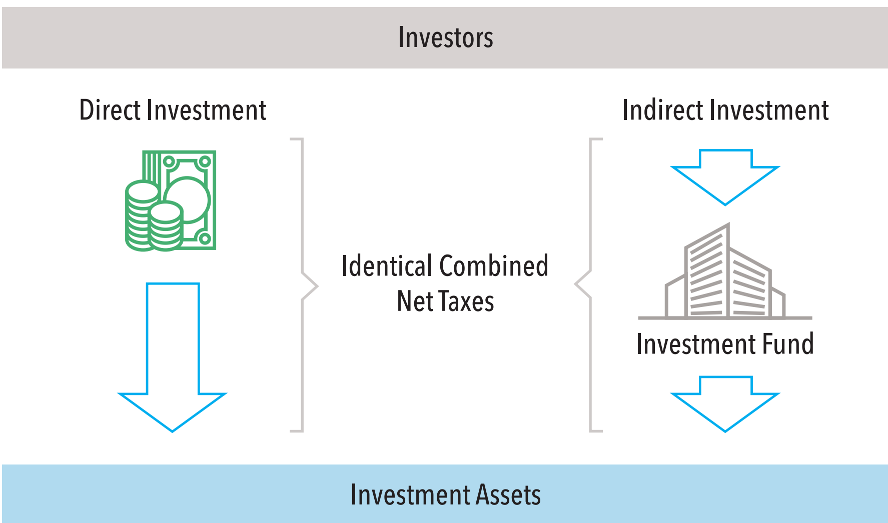
- Adopting specialized valuation guidance in order to allow publicly-held VC and PE funds

F. ENCOURAGING THE USE OF INVESTMENT FUNDS

248. **Recommendation: Consider Eliminating the Double Taxation as it Exists Today, only if the Minimum Holding Period Regime is Revised.** As noted above, investment funds in the Czech Republic pay a 5% profits tax. Thus, currently, there is an "unlevel playing field" between indirect investment in the form of investment funds and direct investment. Many other jurisdictions cure this dilemma by making investment funds "tax transparent".

249. **Essentially, tax transparency means that the fund does not pay profits tax on its income (in the form of interest and/or dividends received) or on gains from sales of securities.** Instead the shareholders in the fund pay tax when they receive distributions from the fund and/or sell their shares. Without this tax transparency, investors are taxed twice – once at the fund level and then again upon receipt of distributions. In contrast the direct legal entity investor (that buys the security directly for its own account) pays tax only once (Figure 25). Annex 17 provides more detail.

Figure 25: Optimal Taxation of Direct vs. Indirect Investments



Source: WB Project Team Graphic

250. **During the technical discussions, several stakeholders stated that the 5% profits tax imposed on investment funds does not serve (in reality) as a meaningful disincentive to invest in funds, as opposed to direct investing.**[71] Their bottom line position was that the lack of tax transparency was not a pressing problem and should be ignored. But the sense from these discussions was that the persons interviewed were concerned that if the funds were granted tax transparency then the "3-year holding rule" would be revoked.

251. **As noted above, there is an exemption from the capital gains tax for any holdings held 3 years or more, which to some extent cures the unlevel playing field described above.**[72] In addition, any income within the account not distributed prior is also exempt in that it is included in the gain.[73] Thus, for these longer term holdings, the investor is not taxed but the fund is. In essence, this cures the double taxation problem at the domestic investor level of the equation, not the fund level. And, it is more advantageous given that the rate for the fund is 5% while the rate for natural person investors is 15% and for legal entity investors is 19%.[74]

252. **Thus, it should be noted that granting investment funds tax transparency might conform the Czech Republic to the treatment found in other jurisdictions, but with a pyrrhic result.** Funds would no longer be taxed at 5% but natural person investors holding less than 3 years would be taxed at 15% while legal form entities would be taxed at 19%. If indeed the 3-year rule was revoked as it applies to investment fund holdings then the same result would apply to the longer term holdings. The net result would be a tax increase on both direct and indirect investors of more than 10%.[75]

253. **At the same time, it would not appear that the tax policy-makers would be willing to keep the 3-year rule *and* grant investment funds tax transparency.** This would result in 0% tax (in other words no tax at both the fund and investor levels) for holdings of three years or more.

254. **In light of this, it is not recommended to change the current tax treatment for investment funds.** As long as the holding period exemption is in place creating tax transparency at the fund level would actually harm investors. This said the double taxation of short-term domestic holders and foreign investors remains unsolved. This latter point is addressed by the next recommendation.

255. **Recommendation: Eliminate Taxation of Foreign Fund Investors on Czech Fund Income. Foreign institutional investors have a strong expectation that they will not be taxed on local income.** The rate should be reduced to zero and the withholding rules adjusted accordingly. It is understood that there may be practical considerations involved but foreign institutional investors should be easily identifiable.

[71] This still should be considered a meaningful disincentive to foreign investors who have a high expectation that their returns will not be taxed at the fund level.

[72] This tax feature is part of a wider set of rules exempting holdings of capital assets. There are varying sets of minimum holding periods for varying types of assets. Thus. the 3-year rule is not limited to investment funds, or to corporate securities generally.

The 3-year rule also applies to direct holdings, and thus there is parallel treatment between indirect investment and direct investment in the same assets held for the same period of time.

[73] This has incentivized the creation of "accumulation funds" which do not distribute realized fund income.

[74] This said, the double taxation problem still exists for holdings less than 3 years. It also continues to exist for foreign investors regardless of the period held.

[75] Setting the rate at 0% might have other unintended consequences. It might expose the Czech investment funds to tax in other countries in that they would no longer be able to claim exemption from double taxation.

256. <u>Recommendation</u>**: Review the Regulatory Requirements Surrounding Direct Marketing of Funds' Securities.** Evidence from technical discussions is that certain products rely heavily on outside sales forces for their distribution. For the capital market this relates most heavily to (a) life insurance with an investment rider, (b) non-bank investment funds and (c) pension funds. Evidence is that the commissions charged for these products are high. Industry itself has indicated that commissions on life insurance can reach as much as 200% (the two first years of premiums). Clearly these high transaction costs impact returns and create a negative experience for the investor.[76]

257. **Cutting out this high cost of intermediation can benefit investors and the capital market as a whole.** To this end it is recommended that the MoF and the CNB review the regulations governing the use of internet marketing and sales. To the extent that investors can be provided clear and attractive investment choices at little or no fee then participation in the investment fund industry should be expected to grow.

258. Creating a "no or low" commission structure should help the non-bank investment fund groups compete better with the bank sponsored funds. As noted above as much as 86% of the fund industry is managed by bank affiliates. Freeing the non-bank investment funds up from the burden of having to pay such high commissions should level the competitive playing field.

259. **Encouraging direct marketing also anticipates the impact of the Inducements Rules.** As described above, under this new regime, fund complexes may no longer be allowed to pay commissions to sales agents. This will effectively shut down this current distribution channel, leaving the non-bank fund complexes with no sales means.[77] Direct marketing may become necessary for these funds to survive. If this segment is lost, then the dominance of the banks in the industry even more impactful.

260. <u>Recommendation</u>**: Study Whether the Legal Form Sverensky Fond Could be Revised.** At this point it is not clear if revising the Sverensky Fond form would provide advantages over the current legal forms in use (contractual plan or corporate form). Thus, it is only recommended that the issue be explored with industry and their legal counsel. If these discussions indicate that revising the Sverensky Fond would be more advantageous then it is recommended that it be pursued. Actions will require amendments to the company law, with conforming amendments to the CMA.

261. In sum, the strategies for the ***encouraging the use of investment funds*** are:

<u>Main Recommendations</u>

- Consider eliminating the 5% profits tax on investment funds, only if the Government determines for other reasons to revise the minimum holding period regime.
- Eliminate taxation on foreign fund investors on Czech fund income.

<u>Additional Recommendations</u>

- Review the regulatory requirements surrounding direct marketing of funds' securities to encourage investor access to collective investments.

---

[76] Distribution commissions for pension funds are fixed at CZK 1,080 and thus do not pose the same problem.

[77] Unless the position of the security regulator is to categorize fund distribution as a "quality enhancing". For the moment, no such position has been indicated.

- Study whether the legal form Sverensky Fond could be revised to encourage its greater use and/or result in lower administrative costs and operational flexibility.

G. STRENGTHENING THE PENSION FUND SECTOR

262. As discussed above, the current status of the pension fund system raises significant doubts about its ability to provide a sufficient replacement income for retirees. In particular, it is estimated that the third pillar will provide only 15.8% of replacement income. This is due to the required structure of the funds and the resulting investment practices. If the first pillar were ever to experience fiscal pressure, the contribution of the third pillar would need to be higher. In order to address these concerns several actions are recommended.

263. **Recommendation: Expand the Range of Investable Securities.** The pension funds need to be allowed to invest (or invest more) in additional categories of investments. These can include (a) private equity originated investments, (b) private placements eligible for institutional /investors, and (c) infrastructure finance bonds issued via special vehicles.[78] Of these, currently private placements are allowed with strict limits, while the other classes need to be allowed, or developed in the case of infrastructure bonds. These bonds could also be supplied with some partial credit guarantees (e.g., covering the riskier construction period) as a form of credit enhancement to attract investors. The CMZRB could potentially develop such financial guarantee instruments. The resulting long term bonds would have better yields than government bonds and sufficiently high credit ratings to be a good long term asset for pension investments.

264. **Recommendation: Provide Targeted Incentives to Migrate the Transformed Fund assets into Higher Growth Participant Funds.** More pension assets should be placed in higher yielding portfolios. The Czech authorities should consider methods, regulations or incentives to migrate a share of the Transformed funds to the Participant funds. This could be done via a voluntary approach but supported by an information campaign that provides transparent calculations of income replacement rates based on expected fund yields, and showing the resultant low percentages of replacement income achieved under the current structure. Along these lines the basic structure of the overall scheme could be modified to allow more flexibility for the contributors, instead of requiring them to be in either a Transformed Fund or Participant Fund as is now the case. For example:

    - Allow participants currently in Transformed Funds to maintain balances in both a Transformed and Participant Funds, with contributions to both; or
    - Allow contributors to 'freeze' their Transformed Fund balance and thereafter make contributions to a Participant Fund.

    Other incentives could include providing higher matching government contributions in Participant funds versus Transformed funds and raising the tax deductibility of contributions in Participant funds versus Transformed funds.

[78] Allowing the pension funds to invest in private equity securities would also address a complaint by the VC/PE firms that there are few 'big ticket investors' in this category.

265. **<u>Recommendation</u>: Modify the Minimum Return Guarantee Provision.** The "no loss" guarantee should not exist on a year by year basis during the contribution / accumulation period. As currently imposed the guarantee is preventing funds from growing to an asset value needed to provide a more significant replacement income. By allowing more flexibility during the accumulation period, pension fund managers can earn more during this period and be compensated for the low fees they will accrue during the post-retirement period when the portfolio by definition needs to be the most conservative.[79] Two adjustments are possible:

- Do not apply the guarantee on a year by year basis but instead gauge this at longer, stated intervals; or
- Apply the guarantee only from retirement age onward to preserve the capital paid out to the pensioner.

266. **<u>Recommendation</u>: Design Broader, Low-Cost Options for Annuities and Phased Withdrawal Products.** The authorities should consider new mechanisms for the withdrawal of pension savings after retirement, beyond those that exist. Currently, pension withdrawal is done in lump sum although alternative instruments are permitted to be offered. But if the pension system is designed to provide replacement income, the pensioner should have more choices, supported by better designed instruments (which would also support the use of longer term capital market securities). One option is the phased withdrawals mechanism. This implies the use of a calculation tool to project fund earnings and withdrawal requirements so as to program a level amount of payments for the remaining life of the retiree. While this can presumably be offered, retirees should understand its mechanics and the instrument should be regulated. Another option is to convert the pension savings into a lifetime annuity provided by an insurance company.[80] Annuities, which are currently permitted, but would likely have a high cost if the pool of participants was not large enough, can take many forms such as (i) fixed level payments, (ii) fixed plus variable payments, (iii) variable only, (iv) inflation adjusted, escalating payments, and (v) other forms. These can be designed within the regulatory framework according to Czech national preferences.

267. **<u>Recommendation</u>: Better Exploit Asset Pooling Methods for Fund Management and Accounting.** The current accounting for assets in the both Transformed and Participant funds relies on pension fund managers purchasing specified assets for each fund separately. This can raise costs. The industry could consider an asset and securities pooling method whereby a common pool of assets exists for each pension fund manager, and "virtual funds" of different types are created via the assignment of shares in the pool to meet the investment profile requirements of each fund. This would reduce transaction costs for fund managers since less turnover of securities might be required to meet each

[79] If none of the above three reforms are feasible, the Transformed funds in particular could be relabeled as "employee savings funds" instead of "pension funds", since their main function now is to accrue savings rather than provide an adequate pension. Branding them as pension funds creates the expectation that they might be able to contribute some significant share of income to an individual's pension or disburse, post-retirement, with a regular periodic schedule.

[80] Money's Worth Ratio (MWR) is the ratio of (a) discounted present value of expected future annuity payments, divided by (b) the costs of the annuity (i.e., the stock of pension savings handed over to convert to an annuity). A MWR below 1.0 means the value of all the annuity payments in the future is less than the original savings base. This could mean that the annuity firm has high costs and commissions as well as risk charges to account for variations in life expectancy (e.g., potential longevity or high old age) that it charges. However, while all annuity firms have these factors, by having lower commissions and fees and a good investment policy to achieve reliable returns, along with a fair actuarial calculation, the MWR can be achieved with a higher than 1.0 ratio.

funds' investment targets. From a supervisory perspective, some IT based auditing may be required to ensure that securities assigned to one particular type of fund are always in line with that fund's asset allocation target and risk profile. This accounting approach is allowed and used in some private pension systems with multiple funds, including some with mandatory pension second pillars.

268. In sum, the strategies for ***strengthening the pension fund sector*** are:

Main Recommendations

- Expand the range of investable securities, to include private equity, private placements and infrastructure bonds.
- Provide targeted incentives to migrate Transformed Fund assets into higher growth Participant Funds and/or ISAs.
- Modify the minimum return guarantee provision to eliminate the year by year measurement.

Additional Recommendations

- Design broader, low-cost options for annuities and phased withdrawal products.
- Better exploit asset pooling methods for fund management and accounting.

H. BUILDING FINANCIAL REPORTING TRANSPARENCY

269. **The Czech Republic faces several policy decisions regarding the mandatory and voluntary use of IFRS, but only a few of these relate directly to the capital market.** As noted above, the system requires listed companies to use IFRS and thus this aspect already fits the expectation for developed markets. The extent to which other, privately-held companies should be required to use IFRS is not – strictly speaking - a matter for the capital market (and thus this Assessment). At the same time, a remaining issue is to what extent market participants should be required to report using IFRS. The expectation for developed markets is that IFRS should apply to investment firms and fund managers. However, before moving to this stage of mandatory use, the policy-makers should address ways to reduce compliance costs and thus make the imposition of the requirement less impactful.

270. **Recommendation: Perfect and Finalize the Translation Tables for Using IFRS to Generate the Required Tax Reports.** Adopting a standard and official mechanism for converting from IFRS to CAS Tax Reporting will mean that the perceived need to maintain two sets of books will be eliminated. Once the 'cost' side of the equation has been perfected and rolled out, thus greatly reducing the compliance burden, the MoF can move toward imposing the requirement for a wider range of enterprises.

271. **Recommendation: Continue and Complete the Current Pilot Program for Testing the Translation Tables for Large Enterprises.** The MoF's current testing phase is salutary and should be continued, expanded and completed.

272. **Recommendation: Once the Translation Tables are Completed and Adopted, Require Investment Firms and Fund Managers to Report Using IFRS.** At this stage the compliance costs will be reduced as much as possible. Imposing a requirement to use IFRS will be fairer.

273. **Recommendation: Reassess the Application and Need for Investment Funds and Pension Funds to Use IFRS.** The technical discussions raised questions as to whether IFRS applies well to these types of funds. The recommendation is to complete the first 3 stages described immediately above and then revisit this question. But at this stage there is no recommendation to require IFRS for investment and/or pension funds.

274. In sum, the strategies for ***building financial reporting transparency*** are:

Main Recommendations

- Perfect and finalize the translation tables for using IFRS to generate the required tax reports.
- Continue and complete the current pilot program for testing the translation tables for large enterprises.

Additional Recommendations

- Once the translation tables are completed and adopted, require investment firms and fund managers to report using IFRS.
- Reassess the application and need for investment funds and pension funds to use IFRS.

I. LINKING THE MARKET TO THE FACTORING SECTOR

275. **There are ways to link the factoring sector with the capital market to make both segments stronger.** Factored portfolios can be packaged as securitized assets to transform them into marketable instruments, functioning as fixed income securities backed by the invoices. Such securities, if relying on a continually revolving supply of accounts receivable invoices, could extend their maturities for a few years and become a new market instrument.

276. **However, factoring firms do not appear to practice selling their assumed receivables to market investors - either directly or through securitization - as a form of offloading their exposure.** Currently, the factoring banks and firms appear to have sufficient own liquidity. However, such initiatives could assist in creating new investment opportunities in the capital market. A new agent or arranger may be required to motivate the creation of such instruments and provide incentives to factoring firms to sell off part of their portfolios.

277. **Recommendation: Encourage Securitization of Invoice Pools by Third Party Agents as Arrangers.** Invoice receivables (or in the case of reverse factoring, payables) should be allowed to develop without regulatory obstacles via third party arrangers such as investment firms, to securitize such assets into fixed income or bond instruments. This would essentially represent an asset backed security. Investment funds and Participant pension funds could be viable institutional investors to purchase such securities. Investment firms could arrange their structuring by purchasing pools of receivables from factoring firms and issue the structured security as a capital market product.

278. **Recommendation: Develop Reverse Factoring as a Financial Instrument. Besides traditional factoring of SME receivables, the mechanism of reverse factoring (where invoices owed by the debtor firms are factored) should be encouraged.** Given the higher credit rating of the debtor or "owing" firm, it would be easier to package these liabilities into potential securities with better credit

ratings, that could be sold and traded on the market, and where the income streams and repayment would be sourced from debtor firms' account payables.

279. **Recommendation: Permit Investment Funds to Invest in Factored Receivables.** A capital market product based on factored receivables could also represent an SME investment fund with the assets in the fund comprised of the receivable invoices (or alternatively accounts payable of the debtor firm). As before, this would require an investment firm as an arranger and promoter of such a fund. Such funds have been implemented in selected countries in UCITS or equivalent form.

280. **Recommendation: Allow SME Receivables to be Listed.** In some countries, accounts receivables are listed on exchanges (typically commodities type exchanges) for trading. In the Czech Republic, it should be explored whether such an exchange is viable or whether a separate window on the PSE could be created for such purpose. The listing would be for packaged pools of revolving receivables (or payables) of a given firm, sector or other underlying common class. They could be assigned a specific credit classification to allow investors to know the risk and price the financing appropriately (e.g., advance funding offered at a discount to the assets as maturity). In some countries, such listed receivables are provided credit risk guarantees by insurers, which raises their credit quality (but also reduces their yield given the embedded insurance/guarantee fee). In these cases, the credit quality essentially becomes that of the insurer/guarantor. The (CMZRB) could have a role in these types of guarantee instruments.

281. In sum, the Strategies for ***linking the market to the factoring sector*** are:

Main Recommendations

- Encourage securitization of invoice pools by third party agents as arrangers.
- Develop reverse factoring as a financial instrument.
- Permit investment funds to invest in factored receivables.

Additional Recommendation

- Allow SME receivables to be listed.

J. DEEPENING GOVERNMENT SECURITIES TRADING

282. **As discussed above, it is unclear if the low level of government securities trading is hampering the development of a reliable yield curve.**

If this indeed is a deficiency to be addressed then the next step would be to consult with the MoF's Debt Management Department to explore consolidation of tenors, with the goal of deepening of the amounts outstanding within each tenor, leading to more secondary trading.

283. In sum, the next steps for ***deepening trading in the government securities*** are:

Main Recommendations

None

Additional Recommendations

- Consult with the market traders to obtain their views on the yield curve.
- Consult with the MoF Debt Management Department to explore tenor consolidation.

All the above suggested actions are listed and briefly described in Table 1 above.

VIII. ANNEXES

ANNEX 1: ADDITIONAL NOTES ON THE REGULATORY ENVIRONMENT SURROUNDING THE CAPITAL MARKET

The EU Based Regulatory Framework and Compliance Costs

General Notes

From raising capital to trading and portfolio management, issuers, intermediaries and investors operating within the EU face dozens of primary directives and regulations covering a host of topics including:[81]

- transparency
- accounting standards
- statutory auditor
- market abuse
- deposit and investors compensation scheme
- prospectus
- anti-money laundry
- central depository
- capital requirements
- issuer non-financial disclosure requirements
- short selling
- recovery and resolution
- markets in financial instruments
- market infrastructures and clearing requirements
- shareholder rights
- credit rating agencies
- financial transactions in securities
- collective investment schemes and alternative funds[81]

For example, when an issuer seeks to raise capital, it faces over a dozen implementing regulations. On the trading side, the MiFID II/MIFIR 'package' is due to take effect in January 2018 with one master directive and one master regulation and over twenty seven regulatory technical standards (RTS) adopted in the form of implementing delegated acts which were published in March 2017. The late date of this publication gives market participants less than ten months before the RTS becomes fully effective. ESMA has already issued some level 3 measures (guidelines) and it is finishing additional Q&A and technical instructions. On the clearing side, which includes clearing obligations for some derivatives, margin requirements for non-cleared derivatives and organizational requirements for clearing infrastructures, over forty implementing regulations and decisions have already been adopted in addition to multiple Q&As, guidelines, and other reports.

Impacts for the Czech Republic:

- **The volume and complexity of the new market rules imply high compliance costs. This additional regulatory cost has a detrimental impact on smaller EU financial centers, such as the Czech Republic.** It creates a barrier to entry for new and smaller market participants. For larger participants who have the scale to absorb the legal fees and costs associated with this complex financial regulatory environment, resources will be reallocated to more profitable businesses and possibly to larger financial centers located elsewhere in the EU.

[81] A list of the main primary EU legislation and secondary regulations potentially applicable to the Czech market participants is set forth below in Annex 19.

- **The new rules still do not appropriately address market growth issues and market operators are left with open technical questions.** The distribution of financial instruments to investors or the credit risk assessment for derivatives are two examples of such unresolved areas.
- **The ability of the largest market participants to absorb compliance costs is exacerbating concentration in the industry and preventing competition.** This advantage generally accrues to banking, insurance, and asset manager groups. The resulting concentration prevents steady capital market development as it impedes a healthy competitive environment from sustaining a diversity of participants, products and services offered to the public. It also leads to a convergence of similar risks across the financial sector. In the Czech Republic, this translates into an absence of diversified sources for financing companies.
- **The growth of the EU financial rules combined with the continuous revision process of existing legislation and the lack of a sufficiently coordinated cross-sectorial approach highlights a strong need for better streamlining of the existing EU regulatory environment.**

EU Market participants (the Czech financial industry included) are facing an inflation of rules and regulations. The challenge is to try to understand the implications of the new rules while transposing them according to very short deadlines (10 months for MiFID II from the effective publication of the implementing regulations). This effort requires a substantial allocation of legal resources and technical investments to a level that may not be sustainable for smaller firms. Most significantly, this regulatory cost can render the business models of stand-alone (single industry segment) firms unsustainable, unless the firm has a dominant position[82] or is backed up by a larger institution. It is difficult to specify how much a Czech firm will spend in bringing its internal organization up-to-date and reviewing its procedures and processes to comply with the new MiFID/MiFIR rules. Some Czech firms have stated figures involving several million Euros just for IT development to put in place new reporting lines to client and market authorities.[83] While the number of MiFID firms licensed in the Czech Republic may not necessarily decrease, compliance costs will force firms to re-allocate their resources into the most profitable market segments and retreat from others. For the larger EU banking groups, which are dominant within the Czech Republic financial business landscape, this means that their allocation of resources will tend to focus less on the smaller, underdeveloped, and often perceived as 'riskier' segments of the market, and to turn instead to other already established financial centers established elsewhere in Europe. Thus, there may be a reduction of focus by these larger groups on the Czech capital market.

The most common concerns linked to 'high compliance costs' relate to the upcoming regulation on financial markets (MiFID II/MiFIR Package), market infrastructures (EMIR) and capital requirement rules. For example, the new conduct rules under MiFID substantially increase the required amount of pre-trade, post-trade, and risk reporting to clients. The burden resulting from the number and complexity of required new disclaimers and reporting requirements is on an increasing trend. However, no matter how high the regulatory burden is, it does not improve the low level of investors' financial education and understanding of basic market mechanisms, which seems to be a true a concern for retail and institutional investors in the Czech Republic.

[82] This is the case in the Czech Republic where the market is dominated by large foreign banks.

[83] One market participant mentioned a cost of EUR 30 million only for software development of the Czech trading desk.

Another example of regulation driving the market into concentration relates to the implementation of EMIR rules. During the technical discussions, most Czech firms explained that derivatives clearing was made through b2b swaps with their parent companies, given that a single membership access with any major clearing firm would be too costly for a single firm based in the Czech Republic. The technical management of the new margin requirements was also identified as an example of 'over-regulation' as proper credit risk assessment can also be effectively made at the global level and it is necessary to impose these requirements on a transaction per transaction base assessment. This was identified as another potential cause that is driving local firms out of the Czech derivative market.

Along these lines, the current capital requirements were also described as overly complex and not particularly fit for risk-inherent market activities, such as SME investments. Existing capital rules were described as pushing end-users towards more standardized products, which in the longer run, can have a detrimental effect on local market liquidity, and to some extent, even to benchmark products such as government bonds, pushing trades to the most liquid tenors.

The existing set of directives and regulations applicable to the financial services industry are revised at the EU-wide level on a regular, short-term base (every five years), leaving little time for the impacted markets to settle into the new regulatory environment. This contributes to the uncertainty surrounding the EU roadmap on capital markets development, which was described during the technical discussions as a source of concern by Czech market participants. The bottom line message is that this uncertainty makes capital market development planning and coordination much more difficult at Czech level.

Market participants also voiced a need to go from 'over regulation' to 'surgical regulation'. A first step could be to level the regulatory treatment applicable to saving products that are distributed to the same category of investors. At the EU level, some work has been undertaken with the PRIPS initiatives which aims to align the level of information available to an investor buying a UCITS fund or insurance based product, such as a unit linked products. However, efforts still need to be made to align conduct rules and investor protection measures, including for inducements or the liability of manufacturers and distributors, as existing requirements largely, if not exclusively, focus on financial instruments only. These concerns were also highlighted at Czech level, where there is an unlevel playing field between the requirements applied to the distribution of similar saving products to retail investors.

Finally, from a regulatory perspective there is no incentive for Czech investment firms who belong to a large EU banking group to seek financing though the capital market for their clients. This is due not only to current macroeconomic factors and the excess liquidity in the system, but also due to the fact that, once again, financial regulation implies a high compliance cost burden for an issuer and its market sponsor. This disparity of compliance costs is particularly impactful when the same banking institution can offer a loan to a company it is advising, with its regulatory burden essentially consisting of assessing the correct level of credit worthiness of the company.

Regulation of Securities Offerings and SME Financing

General Notes

- **EU Prospectus Regime[84] and Private Bond Issuance Regime under Czech law**

Pursuant to the EU prospectus regime under Directive 2003/71/EC, as amended and complemented by the Commission Regulation 809/2004, a prospectus is required for (i) certain public offerings or (ii) where securities are admitted to trading on an EU regulated market. The prospectus Directive exempts offers of securities that are less than EUR 5 million calculated over a rolling 12-month period and offers of debt securities issued in a continuous or repeated manner by credit institutions where the total consideration is less than EUR 75 million. Securities issued in denominations not less than EUR 100,000 (or equivalent)[85] also benefit from an exemption for the 'public offering' trigger, as do exemptions applying to offers to qualified investors only or to a group of non-qualified investors totaling less than 150 persons. The EU Prospectus Directive generally details the necessary information that must be contained in prospectuses such as the format, incorporation by reference, rules on the publication of the prospectus, and dissemination of advertisements.

This regime has been translated into the Czech regulatory environment under the Capital Market Act (CMA). Article 34 of the CMA excludes securities whose total offered issue price does not exceed the equivalent of EUR 1,000,000 (calculated over a rolling 12-month period). Article 35 of the CMA also exempts from the prospectus requirement (i) an offer of securities solely addressed to qualified investors, or (ii) a limited group of persons (other than qualified investors) of fewer than 150 per EU Member State, if the minimum investment per investor is equal to or greater than EUR 100,000 or if the price per unit is equal to of EUR 100,000. Information to be provided to investors and the approval process is set forth under the CMA.

The Czech securities market is also regulated by additional laws and decrees which have been gradually introduced since 1991, and amended on several occasions since that date, including: the Bonds Act (2004), the Business Corporations Act (2013), the Civil Code (2014), the Investment Fund Code (2013), and the Securities Commission Act (1998).

With regard to debt issuance, the 2004 Bonds Act is applicable to all bonds governed by Czech law, regardless of their issuer or place of issue. Bonds can be issued as a security in an order form and transferable by physical endorsement. The bonds can be also issued in a dematerialized form. The change of the bond ownership has then to be recorded in the list either held by the issuer or held by a registrar for the transfer

[84] This regime and applicable threshold have recently been revised with the adoption of a new Prospection Regulation. This new Regulation has been published in the Official Journal of the European Union on June 30 2017 (EU/2017/1129). It will replace the existing regime for the approval of Prospectuses under Directive (2003/71/EC) (as amended). Under the New Regulation, Member States will have the discretion to exempt from the prospectus requirement (or instead impose minimum disclosure requirements) on domestic issues of securities with total consideration of up to EUR 8 million (instead of EUR 5 million) over 12 months. No prospectus will be required for capital raisings and crowdfunding projects of up to EUR 1 million. A simplified proportionate disclosure regime for SME markets, and other issuers making offers to the public of less than EUR 20 million in any 12-month period will apply. A simplified prospectus regime will apply to issuers with fungible securities already listed on a regulated market or SME for at least 18 months. This new Regulation will gradually enter in effect, to reach its full applicability in July 2019.

[85] The rational being that an investor capable of investing a ticket of €100,000, will generally be an institution or have the means to carry out any due diligence necessary.

to be effective. Not all bonds are dematerialized and there is no centralized registrar in the country able to provide a complete and exhaustive view of the bonds issued in the Czech Republic.

The Bonds Act was significantly amended in 2012, confirming the reduced supervisory involvement in the bond issuance process. These amendments eliminated the oversight and sanctioning authority of the CNB in cases where the bond issuance is not "offered to public" as defined by CMA and there is no obligation to publish a prospectus. This new approach created a "private bonds" regime, operating under simplified rules to expand the issuance of bonds in the Czech market. Under this regime, there are no obligations for the bond issuer to submit or even inform the CNB when bonds are issued, leaving any change in the issuing conditions, even substantial ones, entirely to the vigilance of the investors until their repayment is fully made.[86] Finally, any breach of duties by an issuer to investor may only be remedied by means of private law. In other words, the CNB, in its role as the securities regulator, does not have investigative or sanctioning power over bonds issued in this manner. Those bonds are issued outside any financial supervisory scope.

The information to be provided under this 'private bond regime' is also simplified.[87] The issuer must in particular designate itself, the type of bond, its form, nature and basic rights and conditions attached to the bond (for example, transferability, convertibility and/or preemptive rights), its identification number in the International Securities Identification Number (ISIN) system, the par value of the bond, the amount of the interest payment or the method used to determine the interest payment, the date(s) of interest payments, and the maturity date(s) of the bond's par value. It includes a declaration by the issuer of its duties to the bondholder, (including at least the par value, to obligation to repay the par value of the bond and the interest payments, and the set times and places of payment).

- **Trading in Securities Issued by SMEs**

The revised version of MiFID allows operators of an MTF to register their market under an "SME growth market" label, provided that at least 50% of the instruments traded on the MTF are issued by SMEs. Under MiFID 2 trading rules, SMEs are defined as companies with an average market capitalization of less than EUR 200 million, on the basis of year-end quotes for the previous three calendar years.[88] The listing on such an SME market segment is possible if there is sufficient information published to enable investors to make an informed judgment. This information can take the form of a prospectus or any other type of admission document if the prospectus requirements do not apply.

The information required for admission to trading on an SME market segment, where the requirement to publish a prospectus does not apply, is not dictated at the EU level. It is left to each competent authority to assess whether the rules of the market achieve the proper level of information necessary for investors to make an informed judgement. The responsibility for the information featured in the admission document belongs to the issuer, but it will be for the operator of the SME market to define how the admission docu-

[86] Certain types of bonds remain subject to special conditions where certain supervision and sanctions have been retained (for example, communal bonds, public bonds or mortgage bonds).

[87] Article 3 of the Act.

[88] This criterion is different from the Prospectus Directive which defines a Medium Sized Enterprise as a company which, according to its last annual or consolidated account, has (a) an average number of employees during the financial year of less than 250, and (b) total assets not exceeding EUR 43 million or annual net turnover not exceeding EUR 50 million. The EC has used both definitions in new prospectus requirements 2017/1129.

ment will be reviewed, with or without a formal approval by the competent authority or the operator.[89] The PSE operates an official market segment open to companies that have a market capitalization of at least EUR 1 million, 25% free-float, and have been in operation for at least 3 years. The PSE also operates an MTF with two segments, including one dedicated to SMEs ('Start market').[90] This market operates under a lighter listing regime where no approved prospectus is necessary.[91]

Impacts for the Czech Market

- **The low level of public offerings may be explained by the regulatory burden placed on issuers which discourages them form obtaining financing through the capital market.** While listing costs were not identified during the technical discussions as the most impeding factor, the **governance and transparency requirements** associated with a public listing were. During the technical discussions, Czech SME's were generally described as family companies that (1) have historical relationships with their banks, and (2) are not willing to subject their management (and ownership) to public scrutiny. Here again reference is made to the relative competitiveness of the banking segment versus the capital market, at least with regard to debt financing. When a bank provides a loan, the focus is placed on the credit risk associated with the repayment, whereas in the case of capital market financing, the issuer must provide information about the company's management process to investors. A firm that is reluctant to provide such information will clearly opt for (an extension of) bank credit over a capital market issuance.
- **The 'private bond regime' is described as a powerful alternative for small companies to obtain financing.** However, the lack of official offering data makes this difficult to assess. Both market participants and the CNB have reported that when a small company decides to raise capital through a debt issuance, this is generally done under the private bond placement regime. The process is simple, not involving the market regulator and keeping disclosure to a minimum (the issuer describes only the debt obligation and the promised return).[92] When this exemption is used to sell bonds to institutional buyers the level of disclosure provided can be driven by market forces. However, when the exemption is used to sell to retail buyers this process raises investor protection concerns.

New Inducement Rules Governing SME Research and Securities Distribution:

General Notes

MiFID II establishes a new set of rules speaking to client protection and disclosure, known as the Inducements Rules. MiFID firms providing investment advice on an independent basis, portfolio management, or any other MiFID services are subject to restrictions on inducements and in their advice to their clients.[93] ESMA has included the offering of investment research as an inducement. As a result, a firm's ability to accept fees from third parties has been severely curtailed:

[89] This is based on ESMA advice sent to the EC last April 2016

[90] For example, companies that do not qualify to be listed on the regulated market – see https://www.pse.cz/en/market-data/statistics/statistics-files/key-data/

[91] https://www.pse.cz/uploads/u/pse/Ostatni_dokumenty/IPO-brochure.pdf, page 3

[92] https://www.pse.cz/uploads/u/pse/Legislativa/Free_Market_Information_Document.pdf

[93] Articles 24.4, 24.7, 24.7 and 24.9 of MiFID 2 (Directive No 2014/65/EU). Delegated Act published in April 2016, Articles 11 to 13.

- MiFID firms providing investment advice on an 'independent basis' may not accept fees, commissions, or any monetary or non-monetary benefits from any source that would impair the firm's duty to act in the best interest of the client.[94]
- MiFID firms providing portfolio management service (management of an individual mandate) may not accept fees, commissions, or any monetary or non-monetary benefits paid or provided by, or on behalf of, a third party, unless the firm can prove that the payment or benefit paid or received is designed to enhance the quality of the service to the client and that the benefits provided or received do not impair with its duty to act honestly, fairly and professionally in accordance with the best interests of the client. The scale and nature of the payment made or the benefit received are taken into consideration to assess if the firm is acting in the best interest of its client.
- MiFID firms, from brokers to distributors, when offering investment advice, are considered as conflicted if they pay or are paid any fee or commission, or provide or are provided with any non-monetary benefit unless it enhances the quality of service provided to a client and it does not impair with its duty to act honestly, fairly and professionally in accordance with the best interest of the clients. In this case, the existence, nature, and amount of the payment or benefit, or, where the amount cannot be ascertained, the method of calculating that amount must be disclosed to the client. As a result, firms providing execution services to clients, including asset managers, will have to unbundle the pricing for execution services from other services such as research and corporate access, in order for each service to be separately identifiable and charged.[95] Firms providing execution services will need to expressly and separately identify the charges for the execution of an order, research, and corporate access.

Impacts for the Czech Market

Research provided to any firm (including a 'MiFID' investment firm, a UCITS, or an AIF's asset manager) must be paid for either from the firm's or the asset manager's own resources, unless it is paid for from a specific research payment account (RPA). The RPA will be funded by a specific research fee charged to the client, and managed to ensure that the quality of the research purchased contributes to a 'better' investment decision.[96] The funding of the RPA may not be linked to the volume or value of transactions executed on behalf of clients. Research will be budgeted, and is therefore likely to be translated into a fixed annual cost.[97] The RPA's purpose is to have a specific payment flow which links each research product to a specific and identified payment. The policy goal is to increase the transparency of the fees that are charges to clients. On the other hand, this policy also prevents investment firms from cross-subsidizing the research

[94] There is an exception to this general rule for "minor non-monetary benefits" that can enhance the quality of the service provided to a client and are of a scale and nature such that they could not be viewed as impairing the firm's judgment.

[95] The Delegated Act expressly limits the application of the rule to the situation where an EU bank / broker is dealing with another MiFID investment firm established in the EU. In other words, the 'separate pricing rule' will not apply if dealing with non-EU investment managers, such as US firms. See Article 13.9 of the Commission Delegated Act, published in April 2016.

[96] This implies that the firm shall establish a written policy documenting all elements of how research quality is assessed and provided to its clients, and the extent to which research is purchased through the RPA benefits clients' portfolios. The investment manager must also comply with an initial disclosure requirement, a separate ongoing disclosure requirement, and an ad-hoc disclosure requirement (on request from clients and regulators).

[97] Currently within the EU, when research is paid from commissions it is VAT exempt. However, this treatment may not apply in the future if research is paid through the RPA, unless an exemption is expressly negotiated. In the UK, for example, this would add 20% on to the cost of research.

cost of covering large versus small niche companies. While the full impact of these rules remains uncertain, this has already raised several concerns among the Czech financial services community:

- **The new Inducement Rules will be difficult to apply for fixed income trading:** Although implementing measures allow for an RPA to be funded by dealing commissions, this will cause some operational challenges for most Czech managers which operate in the fixed income space where the use of dealing commissions to pay for research is not common.[98]

- **The switch from a pull to push model will reduce an SME's ability to attract investor interest.** Given that research reports will need to be requested by the client or its asset manager, it is difficult to understand how research on smaller companies, who are unknown to the public, will find its way into the hands of those investors or asset managers. This in turn directly impacts the smaller companies' ability to obtain capital market financing.

- **The costs associated with the RPA will make investment in SMEs and SME funds less profitable and therefore less attractive.** Funds or firms investing in companies where research has not already been produced (for example for SMEs) yet ready to pay for it, will have to set up a PRA account. This will result in an additional 'compliance cost' directly reducing the attractiveness of investing in such SME's. This is an issue for the Czech market where most companies are SMEs. It is also likely to become a major obstacle to a uniform capital market development in the EU.

- **As the Inducement Rules prevent cross-subsidizing research costs, major investment banks will further streamline their research budget allocation and concentrate their resources on the most profitable EU companies.** In a Czech market dominated by a few major banks whose headquarters and decision centers are located in other EU jurisdictions, allocation of resources to produce research on Czech companies is already a challenge. The Inducement Rules stand to make this situation worse. Some see this as an opportunity for smaller providers to produce independent analysis on SME's although the question as to who will pay for producing such research remains unresolved.

- **Finally, Czech market participants predict that the new Inducements rules will have a distortive impact on product distribution.** The new rules essentially provide that distribution fees shall be directly charged to the investor, which of course is a radical change to existing models. Agents acting on behalf of clients investing in funds managed by an EU manager will not be able to receive any form of commission for distribution. This will drive agents to focus their businesses towards distributing more 'rewarding' products which are not subject to the MiFID rules (*e.g.*, insurance products or pension funds) which offer similar features to the final investors.

[98] Moreover, to avoid any artificial increase of the execution prices to finance the RPA, the Delegated Act states that the supply of and charges for those benefits or services must not be influenced or conditioned by levels of payment for execution services.

ANNEX 2: THE LINK BETWEEN CAPITAL MARKETS DEVELOPMENT AND ECONOMIC GROWTH

Many data-based studies have explored the link between developing a country's capital market and achieving macroeconomic goals. One of the key problems in this regard has been an academic dispute as to what should be the relevant measures of capital market development. There are many choices. For example, the World Bank's financial development database contains a wide range of measures including: market capitalization, trading volumes, volume of securities offerings, and the total value of private and public bonds outstanding.[99] These can also be considered as a ratio against GDP, which makes it possible to assess relative capital market strength adjusting to 'same-sized economy'.

Part of the problem in using these various metrics is the lack of widespread and cohesive data. Except for market capitalization data, the information for the other metrics is intermittent. So, despite the fact that other metrics might provide a more informed view of a capital market's health, most of the studies look to market capitalization, which is the total market value of all shares (and bonds) listed on the public securities exchange.

Capital Market and GDP Growth

Most studies conclude that development of the capital market has a positive effect on GDP growth. The scatterplot graph at **Figure 2** illustrates the strong correlation between capital market development (measured by market capitalization) and GDP per capita.

Various aspects of this have been reviewed many times in the literature. One of the most notable early studies shows that capital market development predicts GDP growth.[100] Another study concludes that stock market liquidity (measured as trading volume in proportion of the market capitalization) is positively and robustly correlated with current and future rates of economic growth.[101]

Capital Market and FDI

In today's highly competitive environment for inward investment, attracting foreign direct investment (FDI) is a key target for policymakers. It is clearly recognized that FDI has positive effects in addition to the inward capital, including gains in productivity and technology transfers, as well as introducing new processes, managerial skills, know-how, international production networks and access to markets. However, several studies address how the lack of a local capital market, can limit a country's ability to attract FDI.

A study by authors Laura Alfaro, Areendam Chanda, Sebnem Kalemli-Ozcan and Selim Sayek in 2003 used many financial market variables to show "although FDI on its own plays an ambiguous role in contributing to economic growth, having well-developed financial markets alters the results significantly … Countries with well-developed financial markets seem to gain significantly more from FDI". This is

[99] Accessible via http://data.worldbank.org/data-catalog/global-financial-development

[100] Neusser and Kugler (1998).

[101] Levine, Ross and Zervos (1998).

consistent with two other 2003 studies. The stock market metrics used were (1) the value of stock market trading relative to the size of the economy (GDP) and (2) the average value of listed domestic shares on the domestic exchange in a year as share of the GDP. The data covers approximately 50 countries and the period 1980-1995.

Capital Market and Access to Finance for Small Businesses

A World Bank report found SMEs provide more than 60% of employment in developing countries. They contribute 51% of GDP in high-income countries but only 16% in low-income countries, suggesting much room to grow. In most cases their ability to find finance is a key constraint. Banks are the main source of finance, but loans must be repaid short-term, putting pressure on cash-flows and slowing growth. Banks also require collateral, which can be difficult.

Two recent studies of SME financing, by the World Bank and World Federation of Exchanges (WFE), looked into the efforts of regulated securities exchanges worldwide to support the financing of SMEs by creating specialist trading lists for them, often known as “SME boards” or “growth boards”.

Siobhan Cleary, Head of Research and Public Policy at WFE, says: “Regulators (whether the exchange or the securities regulator) in various jurisdictions have recognized the importance of reducing the cost for SMEs of accessing capital market financing. The trick is to find the balance where investors have what they need in order to make informed decisions and SMEs are still able to access capital markets in a cost-effective manner. Transparency is central component of the listed environment as is flexibility”.

There are many examples of global success stories with SME boards. One of the most notable is the Korean Exchange (KRX), which has grown to be the world’s third biggest stock exchange for listing and trading SMEs and has subsidiary exchanges, KOSDAQ, KONEX and >koscom for technology companies.[102] KOSDAQ was launched in 1996 and provides funds for well-established SMEs and “technology-savvy” companies including information technology, bio technology and cultural technology. KONEX was launched in 2013 exclusively for SMEs and start-up companies to support their early-stage financing and development through the capital market. Government offers key incentives including tax, deregulation and other support. KOSDAQ and KONEX play a critical role in a virtuous circle of growth and investment. Typically venture capital (VC), angel investors and government (through policies as well as funds) invest into start-up companies. These grow to list on KONEX, where professional investors tend to invest in what have developed into start-up SME companies, and VC investors can take some funds out to re-invest into fresh start-ups. As the companies grow further, they can move to KOSDAQ where often non-professional investors may be interested as they have evolved into established SMEs, and the VCs can take more funds to reinvest into the earlier growth stages.

There are many efforts around the world to set up growth boards so that capital markets can boost investment and growth of SMEs. The lessons include:

- The regulatory structure for SMEs to use the capital market needs to be finely balanced and driven by the structures and constraints of that particular market.

[102] Based on presentation by Honghee Shin, Executive Director of Korea Exchange March 2016, World Exchanges Congress, London in March 2016.

- There should be well functioning institutions and intermediaries such as venture capital funds and angel investors who can add the necessary skills and other inputs to help SMEs to grow and make best use of the capital.
- Boosting SMEs through the capital market can lead to a virtuous circle in which the best advance to the main board on the capital market and the pioneer investors have more funds to invest in picking the next generation of SME growth winners.

Bibliography and Related Reading

Acquah-Sam, Emmanuel and King Salami (2014). "Effect of capital market development on economic growth in Ghana". *European Scientific Journal*, March 2014, Edition Vol 10, #7. European Scientific Institute, Kocani, Macedonia.

Aduda, Josiah, Ronald Chogii and Main Thomas Murayi (2014). "The effect of capital market deepening on economic growth in Kenya". University of Nairobi, Nairobi.

Alfaro, Laura, and others (2004). FDI and economic growth: The role of local financial markets. *Journal of International Economics*, 2004, vol. 60, Issue 1 (Oct), pp89-122. Elsevier, Amsterdam, Netherlands.

Alhabashneh, Amjad GH (2015). "Evolving Efficiency of Amman Stock Exchange". *Interdisciplinary Journal of Contemporary Research in Business.* Feb 2015, Vol 6, #10.

Alternative Investment Management Association (AIMA) (2014). "Capital markets and economic growth. Long-term trends and policy challenges." Alternative Investment Management Association. London.

Andritzky, Jochen R (2007). Capital market development in a small country. The case of Slovenia. International Monetary Fund, Washington DC.

Beck, Thorsten, Ross Levine and Norman Loayza (2000). Finance and the sources of growth. *Journal of Financial Economics,* 58, pp261-300. Elsevier, Amsterdam, Netherlands.

Bekaert, Geert, and Campbell R Harvey (1997). Capital markets: An engine for economic growth. National Bureau of Economic Research, Cambridge, MA, USA.

Bencivenga, VR, BD Smith and RM Starr (1996). "Equity Markets, Transaction Costs, and Capital Accumulation: An Illustration". *The World Bank Economic Review, a Symposium Issue on Stock Markets and Economic Development.* May 1996. World Bank, Washington DC.

Blundell-Wignall, A, Yu-Wei Hu and Juan Yermo (2008). "Sovereign wealth and pension fund issues." OECD Working Papers on Insurance and Private Pensions No 14. Organization for Economic Cooperation for Development, Paris.

Börsch-Supan, Axel H, F Jens Köke and Joachim K Winter (2004). Pension reform, savings behavior and capital market performance. Mannheim Research Institute for the Economics of Ageing, Mannheim, Germany.

Demarco, Gustavo (2010). Retirement savings in MENA. World Bank, Washington DC.

Demirgüç-Kunt, A, and Ross Levine (1996). "Stock Markets, Corporate Finance and Economic Growth: An Overview." *The World Bank Economic Review, a Symposium Issue on Stock Markets and Economic Development.* May 1996. Washington: World Bank.

Draženović, Bojana Olgić, and Tino Kusanović (2016). "Determinants of capital market in the new member EU countries". *Economic Research.* Vol 29, #1, 758-769. Routledge, London.

Dudley, William C, and R Glenn Hubbard (2004). How capital markets enhance economic performance and facilitate job creation. Global Markets Institute, Goldman Sachs, New York, USA.

Economic Development Institute of the World Bank, Regulatory Reform and Private Enterprise Division, edited by Ernst, UFW (1996). *Securities Market Development, a Guide for Policy Makers.* Washington: World Bank.

Fredholm, Johan, and Benjamin Taghavi-Awal (2006). Capital markets in developing countries – a model for capital markets diagnostics with a field study implementation in Georgia. School of Business, University of Stockholm, Stockholm.

Isenmila, PA and Akinola Adewale O (2012). The role of capital market in emerging economy. *International Journal of Business and Social Research,* Vol 2, #6 November 2012. Rockville, MD, USA.

Kallas, Űlo (2012). Development Proposals for capital markets. FinanceEstonia.EU

Laeven, Luc (2014). The development of local capital markets. Rationale and challenges. International Monetary Fund. Washington, DC. OŰ Basel Group, Basel.

Levine, Ross, Norman Loayza and Thorsten Beck (2000). Financial intermediation and growth; Causality and causes. *Journal of Monetary Economics,* 46, pp31-77. Elsevier, Amsterdam, Netherlands.

Ouandloos, Arav (2010). "Capital markets and economic development: A framework for newly liberalized economies. *Journal of Business and Economics Research,* Vol 8, #6 June 2010. The Clute Institute, Littleton, CO, USA

Rojas-Suarez, Liliana (2014). "Strengthening capital markets in emerging economies: Two key issues that the G20 should not miss." Centre for Global Development, Washington DC. Available at http://www.cgdev.org/blog/strengthening-capital-markets-emerging-economies-two-key-issues-g20-should-not-miss.

Schellhase, John, Moutusi Sau and Apanard Prabha (2014). "Capital markets in developing countries. The state of play". Center for Financial Markets, Milken Institute, Santa Monica, CA, USA.

Schizaz, Emmanouil (2012). "The rise of capital markets in emerging and frontier economies." Association of Chartered Certified Accountants (ACCA), London.

World Bank (2001). *Global development finance 2001: Building coalitions for effective development finance.* World Bank, Washington DC.

World Economic Forum, prepared with Oliver Wyman (2015). "Accelerating emerging capital markets development. Corporate bond markets". World Economic Forum, Cologny/Geneva.

ANNEX 3: BENCHMARKING DATA – MARKET STATUS

To benchmark the Czech Republic's relative performance against its peers – in terms of its level of capital market development versus GDP levels – four sets of comparative countries were used. These are: (1) GDP peers, (2) GDP per capita peers, (3) Members States entering the EU on or after 2004, and (4) all EU Member States.[103] For the first two groups the nearest +/- countries were selected, omitting those without a capital market or for which data was lacking.[104]

GDP Peers

The data set for the 'GDP peer countries' included all countries with a GDP +/- **EUR** 40 billion from the Czech Republic's 2015 GDP of **EUR** 154.3 billion. The grouping for the resulting 10 countries was as follows.

Table 24: Market Data for 10 GDP Peer Countries

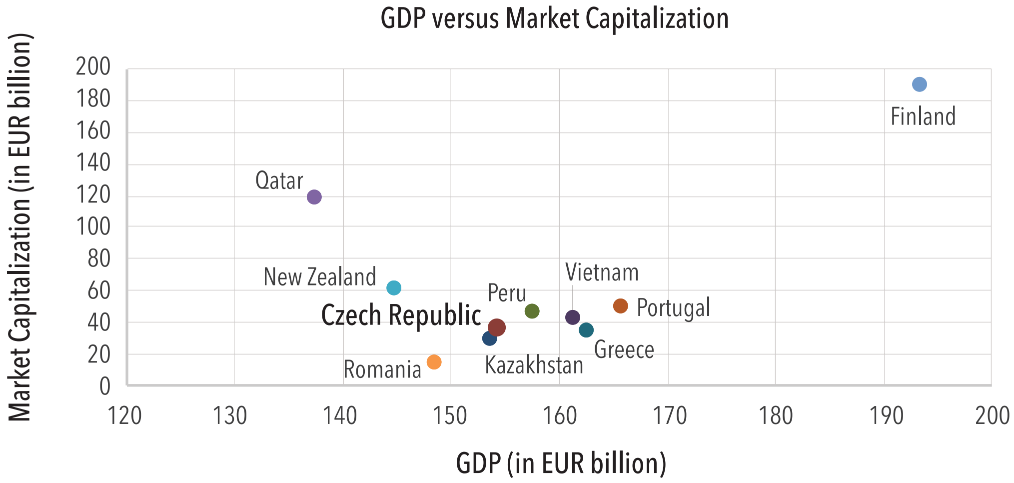
Country Name	GDP 2015 (EUR bill.)	GDP per capita 2015 (EUR)	Market Cap (EUR bill.)	Market Cap per capita (EUR)
Qatar	€ 137.20	€ 61,378	€ 118.80	€ 53,145
New Zealand	€ 144.80	€ 31,507	€ 61.96	€ 13,482
Romania	€ 148.30	€ 7,477	€ 15.45	€ 779
Kazakhstan	€ 153.66	€ 8,758	€ 29.08	€ 1,657
Czech Republic	€ 154.30	€ 14,624	€ 37.09	€ 3,515
Peru	€ 157.59	€ 5,023	€ 47.13	€ 1,502
Vietnam	€ 161.33	€ 1,759	€ 43.23	€ 471
Greece	€ 162.38	€ 15,002	€ 35.07	€ 3,240
Portugal	€ 165.77	€ 16,018	€ 49.86	€ 4,818
Finland	€ 193.29	€ 35,259	€ 189.93	€ 34,646

Sources: WB Database, FEAS, WFE, OMX Baltic Exchange and OMX Nordic Exchange

In this grouping the CZE ranks 6th out of ten in terms of the market capitalization. However, there are strong outliers (Finland and Qatar).

[103] It should be noted that the WB Global Financial Indicators database presents all information in USD. However, for purposes of consistency in this report, the benchmarking results are converted into Euros at 2015 YE rate.

[104] All data used for the benchmarking exercise was obtained through the World Bank's global database, which in turn derives its data from various sources. More specifically, sources for the market capitalization data were: (1) WB database, (2) the Federation of Euro-Asian Stock Exchanges, the World Federation of Stock Exchanges, OMX Baltic Exchange and OMX Nordic Exchange.



GDP per capita Peers

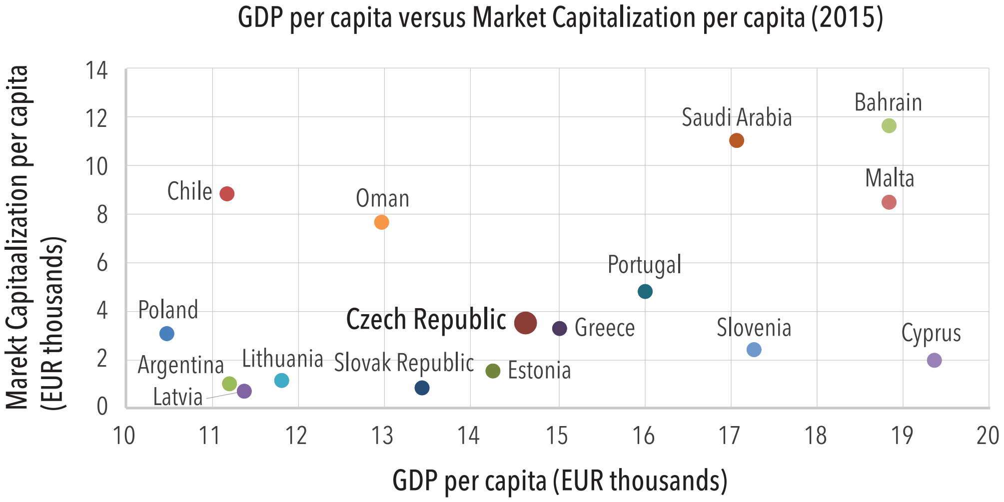
In order to adjust for varying populations, yet still link the benchmarking to GDP size and level of capital market development, a data set for the 'GDP per capita peer countries' was formed which includes all countries with a GDP per capita +/- **EUR** 4,000 from the Czech Republic's 2015 GDP per capita of **EUR** 14,623. The data set for the resulting 16 countries was as follows.

Table 25: Market Data for 16 GDP per capita Peers

Country Name	GDP 2015 (EUR bill.)	GDP per capita 2015 (EUR)	Market Cap 2015 (EUR bill.)	Market Cap per capita (EUR)
Poland	€ 397.56	€ 10,462	€ 114.81	€ 3,021
Chile	€ 200.66	€ 11,180	€ 158.63	€ 8,838
Argentina	€ 485.97	€ 11,193	€ 46.78	€ 1,077
Latvia	€ 22.50	€ 11,374	€ 1.29	€ 654
Lithuania	€ 34.31	€ 11,789	€ 3.44	€ 1,182
Oman	€ 58.19	€ 12,959	€ 34.27	€ 7,631
Slovak Republic	€ 72.72	€ 13,407	€ 4.00	€ 738
Estonia	€ 18.72	€ 14,265	€ 1.92	€ 1,464
Czech Republic	€ 154.30	€ 14,624	€ 37.09	€ 3,515
Greece	€ 162.38	€ 15,002	€ 35.07	€ 3,240
Portugal	€ 165.77	€ 16,018	€ 49.86	€ 4,818
Saudi Arabia	€ 538.33	€ 17,068	€ 350.88	€ 11,125
Slovenia	€ 35.65	€ 17,272	€ 5.03	€ 2,437
Malta	€ 8.12	€ 18,830	€ 3.67	€ 8,511
Bahrain	€ 25.94	€ 18,834	€ 16.04	€ 11,648
Cyprus	€ 16.30	€ 19,369	€ 2.24	€ 1,925

Sources: WB Database, FEAS, WFE, OMX Baltic Exchange and OMX Nordic Exchange

Under this approach, the Czech Republic compares more favorably, fitting roughly at the median. What is noteworthy, however, is that the country appears to place above many other CEE countries



EU 13 Peers

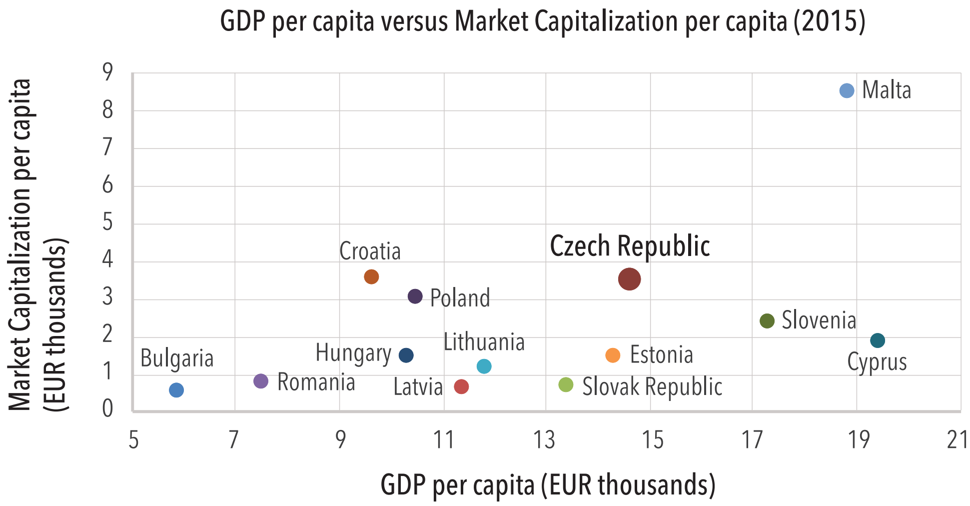
The observation from the GDP per capita peers served to reinforce the original plan to explore how the Czech Republic stands against its CEE peers. The next comparison set collected the data for all EU entrants 2004 and afterwards. The data set for the resulting 13 countries was as follows, sorted by market cap per capita.

Table 26: Market Data for 13 Most Recent EU Entrants

Country Name	GDP 2015 (EUR bill.)	GDP per capita 2015 (EUR)	Market Cap 2015 (EUR bill.)	Market Cap per capita (EUR)
Bulgaria	€ 41.83	€ 5,828	€ 4.01	€ 558
Latvia	€ 22.50	€ 11,374	€ 1.29	€ 654
Slovak Republic	€ 72.72	€ 13,407	€ 4.00	€ 738
Romania	€ 148.30	€ 7,477	€ 15.45	€ 779
Lithuania	€ 34.31	€ 11,789	€ 3.44	€ 1,182
Estonia	€ 18.72	€ 14,265	€ 1.92	€ 1,464
Hungary	€ 101.43	€ 10,303	€ 14.74	€ 1,497
Cyprus	€ 16.30	€ 19,369	€ 2.24	€ 1,925
Slovenia	€ 35.65	€ 17,272	€ 5.03	€ 2,437
Poland	€ 397.56	€ 10,462	€ 114.81	€ 3,021
Czech Republic	€ 154.30	€ 14,624	€ 37.09	€ 3,515
Croatia	€ 40.61	€ 9,613	€ 15.02	€ 3,554
Malta	€ 8.12	€ 18,830	€ 3.67	€ 8,511

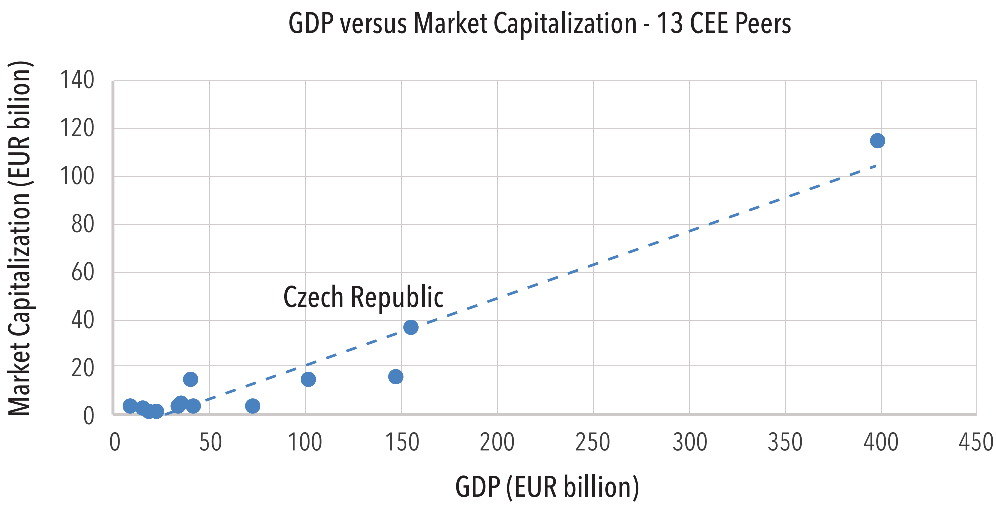
Sources: WB Database, FEAS, WFE, OMX Baltic Exchange and OMX Nordic Exchange

Here one may see that the Czech Republic compares quite well to its CEE neighbors. The level of penetration of the capital markets as expressed by market cap per citizen is high.



Moreover, moving back to the broader metric of economy size versus capital market size one may see that the Czech Republic places ahead of all CEE peers except Poland. In addition, the country fits almost perfectly within the trendline.

Figure 26: Comparison to 13 Most Recent EU Entrants – Mkt Cap to GDP



All EU Members

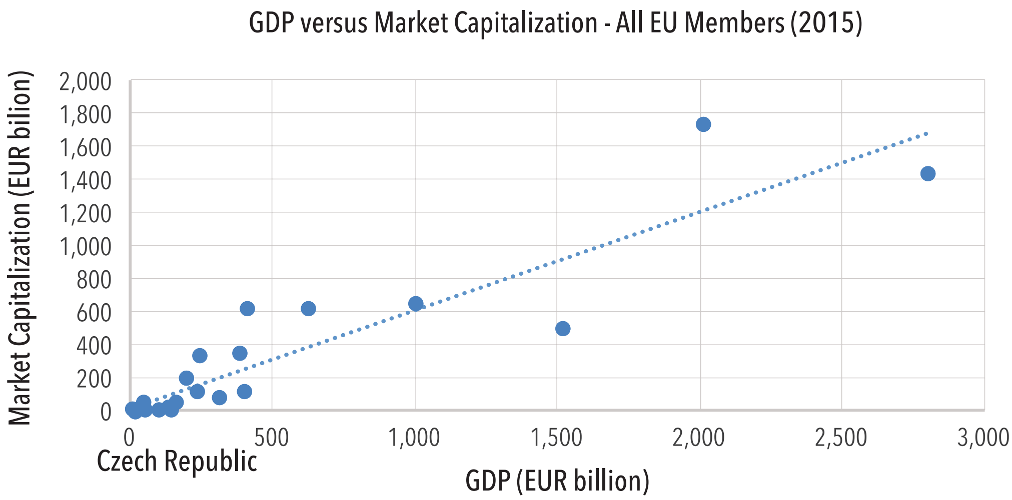
To form the last benchmarking set, the data for all EU Members was collected (except the UK whose parameters significantly skewed the comparisons). The data set for the resulting 27 countries was as follows, sorted by market cap per capita.

Table 27: Market Data for All EU Members

Country Name	GDP 2015 (EUR bill.)	GDP per capita 2015 (EUR)	Market Cap 2015 (EUR bill.)	Market Cap per capita (EUR)
Bulgaria	€ 41.83	€ 5,828	€ 4.01	€ 558
Latvia	€ 22.50	€ 11,374	€ 1.29	€ 654
Slovak Republic	€ 72.72	€ 13,407	€ 4.00	€ 738
Romania	€ 148.30	€ 7,477	€ 15.45	€ 779
Lithuania	€ 34.31	€ 11,789	€ 3.44	€ 1,182
Estonia	€ 18.72	€ 14,265	€ 1.92	€ 1,464
Hungary	€ 101.43	€ 10,303	€ 14.74	€ 1,497
Cyprus	€ 16.30	€ 19,369	€ 2.24	€ 1,925
Slovenia	€ 35.65	€ 17,272	€ 5.03	€ 2,437
Poland	€ 397.56	€ 10,462	€ 114.81	€ 3,021
Greece	€ 162.38	€ 15,002	€ 35.07	€ 3,240
Czech Republic	€ 154.30	€ 14,624	€ 37.09	€ 3,515
Croatia	€ 40.61	€ 9,613	€ 15.02	€ 3,554
Portugal	€ 165.77	€ 16,018	€ 49.86	€ 4,818
Italy	€ 1,517.91	€ 24,965	€ 489.43	€ 8,050
Malta	€ 8.12	€ 18,830	€ 3.67	€ 8,511
Austria	€ 314.13	€ 36,479	€ 80.07	€ 9,298
Spain	€ 999.21	€ 21,526	€ 655.99	€ 14,132
Germany	€ 2,802.87	€ 34,428	€ 1,429.83	€ 17,563
Ireland	€ 236.42	€ 50,945	€ 106.67	€ 22,987
France	€ 2,015.70	€ 30,171	€ 1,740.26	€ 26,049
Belgium	€ 379.24	€ 33,603	€ 345.46	€ 30,611
Finland	€ 193.29	€ 35,259	€ 189.93	€ 34,646
Netherlands	€ 625.24	€ 36,916	€ 607.07	€ 35,844
Denmark	€ 245.91	€ 43,324	€ 332.34	€ 58,552
Sweden	€ 413.02	€ 42,150	€ 611.62	€ 62,417
Luxembourg	€ 48.16	€ 84,542	€ 39.28	€ 68,945

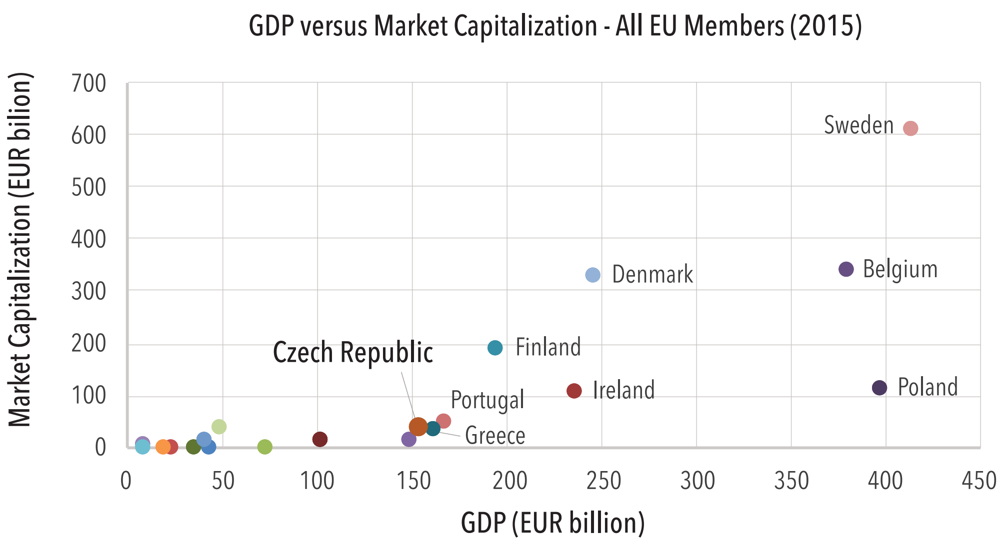
Sources: WB Database, FEAS, WFE, OMX Baltic Exchange and OMX Nordic Exchange

As might be expected, adding in these older EU members, with their considerably larger economies and capital markets, greatly skews the depiction. In essence, a picture of a two-tiered EU capital market begins to form. The 13 new entrants occupy the extreme lower left corner of the GDP vs. Market Cap graph, almost indistinguishable among each other, while the remaining countries fill out the broader trendline.



It is only after removing the countries of Germany, France, Italy, Spain, and the Netherlands (leaving 22 EU members) that the Czech Republic becomes distinguishable within the group. But these, of course, are the most dominant capital markets within the EU.

Figure 27: Comparison to 22 EU Members – Mkt Cap to GDP



In sum:

- When compared to countries with similar sized economies around the world, the Czech Republic's capital market is undistinguished. It falls below the peer group's median and is surrounded by markets recognized as second or third tier.
- When the focus shifts to GDP per capita, essentially taking the population factor out of the equation, the Czech capital market begins to compare more favorably to its peers. It occupies the median of the Market Cap per capita data set. In other words, the level of its capital market's penetration into the economy is better when viewed on a per citizen basis.
- The Czech market compares best within the peer group of the 13 most recent EU entrants. With the exception of Poland, it ranks highest among the CEE countries, both with regard to (a) GDP versus Market Cap and (b) GDP per capita to Market cap per capita.
- The comparisons weaken when the other EU Members are added to the data set. Here a picture of a two tiers of capital markets clearly emerges, with the older members and the larger economies eclipsing the new entrants. The Czech Republic may be a leader in capital markets development among the new entrants, but its capital market lags almost by a power of ten behind the leading economies of the UK, Germany, France, Spain, Italy and the Netherlands.

ANNEX 4: BENCHMARKING DATA – SAVINGS RATES

Part of understanding the level of latent demand for capital market investment products is to understand the amount of investable resources on hand within the economy. This helps answer the question: is the general public able to participate in the capital market (either directly or through indirect means such as investment funds). Put more broadly the question is: are there excess resources in the system that are not required for basic consumption and can be instead used for investment.[105]

For 2015 the savings data for the Czech Republic was as follows:[106]

Gross domestic savings (% of GDP)	Gross domestic savings (current EUR)	Gross savings (% of GNI)	Gross savings (current EUR)
33.49%	€ 51,670,376,205	28.79%	€ 41,501,900,252

Two key questions arise in this regard:

(1) What were the destinations of these savings (*i.e.,* where were these resources placed)?

(2) In terms of the expected future health of the Czech Republic's capital market, how do these amounts compare to the CZ's peer countries.

The first question is addressed in Section III.B., above. The second question is addressed immediately below.

The benchmarking the Czech Republic's savings rates against its peers used the same methodology as was used for the market development analysis. In other words, the benchmarking sought to compare the Czech Republic against its: (1) GDP peers, (2) GDP per capita peers, (3) Members States entering the EU on or after 2004, and (4) all EU Member States. However, two important points should be noted.

First, the countries selected for the savings comparisons do not match identically with the countries used in the market development benchmarking. This is because savings data was not available for some of those same countries.

Second, when viewing savings rates, the base matric used was Gross National Income as opposed to Gross Domestic Product.[107]

[105] Once the amount of latent resources has been determined, the analysis can move on to questions of market structure, financial literacy and inducement.

[106] The source for this comparison data is the World Bank's global database, which in turn specifies the primary sources. All sources and definitions for the data used are contained in the spreadsheets submitted with this report.

[107] The GNI per capita figures as calculated under the Atlas Method.

GNI Peers

The 'GNI peer countries' group includes all countries with a GNI +/- **EUR** 40 billion from the Czech Republic's 2015 GNI of **EUR** 144.14 billion. The grouping for the resulting 10 countries was as follows, sorted by GNI.

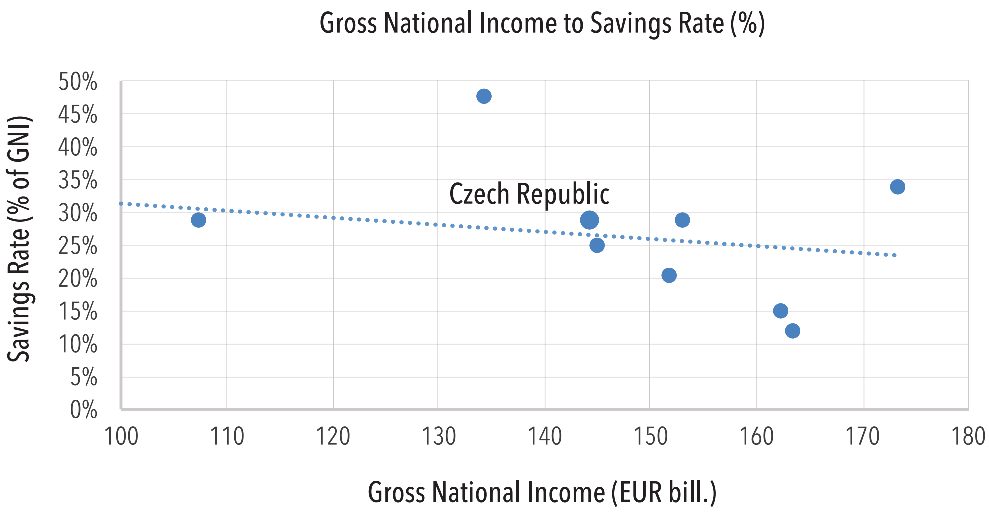
Table 28: Savings Data for 10 GNI Peer Countries (2015)

Country Name	GNI (current EUR bill.)	GNI per capita (current EUR)	Gross savings (as a % of GNI)	Gross savings (current EUR bill.)
Hungary	€ 96.78	€ 10,817	26.14%	€ 25.30
Kuwait	€ 107.40	€ 35,125	28.88%	€ 31.02
Qatar	€ 134.23	€ 69,992	47.59%	€ 63.87
Czech Republic	€ 144.16	€ 15,117	28.79%	€ 41.50
Romania	€ 144.84	€ 7,917	25.05%	€ 36.28
Peru	€ 151.75	€ 5,108	20.42%	€ 30.98
Vietnam	€ 153.05	€ 1,658	28.81%	€ 44.09
Portugal	€ 162.24	€ 17,108	15.01%	€ 24.36
Greece	€ 163.32	€ 16,933	10.20%	€ 16.66
Bangladesh	€ 173.12	€ 992	33.90%	€ 58.69

Source: World Bank global database

In this grouping, the Czech Republic ranks squarely in the middle of the data set, falling almost upon the linear trendline. Four countries have higher savings rates, while five are lower.

Figure 28: Comparison to GNI Peers – Savings Rate (%) to GNI



Source: World Bank global database

GNI per capita Peers

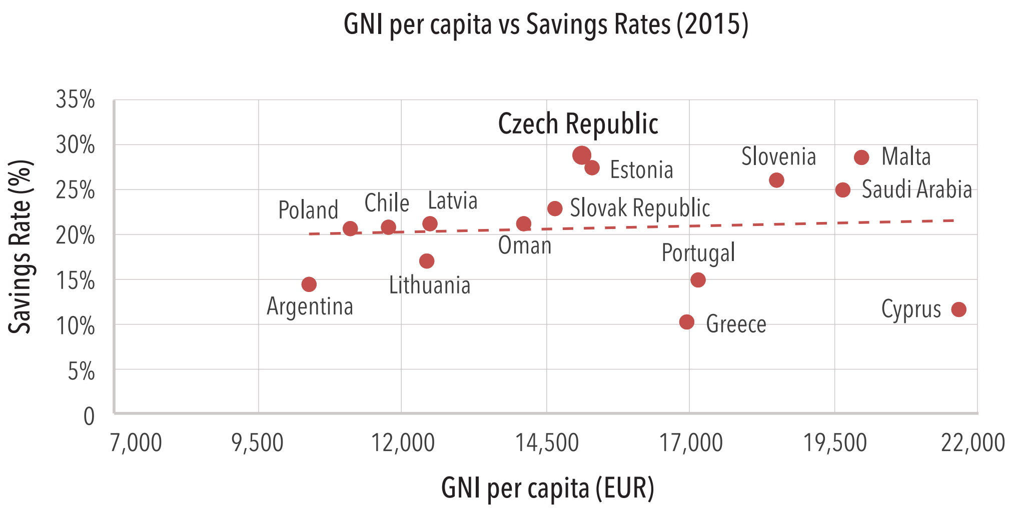
In order to adjust for varying populations, a data set for the 'GNI per capita peer countries' was formed which includes all countries with a GNI per capita +/- **EUR** 6,000 from the Czech Republic's 2015 GNI per capita of **EUR** 15,116. The data set for the resulting 15 countries was as follows, sorted by GNI per capita.

Table 29: Savings Data for 15 GNI per capita Peers (2015)

Country Name	GNI (current EUR bill.)	GNI per capita (current EUR)	Gross savings (% of GNI)	Gross savings (current EUR bill.)
Argentina	€ 477.43	€ 10,383	14.47%	€ 69.08
Poland	€ 383.76	€ 11,117	20.59%	€ 79.01
Chile	€ 195.49	€ 11,750	20.79%	€ 40.64
Lithuania	€ 32.87	€ 12,450	17.04%	€ 5.60
Latvia	€ 22.45	€ 12,483	21.31%	€ 4.78
Oman	€ 56.26	€ 14,092	21.10%	€ 11.87
Slovak Republic	€ 71.53	€ 14,642	22.95%	€ 16.42
Czech Republic	€ 144.16	€ 15,117	28.79%	€ 41.50
Estonia	€ 18.33	€ 15,300	27.51%	€ 5.04
Greece	€ 163.32	€ 16,933	10.20%	€ 16.66
Portugal	€ 162.24	€ 17,108	15.01%	€ 24.36
Slovenia	€ 34.74	€ 18,492	25.90%	€ 9.00
Saudi Arabia	€ 551.39	€ 19,625	25.14%	€ 138.60
Malta	€ 7.92	€ 19,942	28.49%	€ 2.26
Cyprus	€ 16.24	€ 21,658	11.59%	€ 1.88

Source: World Bank global database

Within this comparison set, the Czech Republic surpasses all its peers in terms of savings rate.



EU 13 Peers

The next comparison set consists of the 13 EU entrants 2004 and afterwards, again sorted by GNI per capita.

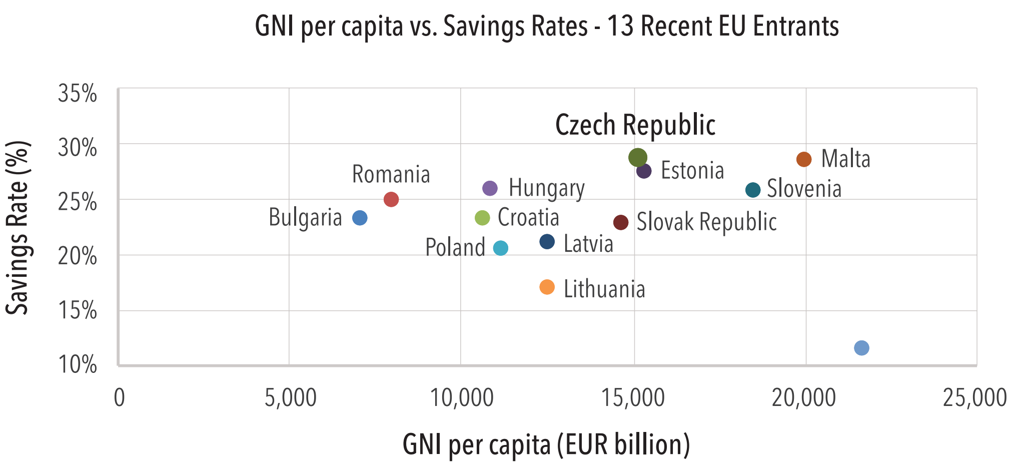
Table 30: Savings Data for 13 Most Recent EU Entrants (2015)

Country Name	GNI (current EUR bill.)	GNI per capita (current EUR)	Gross savings (as % of GNI)	Gross savings (current EUR bill.)
Bulgaria	€ 40.99	€ 6,233	23.39%	€ 9.59
Romania	€ 144.84	€ 7,917	25.05%	€ 36.28
Croatia	€ 40.36	€ 10,583	23.43%	€ 9.45
Hungary	€ 96.78	€ 10,817	26.14%	€ 25.30
Poland	€ 383.76	€ 11,117	20.59%	€ 79.01
Lithuania	€ 32.87	€ 12,450	17.04%	€ 5.60
Latvia	€ 22.45	€ 12,483	21.31%	€ 4.78
Slovak Republic	€ 71.53	€ 14,642	22.95%	€ 16.42
Czech Republic	€ 144.16	€ 15,117	28.79%	€ 41.50
Estonia	€ 18.33	€ 15,300	27.51%	€ 5.04
Slovenia	€ 34.74	€ 18,492	25.90%	€ 9.00
Malta	€ 7.92	€ 19,942	28.49%	€ 2.26
Cyprus	€ 16.24	€ 21,658	11.59%	€ 1.88

Source: World Bank global database

Here one may see again that the Czech Republic compares quite well to its CEE neighbors. The level of savings compared to the national income per citizen is high.

Figure 29: Comparison to 13 Most Recent EU Entrants – Savings Rates to GNI per capita



All EU Members

To form the last benchmarking set, the data for all 28 EU Members was collected. The data set was as follows, sorted by market cap per capita.

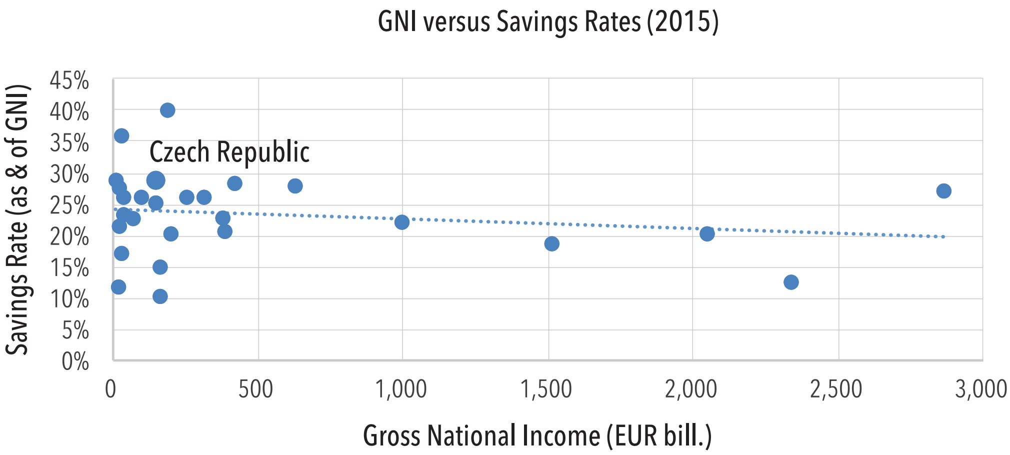
Table 31: Savings Data for All EU Members (2015)

Country Name	GNI (current EUR bill.)	GNI per capita (current EUR)	Gross savings (as % of GNI)	Gross savings (current EUR bill.)
Bulgaria	€ 40.99	€ 6,233	23.39%	€ 9.59
Romania	€ 144.84	€ 7,917	25.05%	€ 36.28
Croatia	€ 40.36	€ 10,583	23.43%	€ 9.45
Hungary	€ 96.78	€ 10,817	26.14%	€ 25.30
Poland	€ 383.76	€ 11,117	20.59%	€ 79.01
Lithuania	€ 32.87	€ 12,450	17.04%	€ 5.60
Latvia	€ 22.45	€ 12,483	21.31%	€ 4.78
Slovak Republic	€ 71.53	€ 14,642	22.95%	€ 16.42
Czech Republic	€ 144.16	€ 15,117	28.79%	€ 41.50
Estonia	€ 18.33	€ 15,300	27.51%	€ 5.04
Greece	€ 163.32	€ 16,933	10.20%	€ 16.66
Portugal	€ 162.24	€ 17,108	15.01%	€ 24.36
Slovenia	€ 34.74	€ 18,492	25.90%	€ 9.00
Malta	€ 7.92	€ 19,942	28.49%	€ 2.26
Cyprus	€ 16.24	€ 21,658	11.59%	€ 1.88
Spain	€ 998.60	€ 23,775	22.09%	€ 220.62
Italy	€ 1,510.45	€ 27,342	18.76%	€ 283.42
France	€ 2,048.43	€ 33,783	20.39%	€ 417.66
United Kingdom	€ 2,333.10	€ 36,158	12.42%	€ 289.85
Belgium	€ 378.44	€ 36,875	23.09%	€ 87.38
Germany	€ 2,863.88	€ 38,283	27.09%	€ 775.86
Finland	€ 194.93	€ 38,792	20.24%	€ 39.46
Austria	€ 312.41	€ 39,508	26.11%	€ 81.58
Netherlands	€ 622.97	€ 40,717	28.03%	€ 174.64
Ireland	€ 188.44	€ 43,817	40.00%	€ 75.37
Sweden	€ 420.34	€ 48,267	28.43%	€ 119.49
Denmark	€ 252.22	€ 48,792	25.90%	€ 65.33
Luxembourg	€ 33.43	€ 64,167	36.10%	€ 12.07

Source: World Bank global database

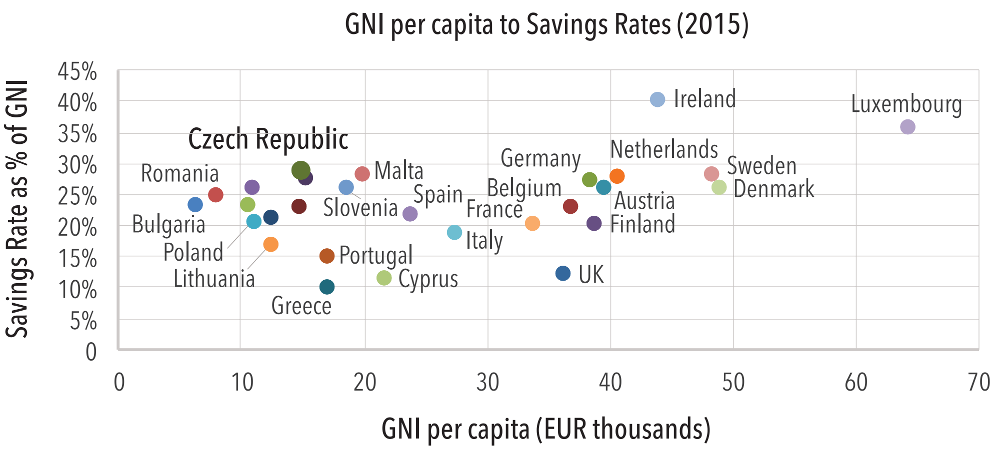
From the perspective of total GNI, the Czech Republic compares very well to all the EU countries. Only Ireland (40%) and Luxembourg (36.10%) exceed the CZ's savings rate of 28.79%.

Figure 30: Savings Comparison to All EU Members – GNI to Savings Rate



When adjusting for population (by using GNI per capita), again the Czech Republic compares well. Again, in terms of savings rates, only Ireland and Luxembourg have higher percentage rates. Against the new entrants the CZ's rate is the highest. However, its GNI per capita falls within the median of that set.

Figure 31: Savings Comparison to All EU Members – GNI per capita to Savings Rates



In sum:

When compared to countries with similar sized national incomes around the world, the Czech Republic ranks squarely in the middle of the data set. Four countries have higher savings rates, while five are lower. When the focus shifts to GNI per capita, essentially taking the population factor out of the equation, the Czech Republic surpasses all its peers in terms of savings rate.

- Czech savings rates compares best within the peer group of the 13 most recent EU entrants. At 28.71% it is the highest ranking country within the set.
- This is also true when comparing the Czech Republic against all EU members. Within these 28 countries, the Czech Republic has the highest savings rate, exceeded only by Ireland (40.00%) and Luxembourg (36.10%).

ANNEX 5: HISTORICAL SAVINGS FLOWS

Year	Annual Deposit Growth (clients)		Gross Life Insurance Premiums		Net Inflows Pension Funds		Net Inflows Investment Funds		Securities Offerings	
	CZK bill.	EUR bill.	CZK bill.	EUR bill.	CZK bill.	EUR bill.	CZK bill.	EUR bill.	CZK bill.	EUR bill.
2008	197.91	€ 7.35	56.90	€ 2.11	24.53	€ 0.91		€ 0.00	51.86	€ 1.93
2009	131.32	€ 4.96	60.21	€ 2.27	24.15	€ 0.91	(0.39)	(€ 0.01)	66.53	€ 2.51
2010	89.87	€ 3.59	71.76	€ 2.86	16.55	€ 0.66	4.49	€ 0.18	28.16	€ 1.12
2011	125.85	€ 4.88	72.01	€ 2.79	15.18	€ 0.59	(0.64)	(€ 0.02)	129.00	€ 5.00
2012	213.63	€ 8.50	72.06	€ 2.87	25.72	€ 1.02	4.47	€ 0.18	191.47	€ 7.62
2013	212.48	€ 7.75	71.58	€ 2.61	22.47	€ 0.82	11.74	€ 0.43	90.33	€ 3.29
2014	95.07	€ 3.43	71.19	€ 2.57	40.42	€ 1.46	4.10	€ 0.15	20.14	€ 0.73
2015	85.58	€ 3.17	62.42	€ 2.31	32.44	€ 1.20	0.53	€ 0.02	14.66	€ 0.54
2016	246.50	€ 9.12	86.53	€ 3.20	32.20	€ 1.19	7.71	€ 0.29	30.57	€ 1.13

Sources: CNB ARAD; PSE 2016 Fact Book

Figure 32: Selected Savings Flows (CZK) (2013-2016)

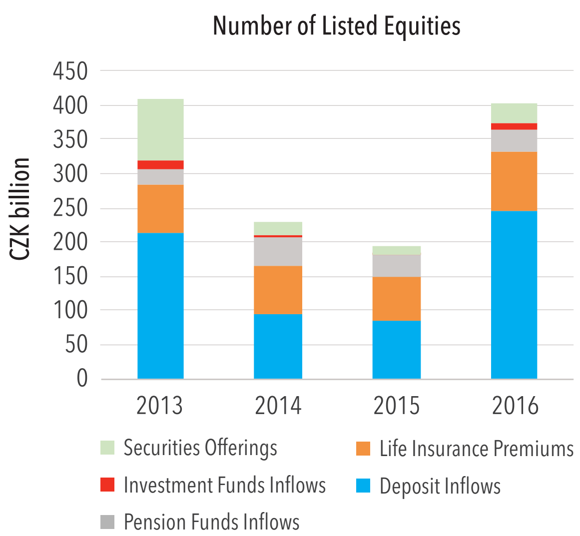
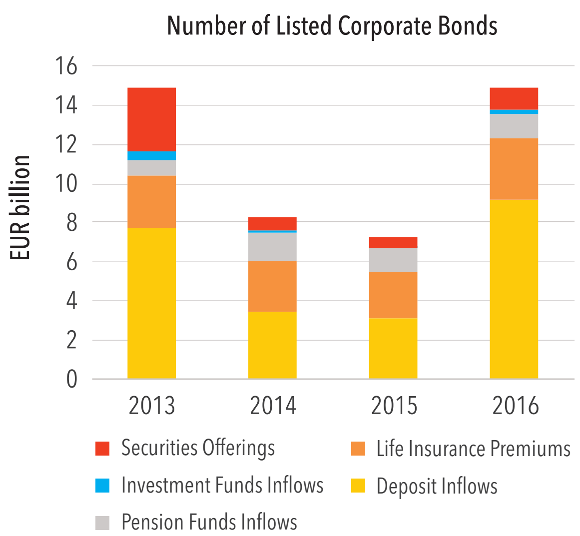


Figure 33: Selected Savings Flows (EUR) (2013-2016)



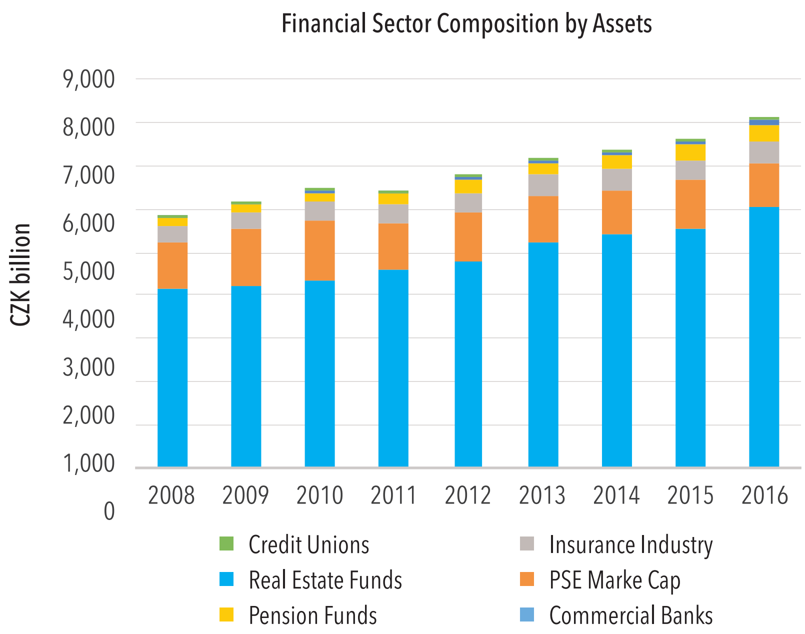
ANNEX 6: FINANCIAL SECTOR COMPOSITION HISTORICAL DATA

Table 32: Financial Sector Composition by Assets (2008-2016)

Year	Commercial Bank Assets		PSE Equity Market Capitalization		Insurance Industry Assets		Pension Fund Assets		Real Estate Fund Assets	
	CZK bill.	EUR bill.	CZK bill.	EUR bill.	CZK bill.	EUR bill.	CZK bill.	EUR bill.	CZK bill.	EUR bill.
2008	4,153.37	€ 154.23	1,091.73	€ 40.54	369.18	€ 13.71	191.722	€ 7.12	7.00	€ 0.26
2009	4,218.99	€ 159.39	1,293.48	€ 48.87	396.43	€ 14.98	215.872	€ 8.16	9.96	€ 0.38
2010	4,329.77	€ 172.78	1,388.00	€ 55.39	426.39	€ 17.01	232.426	€ 9.27	18.64	€ 0.74
2011	4,609.81	€ 178.67	1,060.77	€ 41.12	435.50	€ 16.88	247.605	€ 9.60	28.30	€ 1.10
2012	4,778.59	€ 190.08	1,142.09	€ 45.43	469.04	€ 18.66	273.322	€ 10.87	63.43	€ 2.52
2013	5,200.63	€ 189.60	1,093.48	€ 39.86	479.12	€ 17.47	297.071	€ 10.83	74.46	€ 2.71
2014	5,387.98	€ 194.30	1,040.29	€ 37.51	487.37	€ 17.58	337.487	€ 12.17	81.73	€ 2.95
2015	5,549.69	€ 205.32	1,100.47	€ 40.71	483.08	€ 17.87	369.922	€ 13.69	82.05	€ 3.04
2016	6,020.00	€ 222.80	1,044.46	€ 38.66	492.50	€ 18.23	402.12	€ 14.88	96.10	€ 3.56

Sources: CNB ARAD; PSE 2016 Fact Book

Figure 34: Historical Financial Sector Asset Levels by Segment (2008-2016)



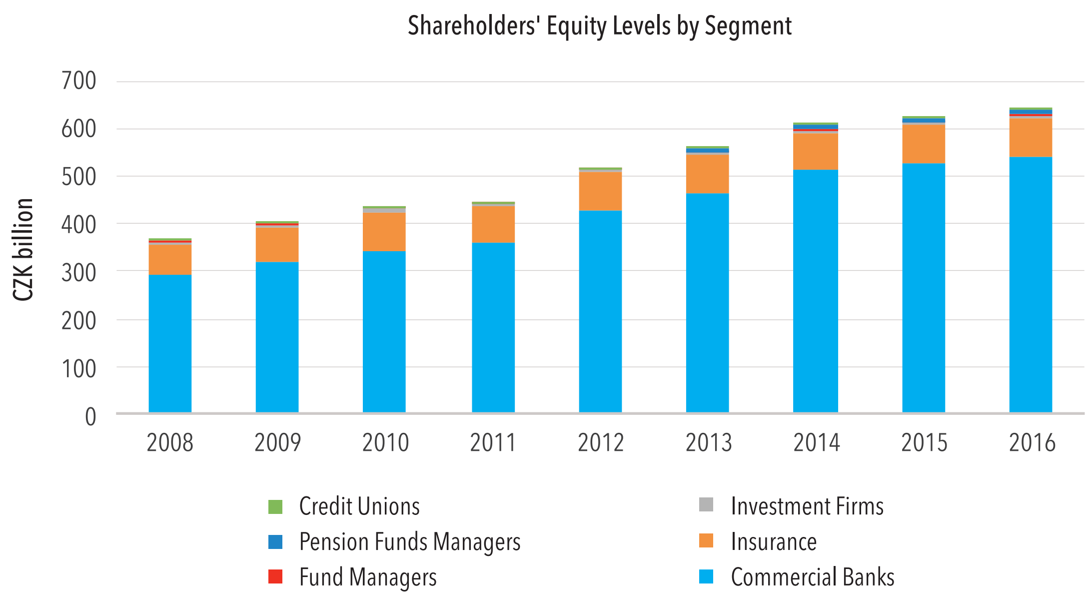
ANNEX 7: MARKET PARTICIPANT SHAREHOLDERS' EQUITY HISTORICAL DATA

Table 33: Shareholders' Equity by Industry Segment (2008-2016)

Year	Commercial Banks' Shareholders' Equity		Insurance Industry's Shareholder's Equity		Investment Firms' Shareholders' Equity		ICD FO 9 Management Companies' Equity		ICD PF 5 Pension Management Companies' Equity		Credit Unions' Members' Equity	
	CZK bill.	EUR bill.	CZK bill.	EUR bill.	CZK bill.	EUR bill.	CZK bill.	EUR bill.	CZK bill.	EUR bill.	CZK bill.	EUR bill.
2008	292.40	€ 10.86	64.68	€ 2.40	5.34	€ 0.20	2.50	€ 0.09	0.00	€ 0.00	0.26	€ 0.01
2009	319.59	€ 12.07	73.75	€ 2.79	5.35	€ 0.20	1.53	€ 0.06	0.00	€ 0.00	0.27	€ 0.01
2010	342.94	€ 13.68	82.43	€ 3.29	6.15	€ 0.25	1.39	€ 0.06	0.00	€ 0.00	0.06	€ 0.00
2011	362.45	€ 14.05	74.00	€ 2.87	4.63	€ 0.18	3.05	€ 0.12	0.00	€ 0.00	0.17	€ 0.01
2012	426.87	€ 16.98	83.07	€ 3.30	4.08	€ 0.16	2.42	€ 0.10	0.00	€ 0.00	0.55	€ 0.02
2013	462.74	€ 16.87	82.71	€ 3.02	4.33	€ 0.16	2.50	€ 0.09	9.13	€ 0.33	0.30	€ 0.01
2014	512.33	€ 18.48	81.16	€ 2.93	3.85	€ 0.14	2.61	€ 0.09	8.32	€ 0.30	0.17	€ 0.01
2015	527.08	€ 19.50	81.02	€ 3.00	3.88	€ 0.14	2.51	€ 0.09	8.80	€ 0.33	4.24	€ 0.16
2016	541.61	€ 20.04	82.59	€ 3.06	3.45	€ 0.13	2.88	€ 0.11	8.90	€ 0.33	4.81	€ 0.18

Sources: CNB ARAD database

Figure 35: Historical Financial Sector Equity Levels (2008-2016)



ANNEX 8: BANKS' USE OF AVAILABLE FUNDS

Eighteen Czech banks were included in the liquidity study. These included Czech chartered banks as well as branches of foreign banks reporting on an unconsolidated basis. Local banks providing their financial statements only in Czech language were excluded, as were the branches of foreign banks not providing unconsolidated statements. Together, the 18 banks reviewed comprise 76.27% of the total assets in the system and thus are deemed a reliable gauge for the liquidity study. For purposes of depicting the data, each bank was assigned a random code.

The banks included in this part of the review were:

Institution's Name		% of Total System Assets
BNP Paribas Personal Finance SA, odštěpný závod		0.28%
Banka CREDITAS a.s.		0.19%
CommerzeBank Aktiengesellschaft, pobočka Praha		0.85%
Equa bank a.s.		0.67%
Expobank CZ a.s.		0.39%
Fio banka, a.s.		0.74%
J & T BANKA, a.s.		2.65%
Komerční banka, a.s.		15.06%
MONETA Money Bank, a.s.		2.53%
Modrá pyramida stavební spořitelna, a.s.		0.22%
PPF banka a.s.		1.86%
Raiffeisenbank a.s.		4.44%
Sberbank CZ, a.s.		1.38%
UniCredit Bank Czech Republic and Slovakia, a.s.		9.86%
Českomoravská záruční a rozvojová banka, a.s.		0.56%
Československá obchodní banka, a. s.		16.77%
Česká exportní banka, a.s.		1.60%
Česká spořitelna, a.s.		16.24%
Total Banking System Assets as of 2015	**5,549,688,700,000**	**76.27%**
	€ 205,391,883,789	

The following is the detailed **level** of available funds, sorted by the “narrow metric”, lowest % of lending to highest.

Table 34: Detailed Levels of Available Funds

Bank ID Code	Available Funds (CZK thou)	Available Funds (EUR thou)	% Lending to Available Funds (Customers)	Excess Funds (CZK) Narrow Method (Using 80% Metric)	Excess Funds (EUR) Narrow Method (Using 80% Metric)	% Lending to Available Funds (Customers and Banks)	Excess Funds (CZK) Broad Method (Using 80% Metric)	Excess Funds (EUR) Broad Method (Using 80% Metric)
12	50,822,424	€ 1,880,919	26.14%	27,371,157	€ 1,012,996	29.42%	25,707,294	€ 951,417
1	98,691,000	€ 3,652,517	26.15%	53,145,800	€ 1,966,906	30.84%	48,513,800	€ 1,795,477
11	30,608,000	€ 1,132,791	29.59%	15,429,400	€ 571,036	30.44%	15,168,400	€ 561,377
15	866,278,000	€ 32,060,622	37.94%	364,330,400	€ 13,483,731	58.01%	190,488,400	€ 7,049,904
3	85,117,120	€ 3,150,152	42.59%	40,352,108	€ 1,493,416	79.18%	698,605	€ 25,855
14	43,312,000	€ 1,602,961	45.47%	14,955,600	€ 553,501	95.72%	(6,810,400)	(€ 252,050)
16	140,302,000	€ 5,192,524	49.92%	42,199,600	€ 1,561,791	52.53%	38,538,600	€ 1,426,299
2	867,178,000	€ 32,093,930	57.15%	198,164,400	€ 7,333,990	61.08%	164,044,400	€ 6,071,221
18	20,859,456	€ 772,000	61.97%	3,760,685	€ 139,182	96.28%	(3,396,021)	(€ 125,685)
8	537,360,000	€ 19,887,491	62.15%	95,892,000	€ 3,548,927	81.99%	(10,683,000)	(€ 395,374)
13	714,986,000	€ 26,461,362	67.76%	87,514,800	€ 3,238,890	75.39%	32,925,800	€ 1,218,571
4	74,672,000	€ 2,763,583	68.01%	16,423,800	€ 607,839	71.08%	14,127,800	€ 522,864
10	35,547,625	€ 1,315,604	76.55%	1,225,605	€ 45,359	85.19%	(1,844,908)	(€ 68,279)
6	239,012,615	€ 8,845,767	76.59%	32,056,896	€ 1,186,414	78.28%	28,009,241	€ 1,036,611
17	126,207,000	€ 4,670,873	78.72%	1,615,600	€ 59,793	78.81%	1,498,600	€ 55,463
9	8,639,552	€ 319,747	79.61%	33,405	€ 1,236	89.06%	(782,354)	(€ 28,955)
5	84,580,000	€ 3,130,274	86.09%	3,304,000	€ 122,280	90.37%	(315,000)	(€ 11,658)
7	15,201,839	€ 562,614	93.54%	(2,058,539)	(€ 76,186)	100.00%	(3,040,367)	(€ 112,523)
	4,039,374,631	**€ 149,495,730,237**	**56.55%**	**995,716,718,300**	**€ 36,851,099,863**	**67.79%**	**532,848,889**	**€ 19,720,536,244**

Source: 2015 financial statements of the individual banks

The following is the detailed **use** of available funds, sorted by % lending to customers of available funds lowest to highest.

Table 35: Detailed Use of Available Funds

Bank ID Code	Lending to Customers (CZK thou)	% of Available Funds	Funds Invested in Government Securities (CZK thou)	% of Available Funds	Funds Lent to Other Institutions (CZK thou)	% of Available Funds	Funds at CNB in Excess of Required Reserves (CZK thou)	% of Available Funds	Funds Invested in Non-Government Securities (CZK thou)	% of Available Funds
12	13,286,782	26.14%	9,169,656	18.04%	1,663,863	3.27%	26,104,064	51.36%	587,472	1.16%
1	25,807,000	26.15%	26,253,000	26.60%	4,632,000	4.69%	29,952,000	30.35%	12,023	12.18%
11	9,057,000	29.59%	17,287,000	56.48%	261,000	0.85%	9,000	0.03%	3,994,000	13.05%
15	328,692,000	37.94%	185,918,000	21.46%	173,842,000	20.07%	106,875,000	12.34%	70,951,000	8.19%
3	36,253,300	42.59%	7,043,454	8.28%	31,141,791	36.59%	10,079,209	11.84%	0	0.00%
14	19,694,000	45.47%	1,550,000	3.58%	21,766,000	50.25%	53,000	0.12%	237,000	0.55%
16	70,042,000	49.92%	3,384,000	2.41%	3,661,000	2.61%	47,312,000	33.72%	14,910,000	10.63%
2	495,578,000	57.15%	203,350,000	23.45%	34,120,000	3.93%	92,734,000	10.69%	41,396,000	4.77%
18	12,926,879	61.97%	0	0.00%	7,156,707	34.31%	157,031	0.75%	604,125	2.90%
8	333,996,000	62.15%	63,160,000	11.75%	106,575,000	19.83%	4,353,000	0.81%	29,276,000	5.45%
13	484,474,000	67.76%	72,201,000	10.10%	54,589,000	7.63%	27,135,000	3.80%	73,783,000	10.32%
4	50,781,000	68.01%	1,353,000	1.81%	2,296,000	3.07%	18,926,000	25.35%	1,278,000	1.71%
10	27,212,495	76.55%	2,600,980	7.32%	3,070,513	8.64%	2,183,016	6.14%	286,233	0.81%
6	183,054,457	76.59%	12,444,505	5.21%	4,047,655	1.69%	35,529,657	14.87%	3,936,341	1.65%
17	99,350,000	78.72%	13,120,000	10.40%	117,000	0.09%	13,478,000	10.68%	142,000	0.11%
9	6,878,236	79.61%	84,856	0.98%	815,760	9.44%	4,189	0.05%	828,338	9.59%
5	72,818,000	86.09%	6,173,000	7.30%	3,619,000	4.28%	1,960,000	2.32%	10,000	0.01%
7	14,220,011	93.54%	0	0.00%	981,828	6.46%	0	0.00%	0	0.00%
	2,284,121,160	**56.55%**	**625,092,451**	**15.47%**	**454,356,117**	**11.25%**	**416,844,166**	**10.32%**	**254,242,509**	**6.29%**

Source: 2015 financial statements of the individual banks

ANNEX 9: BANKS' FINANCIAL PERFORMANCE

The following are the performance results of the18 surveyed banks, sorted by Assets, highest to lowest.

Table 36: Banks' Use of Excess Funds

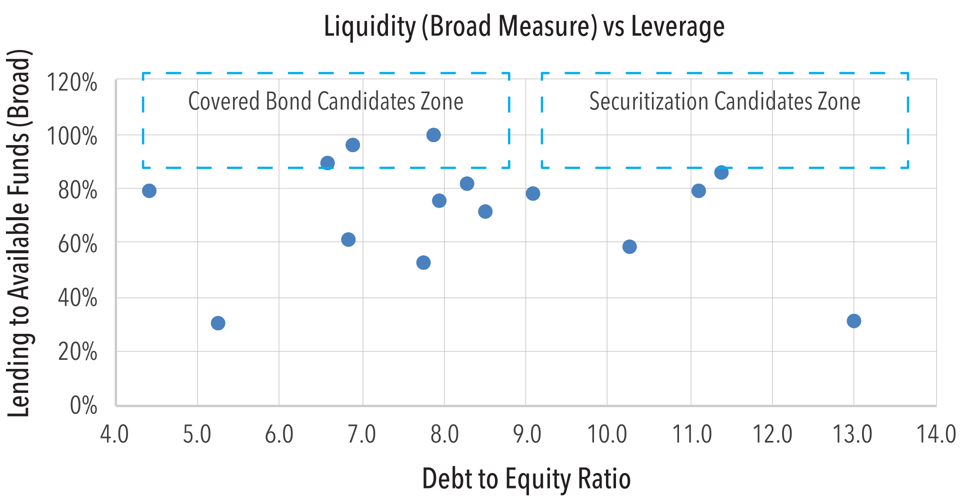
Bank ID Code	Total Assets (CZK thou)	Total Liabilities (CZK thou)	Shareholders' Equity (CZK thou)	Revenues (CZK thou)	Total Net Income (CZK thou)	Debt / Equity	Return on ASSETS	Return on EQUITY	Net Profit Margin
15	930,794,000	848,085,000	82,709,000	37,440,000	14,781,000	10.25	1.59%	17.87%	39.48%
2	901,278,000	785,942,000	115,336,000	37,467,000	14,144,000	6.81	1.57%	12.26%	37.75%
13	835,526,000	742,223,000	93,303,000	34,033,000	12,424,000	7.95	1.49%	13.32%	36.51%
8	547,218,000	488,337,000	58,881,000	17,835,000	5,033,000	8.29	0.92%	8.55%	28.22%
6	246,325,030	221,929,214	24,395,816	10,490,198	2,538,362	9.10	1.03%	10.40%	24.20%
16	146,990,000	130,191,000	16,799,000	7,213,000	1,733,000	7.75	1.18%	10.32%	24.03%
17	140,474,000	114,506,000	25,968,000	11,392,000	4,072,000	4.41	2.90%	15.68%	35.74%
1	103,084,000	95,709,000	7,375,000	3,153,000	1,295,000	12.98	1.26%	17.56%	41.07%
3	89,103,638	81,746,137	7,357,501	3,850,826	915,071	11.11	1.03%	12.44%	23.76%
5	88,686,000	83,753,000	4,933,000	6,953,000	(141,000)	16.98	-0.16%	-2.86%	-2.03%
4	76,609,000	68,530,000	8,079,000	2,651,000	23,000	8.48	0.03%	0.28%	0.87%
12	57,611,316	56,555,286	1,047,030	1,227,536	52,913	54.01	0.09%	5.05%	4.31%
14	46,970,000	46,612,000	358,000	1,536,000	257,000	130.20	0.55%	71.79%	16.73%
10	36,991,124	34,003,117	2,988,007	1,444,746	(282,957)	11.38	-0.76%	-9.47%	-19.59%
11	31,107,000	26,132,000	4,975,000	1,335,000	192,000	5.25	0.62%	3.86%	14.38%
18	21,798,975	19,036,808	2,762,167	806,924	105,126	6.89	0.48%	3.81%	13.03%
7	15,402,988	13,670,460	1,732,528	2,867,444	1,342,396	7.89	8.72%	77.48%	46.82%
9	10,286,345	8,926,527	1,359,818	566,717	22,152	6.56	0.22%	1.63%	3.91%
	4,326,255,416	**3,865,887,549**	**460,358,867**	**182,262,391**	**58,506,063**	**8.40**	**1.35%**	**12.71%**	**32.10%**

Source: 2015 financial statements of the individual banks

ANNEX 10: BANKS' LIQUIDITY AND LEVERAGE

Bank ID Code	Lending to Available Funds (Customers)	Excess Funds (CZK thou) Narrow Method (Using 80% Metric)	Lending to Available Funds (Customers and Banks)	Excess Funds (CZK thou) Broad Method (Using 80% Metric)	Debt / Equity
17	78.72%	1,615,600,000	78.81%	1,498,600,000	4.41
11	29.59%	15,429,400,000	30.44%	15,168,400,000	5.25
9	79.61%	33,405,600	89.06%	(782,354,400)	6.56
2	57.15%	198,164,400,000	61.08%	164,044,400,000	6.81
18	61.97%	3,760,685,800	96.28%	(3,396,021,200)	6.89
16	49.92%	42,199,600,000	52.53%	38,538,600,000	7.75
7	93.54%	(2,058,539,800)	100.00%	(3,040,367,800)	7.89
13	67.76%	87,514,800,000	75.39%	32,925,800,000	7.95
8	62.15%	95,892,000,000	81.99%	(10,683,000,000)	8.29
4	68.01%	16,423,800,000	71.08%	14,127,800,000	8.48
6	76.59%	32,056,896,500	78.28%	28,009,241,500	9.10
15	37.94%	364,330,400,000	58.01%	190,488,400,000	10.25
3	42.59%	40,352,108,000	79.18%	698,605,000	11.11
10	76.55%	1,225,605,000	85.19%	(1,844,908,000)	11.38
1	26.15%	53,145,800,000	30.84%	48,513,800,000	12.98
5	86.09%	3,304,000,000	90.37%	(315,000,000)	16.98
12	26.14%	27,371,157,200	29.42%	25,707,294,200	54.01
14	45.47%	14,955,600,000	95.72%	(6,810,400,000)	130.20
Total / Average	**56.55%**	**995,716,718,300**	**67.79%**	**532,848,889,300**	**8.40**

Source: 2015 financial statements of the individual banks



ANNEX 11: GOVERNMENT SECURITIES DATA

Table 37: Government Bonds Outstanding as of YE 2016

	Issue Name	Issue No.	ISIN	Maturity Date	Nominal Value Outstanding	Time to Maturity (years)	% of Total Outstanding	Nominal Value Outstanding (EUR)
1	CR 4.00%, 17	51	CZ0001001903	11 Apr. 2017	90,300,000,000	0.28	6.94%	€ 3,341,968,912
2	CR Var %, 17	67	CZ0001003438	23 Jul. 2017	47,603,000,000	0.56	3.66%	€ 1,761,769,060
3	CR 0.00%, 17	96	CZ0001004592	9 Nov. 2017	70,000,000,000	0.86	5.38%	€ 2,590,673,575
4	CR 0.00%, 18	99	CZ0001004709	22 Jan. 2018	40,799,050,000	1.06	3.13%	€ 1,509,957,439
5	CR 0.85%, 18	88	CZ0001004246	17 Mar. 2018	48,136,220,000	1.21	3.70%	€ 1,781,503,331
6	CR 4.60%, 18	41	CZ0001000822	18 Aug. 2018	75,000,000,000	1.63	5.76%	€ 2,775,721,688
7	CR 5.00%, 19	56	CZ0001002471	11 Apr. 2019	86,960,000,000	2.28	6.68%	€ 3,218,356,773
8	CR 0.00%, 19	98	CZ0001004717	17 Jul. 2019	60,830,200,000	2.54	4.67%	€ 2,251,302,739
9	CR 1.50%, 19	76	CZ0001003834	29 Oct. 2019	76,931,370,000	2.83	5.91%	€ 2,847,200,962
10	CR 3.75%, 20	46	CZ0001001317	12 Sep. 2020	75,000,000,000	3.70	5.76%	€ 2,775,721,688
11	CR Var%, 20	91	CZ0001004113	9 Dec. 2020	32,798,770,000	3.94	2.52%	€ 1,213,870,096
12	CR 3.85%, 21	61	CZ0001002851	29 Se. 2021	75,635,000,000	4.75	5.81%	€ 2,799,222,798
13	CR 4.70%, 22	52	CZ0001001945	12 Sep. 2022	75,116,740,000	5.70	5.77%	€ 2,780,042,191
14	CR Var %, 23	63	CZ0001003123	18 Apr. 2023	81,207,870,000	6.30	6.24%	€ 3,005,472,613
15	CR 0.45%, 23	97	CZ0001004600	25 Oct. 2023	21,007,750,000	6.82	1.61%	€ 777,488,897
16	CR 5.70%, 24	58	CZ0001002547	25 May 2024	87,600,000,000	7.40	6.73%	€ 3,242,042,931
17	CR 2.40%, 25	89	CZ0001004253	17 Sep. 2025	56,299,870,000	8.72	4.33%	€ 2,083,636,936
18	CR 1.00%, 26	95	CZ0001004469	26 Jun. 2026	31,035,150,000	9.49	2.38%	€ 1,148,599,186
19	CR Var %, 27	90	CZ0001004105	19 Nov. 2027	44,872,420,000	10.89	3.45%	€ 1,660,711,325
20	CR 2.50%, 28	78	CZ0001003859	25 Aug. 2028	58,589,640,000	11.66	4.50%	€ 2,168,380,459
21	CR 0.95%, 30	94	CZ0001004477	15 May 2030	26,444,530,000	13.38	2.03%	€ 978,702,073
22	CR 4.20%, 36	49	CZ0001001796	4 Dec. 2036	28,428,970,000	19.94	2.18%	€ 1,052,145,448
23	CR 4.85%, 57	53	CZ0001002059	26-Nov-57	11,020,000,000	40.93	0.85%	€ 407,846,040

Source: MoF 2016 Debt Management Report

Table 38: Government Securities Trading (2016)

2016	CZK/EUR	Amount in CZK	Amount in EUR	Turnover Relative to Outstanding	Amount in CZK	Amount in EUR	Turnover Relative to Outstanding
Month	**Rate**	**OTC**	**OTC**	**OTC**	**MTS**	**MTS**	**MTS**
June	27.13	24,866,881,813	€ 916,582,448	1.91%	8,036,044,520.96	€ 296,205,106	0.62%
July	27.03	27,211,581,680	€ 1,006,717,783	2.09%	3,710,037,831.89	€ 137,256,302	0.28%
March	27.06	29,638,626,774	€ 1,095,292,933	2.27%	9,390,768,037.58	€ 347,035,035	0.72%
May	27.02	30,995,439,862	€ 1,147,129,529	2.38%	7,170,110,582.71	€ 265,363,086	0.55%
December	27.02	33,927,246,919	€ 1,255,634,601	2.60%	4,835,269,328.66	€ 178,951,493	0.37%
November	27.06	35,259,813,235	€ 1,303,023,401	2.70%	8,670,317,387.65	€ 320,410,842	0.66%
February	27.06	38,613,121,793	€ 1,426,944,634	2.96%	6,981,830,713.14	€ 258,012,961	0.54%
September	27.02	42,542,814,796	€ 1,574,493,516	3.26%	16,603,886,441.01	€ 614,503,569	1.27%
January	27.03	45,782,015,626	€ 1,693,748,266	3.51%	5,612,391,374.90	€ 207,635,641	0.43%
October	27.03	46,754,794,127	€ 1,729,737,112	3.58%	7,509,515,384.30	€ 277,821,509	0.58%
August	27.03	48,924,867,313	€ 1,810,020,988	3.75%	9,822,678,764.86	€ 363,399,140	0.75%
April	27.04	61,240,870,241	€ 2,264,825,083	4.69%	6,952,726,247.87	€ 257,127,450	0.53%
Total		**465,758,074,179**	**€ 17,224,150,293**	**35.69%**	**95,295,576,615.53**	**€ 3,523,722,133**	**7.30%**

Source: CSD Data

ANNEX 12: ADDITIONAL NOTES ON THE FACTORING INDUSTRY

The Factoring Mechanism

Factoring reflects the use of an SME's invoices claimed against its customers (*i.e.,* its accounts receivable records) as collateral or guarantee to obtain advance credit for working capital purposes. It is a promising mechanism that allows SMEs to count on sufficient liquidity at all times for their operations, and to effectively obtain funds while the bills owed to them remain unpaid. See Figure 10 in the Main Text above for a diagram of the transaction.

Typically, the factoring mechanism works where a larger firm or corporation purchases goods or services from an SME, which records the amounts due as invoices in its accounts receivable. Since payment for such goods or services is usually delayed, the use of factoring allows the SME to pledge its receivables to a factoring firm (a bank or an independent financial/factoring company) that will provide funding to the SME in exchange for future payments received from the SME's receivables. The factoring firm typically advances the funds to the SME at a discounted amount versus the full amount of the expected receivable flows in order to compensate for the implied financing rate it needs to charge (as the funds advanced are akin to a loan) and any risks of not collecting 100% of the outstanding receivables amount.

In the Czech Republic, the discounting method for providing funds from a factoring firm to an SME is not always used, and sometimes the factoring firm simply charges a financing rate on the funds advanced, and then uses the proceeds from the payment of bills/receivables to collect on the interest and final principal. Other times the factoring firm may provide a revolving line of credit where the SME pays interest, and where the receivable proceeds are used to redeem principal and renew the revolving line of credit.

Reverse factoring, where instead of using the SME's account receivables as the collateral, the factoring firm uses the purchasing firm's accounts payables (*i.e.,* reflecting amounts owed to the SME), is not used much in the Czech Republic. The advantage of reverse factoring is that typically the larger purchasing firm has a higher credit rating than the SME, so in reverse factoring the accounts payable used as collateral can have a higher credit quality and thus be potentially attractive to capital market investors if packaged in an appropriate form of an investment.

The Regulatory Framework and Industry Structure

Factoring in the Czech Republic enjoys legal certainty (contrary to the experience in some other countries). The Civil Code allows transferability of receivables to a different creditor. A recent update to the Code no longer requires that invoices be specifically identified as the underlying collateral for advance funding, and allows the receivables to be transaction non-specific and revolving in nature (given their short-term duration) within a changing pool of "assets." The only provision in the latest legal change is that the receivables must at least specify the debtor firm(s) they pertain to. In the Code, the transfer of the account receivable does not require approval by the debtor party (the owing party) for it to be a valid factorable document.

The industry is mostly made up of banks with a factoring arm, and there is one non-bank independent factoring firm (Bibby Financial Services). See Table 10 in the main text above for more details.

Financial Parameters of Factoring Products

The invoices reflected in the accounts receivable which are factored, typically have durations of 30-90 (*i.e.,* the time between presentment and payment). Thus, the factoring firms typically use this time range to calculate the financing rate for the provision of advanced funding.

As mentioned, in the Czech Republic the "credit" given under factoring transactions can work more like a liquidity overdraft loan with a limit based on the receivables pledged. Factoring as well, can take the form of recourse or non-recourse factoring, where in the former case, the SME can be asked to repay the factoring firm if the receivable payments do not materialize as expected (*i.e.,* they default), and in the latter case of non-recourse, the factoring firm takes all the credit risk of the owing firm (the debtor). Indications are that most of the factoring done in the Czech Republic is of the recourse type.

Regarding fees, it is estimated that the financial contract requires the SME to pay 0.4% - 0.5% of the outstanding receivables as a fee. The financing rate for the actual funds advanced, as interest payments on the financing that remains outstanding (or as an implied discounting rate) is approximately Pribor + 2.4%. Defaults on the receivables portfolio seem relatively low, estimated at 3% of portfolios, and these invoices are put under "workout" once they become overdue and unpaid.

ANNEX 13: LEASING INDUSTRY DATA

Table 39: Leasing Companies by Market Share

	Company	Total Assets (CZK thou.)	Market Share	Cumulative Market Share
1	ČSOB Leasing, a.s.	17,898.20	13.10%	
2	ŠkoFIN s.r.o.	14,909.95	10.92%	24.02%
3	UniCredit Leasing CZ, a.s. */	14,773.96	10.82%	34.83%
4	Home Credit, a.s.	11,501.19	8.42%	43.25%
5	SG Equipment Finance Czech Republic s.r.o.	10,625.79	7.78%	51.03%
6	Raiffeisen-Leasing, s.r.o.	8,953.82	6.55%	57.59%
7	Mercedes Benz Financial Services Česká Republika s.r.o.	8,851.61	6.48%	64.07%
8	ESSOX, s.r.o.	5,357.97	3.92%	67.99%
9	Autoleasing, a.s.	4,629.15	3.39%	71.38%
10	MONETA Leasing, s.r.o.	3,901.43	2.86%	74.24%
11	LeasePlan Česká Republika, s.r.o.	3,632.24	2.66%	76.89%
12	Provident Financial s.r.o.	3,198.06	2.34%	79.24%
13	Deutsche Leasing ČR, spol. s.r.o.	3,125.56	2.29%	81.52%
14	ALD Automotive s.r.o.	3,108.39	2.28%	83.80%
15	ARVAL CZ s.r.o.	3,093.08	2.26%	86.06%
16	MONETA Auto, s.r.o.	3,030.36	2.22%	88.28%
17	Erste Leasing, a.s.	2,725.43	2.00%	90.28%
18	IMPULS-Leasing-AUSTRIA s.r.o.	2,298.66	1.68%	91.96%
19	UNILEASING, a.s.	2,050.57	1.50%	93.46%
20	Oberbank Leasing spol. s r.o.	1,981.60	1.45%	94.91%
21	SCANIA FINANCE Czech Republic, spol. s r.o.	1,771.74	1.30%	96.21%
22	BUSINESS LEASE s.r.o.	1,248.00	0.91%	97.12%
23	Toyota Financial Services Czech s.r.o.	645.53	0.47%	97.60%
24	PSA FINANCE ČESKÁ REPUBLIKA, s.r.o.	536.78	0.39%	97.99%
25	FCE Credit, s.r.o.	437.85	0.32%	98.31%
26	TT-Complex spol. s r.o.	218.86	0.16%	98.47%
27	AGRO LEASING J. Hradec s.r.o.	215.36	0.16%	98.63%
28	IKB Leasing ČR s.r.o.	1,695.82	1.24%	99.87%
29	ECONOCOM Czech Republic, s.r.o.	180.20	0.13%	100.00%
	Total	**136,597.16**		

Source: Leasing Association

ANNEX 14: LICENSING TRENDS – ENTRIES AND EXITS

Table 40: Czech Republic Investment Firm Entries and Exits (2008-2016)

I	CZECH INVESTMENT FIRMS ENTERING	CZK thou	II	CZECH INVESTMENT FIRMS EXITING	CZK thou
Year ended	Name	Balance Sheet Amount	Year ended	Name	Balance Sheet Amount
2008	None		2008	Böhm & partner, a.s.	17,091
			2008	Česká konsolidační agentura	
			2008	GARFIELD a.s.	62,943
			2008	WEST BROKERS a.s.	23,421
	0			-4	103,455
2009	AKCENTA CZ, a.s.	342,584	2009	BODY INTERNATIONAL BROKERS a.s.	240,382
2009	CITCO - Finanční trhy a.s.	215,315	2009	GAUDEA a.s.	22,681
2009	CYRRUS CORPORATE FINANCE, a.s.	10,727			
	3	568,626		-2	263,063
2010	Fio banka, a.s.	8,951,761	2010	Fio, burzovní společnost, a.s.	2,005,292
			2010	Global Brokers, a.s.	47,327
			2010	PROVENTUS Finance, a.s.	36,012
	1	8,951,761		-3	2,088,631
2011	HighSky Brokers, a.s.	29,277	2011	CAPITAL PARTNERS a.s.	669,953
2011	42 financial services s.r.o.	19,813	2011	KEY INVESTMENTS a.s.	22,351
			2011	Merx a.s., v likvidaci	19,449
	2	49,090		-3	711,753
2012			2012	ČSOB Asset Management, a.s., člen skupiny ČSOB	844,727
	0			-1	844,727
2013	Česká exportní banka, a.s.	95,323,864	2013	A&CE Global Finance, a.s.	119,240
	1	95,323,864		-1	119,240
2014			2014	Amidea, a.s.	20,947
	0			-1	20,947
2015			2015		
	0			0	0
2016			2016	Generali Investments CEE, a.s.	488,021
	0			-1	488,021

Table 41: Czech Republic Fund Managers Entries and Exits (2008-2016)

I	CZECH INVESTMENT FUND MANAGERS ENTERING	CZK thou	II	CZECH INVESTMENT FUND MANAGERS EXITING	CZK thou
Year ended	Name	Balance Sheet Amount	Year ended	Name	Balance Sheet Amount
2008	Fortius Global Investment, investiční společnost, a.s.	4,976	2008		
	Hanover Asset Management, investiční společnost, a.s.	10,279			
	2	**15,255**		0	
2009	EUFI - Asset Management investiční společnost a.s.	4,152	2009		
	FORS CAPITAL investiční společnost, a.s.	3,963			
	2	**8,115**		0	
2010	IVORY Asset Management - investiční společnost, a.s.	10,000	2010	Bayerische Investment Fonds a.s. - investiční společnost	7,920
	Partners investiční společnost, a.s. **(AIFM)**	9,999		Fortius Global Investment, investiční společnost, a.s.	1,694
	Safety invest funds investiční společnost, a.s.	4,533			
	2	**24,532**		-2	**9,614**
2011	Conseq Funds investiční společnost, a.s. **(UCITS MC)**	4,764	2011	EUFI - Asset Management investiční společnost a.s.	275,811
	CLOVIS, investiční společnost, a.s.	4,522		FORS CAPITAL investiční společnost, a.s.	3,898
	VIG Asset Management investiční společnost, a.s.	3,311		ORION CAPITAL MANAGEMENT investiční společnost, a.s.	4,841
				IVORY Asset Management - investiční společnost, a.s.	10,000
	3	**12,597**		-4	**294,550**
2012	I.C.P. Czech investiční společnost, a.s.	4,631	2012	Hanover Asset Management, investiční společnost, a.s.	7,036
	1	**4,631**		-1	**7,036**
2013	Raiffeisen investiční společnost, a.s.	6,406	2013		
	REDSIDE investiční společnost, a.s. **(AIFM)**	4,855			
	ZFP Investments, investiční společnost, a.s. (AIFM)	9,723			
	3	**20,984**		0	
2014	Art of Finance investiční společnost, a.s. (AIFM)	4,000	2014		
	DELTA Investiční společnost, a.s. **(AIFM)**	3,994			
	2	**7,994**		0	
2015	CARDUUS Asset Management a.s **(AIFM)**	15,996	2015		
	INVESTIKA, investiční společnost, a.s. **(AIFM)**	10,398			
	JET Investment Management, a.s. **(AIFM)**	27,825			
	3	**54,219**		0	
2016	Patria investiční společnost, a.s. **(AIFM)**	22,260	2016	CLOVIS, investiční společnost, a.s. (AIFM)	6,978
				I.C.P. Czech investiční společnost, a.s. (AIFM)	2,816
	1	**22,260**		-2	**9,794**

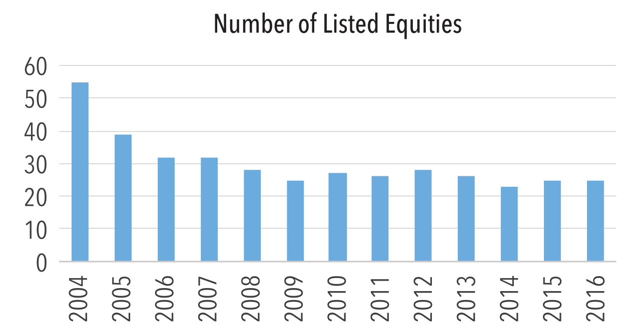
Source: CNB Data

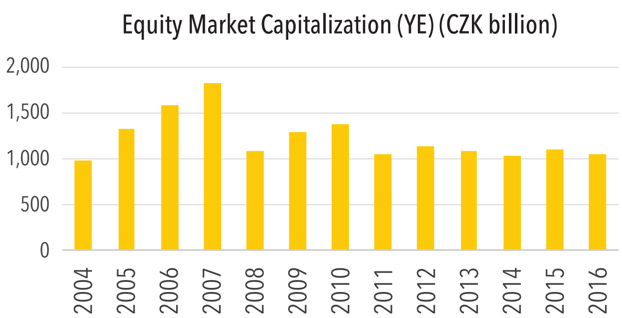
ANNEX 15: SECURITIES MARKET PERFORMANCE

Table 42: Prague Stock Exchange Operations – Market Capitalization

Year	Number of Listed Equities	Number of Listed Corporate Bonds	Equity Market Capitalization at Year-End (CZK bill.)	Equity Market Capitalization at Year-End (EUR bill.)
2004	55	not avail	975.77	€ 32.02
2005	39	not avail	1,330.81	€ 45.87
2006	32	20	1,592.00	€ 57.89
2007	32	21	1,841.68	€ 69.18
2008	28	17	1,091.73	€ 40.54
2009	25	19	1,293.48	€ 48.87
2010	27	16	1,388.00	€ 55.39
2011	26	15	1,060.77	€ 41.12
2012	28	27	1,142.09	€ 45.43
2013	26	32	1,093.48	€ 39.86
2014	23	38	1,040.29	€ 37.51
2015	25	42	1,100.47	€ 40.71
2016	25	49	1,044.46	€ 38.66

Source: PSE Annual Reports





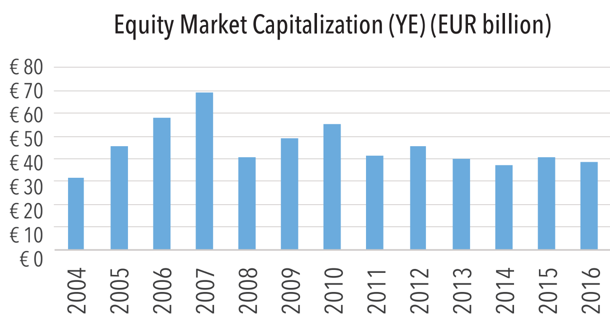
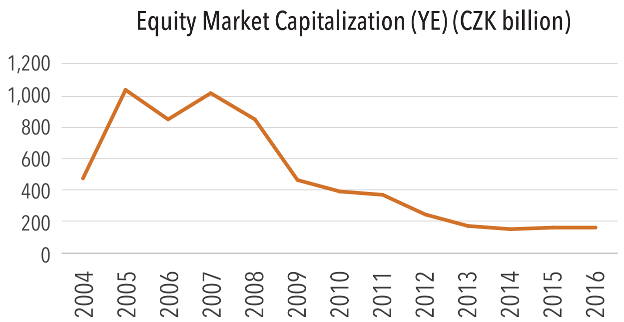
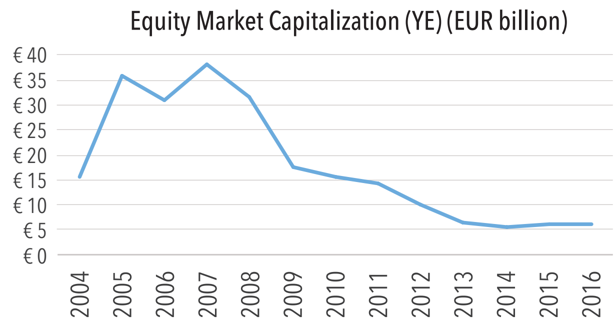


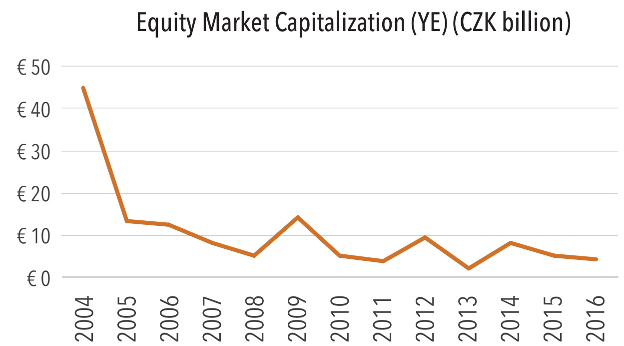
Table 43: Prague Stock Exchange Operations - Trading

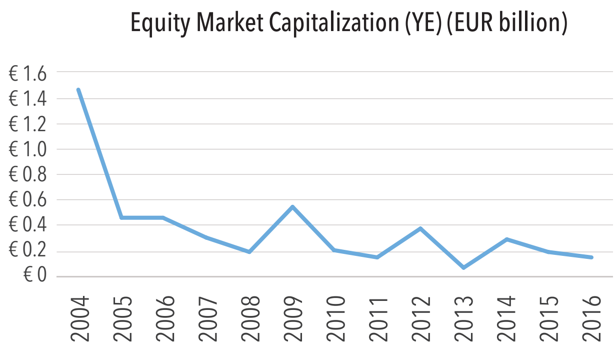
Year	Annual Equity Trading Volume (CZK bill.)	Annual Equity Trading Volume (EUR bill.)	Annual Corp Bond Trading Volume (CZK bill.)	Annual Corp Bond Trading Volume (EUR bill.)
2004	479.66	€ 15.74	44.81	€ 1.47
2005	1041.17	€ 35.89	13.43	€ 0.46
2006	848.90	€ 30.87	12.65	€ 0.46
2007	1013.02	€ 38.05	8.12	€ 0.31
2008	852.04	€ 31.64	5.16	€ 0.19
2009	463.86	€ 17.52	14.35	€ 0.54
2010	389.87	€ 15.56	5.16	€ 0.21
2011	370.99	€ 14.38	3.82	€ 0.15
2012	250.58	€ 9.97	9.44	€ 0.38
2013	174.74	€ 6.37	1.93	€ 0.07
2014	153.49	€ 5.54	8.23	€ 0.30
2015	167.90	€ 6.21	5.10	€ 0.19
2016	168.03	€ 6.22	4.15	€ 0.15

Source: PSE Annual Reports









ANNEX 16: SECURITIES OFFERINGS

The following is the data for registered securities offerings. Note the change in covered time period (2008-2016) compared to the data on market performance (2004-2016). Despite the low level of offerings these continue to be presented in (billions) to make them directly comparable to the data on trading amounts and market capitalization, also in (billions).

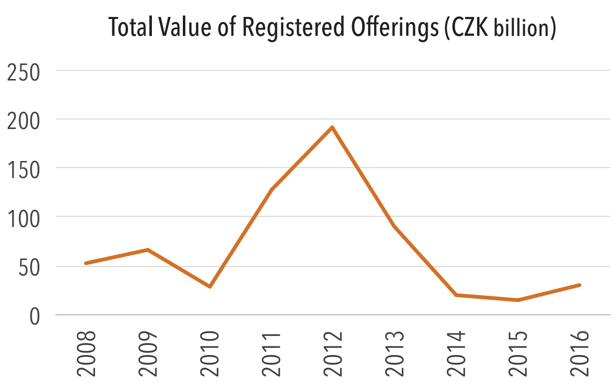
Table 44: Registered Securities Offerings (2008-2016)

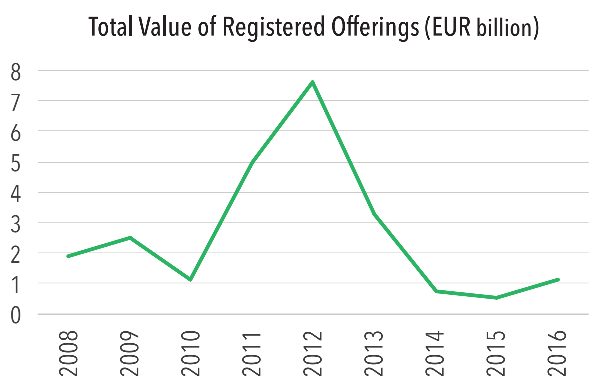
All CZK and EUR amounts in billions

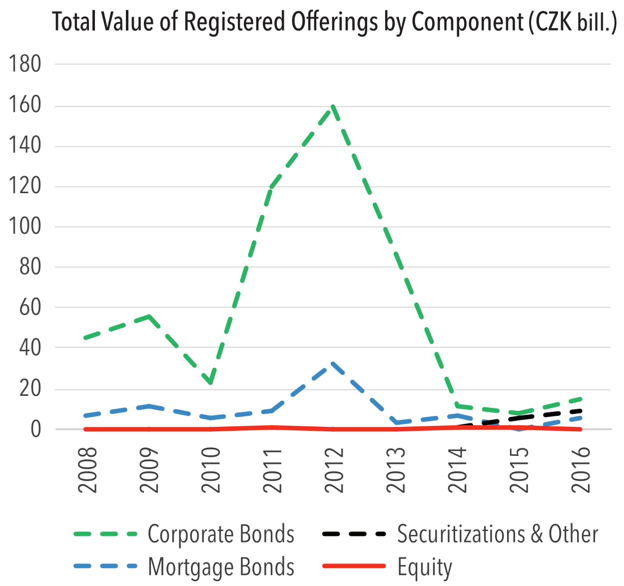
	CZK	EUR	CZK	EUR	CZK	EUR	CZK	EUR	CZK	EUR
YE	Equities		Corporate Bonds		Mortgage Bonds		Securitization & Other		Total	
2008	0.0187	€ 0.0007	44.8454	€ 1.6653	7.0000	€ 0.2599			51.8641	€ 1.9259
2009	0.2335	€ 0.0088	55.4232	€ 2.0938	10.8696	€ 0.4106			66.5263	€ 2.5133
2010	0.2104	€ 0.0084	22.6520	€ 0.9039	5.3000	€ 0.2115			28.1624	€ 1.1238
2011	0.5533	€ 0.0214	119.4468	€ 4.6297	9.0000	€ 0.3488			129.0001	€ 5.0000
2012	0.0907	€ 0.0036	159.1312	€ 6.3298	32.2514	€ 1.2829			191.4733	€ 7.6163
2013	0.0000	€ 0.0000	86.5286	€ 3.1545	3.8000	€ 0.1385			90.3286	€ 3.2931
2014	1.0488	€ 0.0378	11.0931	€ 0.4000	7.0000	€ 0.2524	1.0000	€ 0.0361	20.1419	€ 0.7264
2015	1.1093	€ 0.0410	7.4829	€ 0.2768	0.0000	€ 0.0000	6.0642	€ 0.2243	14.6563	€ 0.5422
2016	0.0000	€ 0.0000	15.3774	€ 0.5691	6.1000	€ 0.2258	9.0925	€ 0.3365	30.5699	€ 1.1314
Total	3.2646	€ 0.1218	521.9805	€ 20.0230	81.3210	€ 3.1305	16.1600	€ 0.5969	622.7228	€ 23.8723

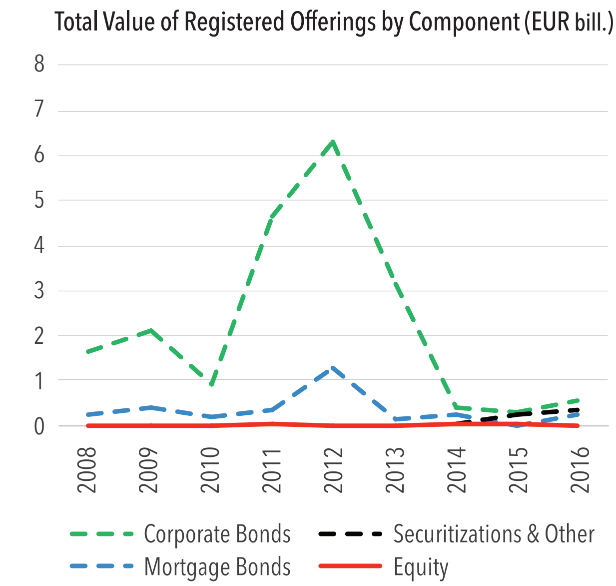
Source: CNB Data

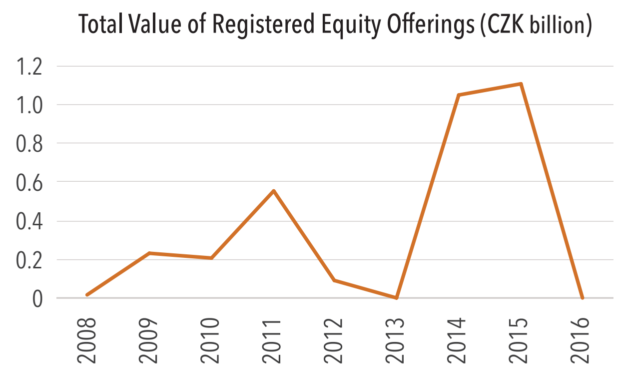
Figure 36: Securities Offerings by Category (2008-2016)

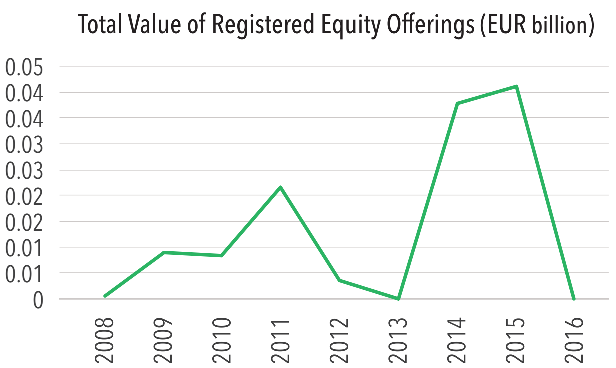


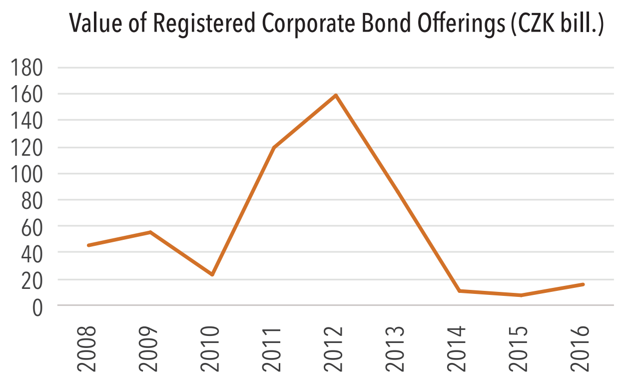


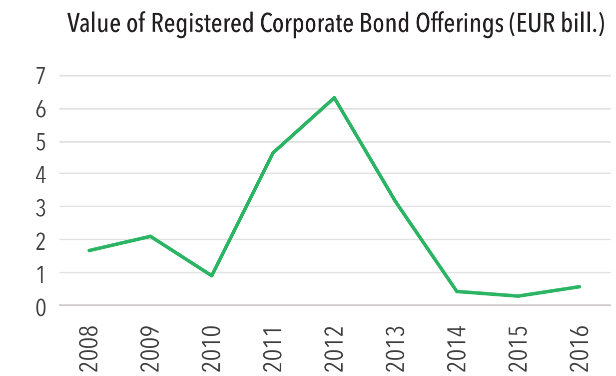

Total Value of Registered Offerings by Component (CZK bill.)
180
160
140
120
100
80
60
40
20
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
Corporate Bonds
Securitizations & Other
Mortgage Bonds
Equity

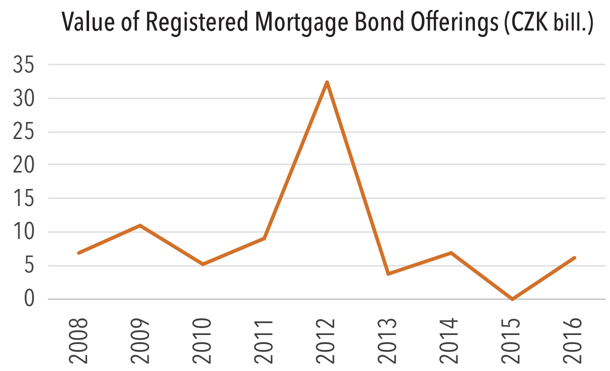

Total Value of Registered Offerings by Component (EUR bill.)
8
7
6
5
4
3
2
1
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
Corporate Bonds
Securitizations & Other
Mortgage Bonds
Equity

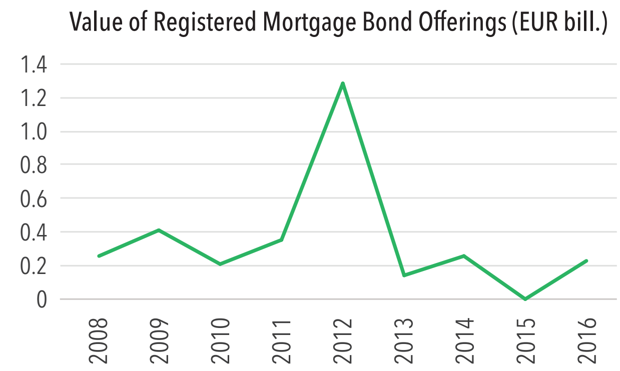

Total Value of Registered Equity Offerings (CZK billion)
1.2
1.0
0.8
0.6
0.4
0.2
0
2008
2009
2010
2011
2012
2013
2014
2015
2016

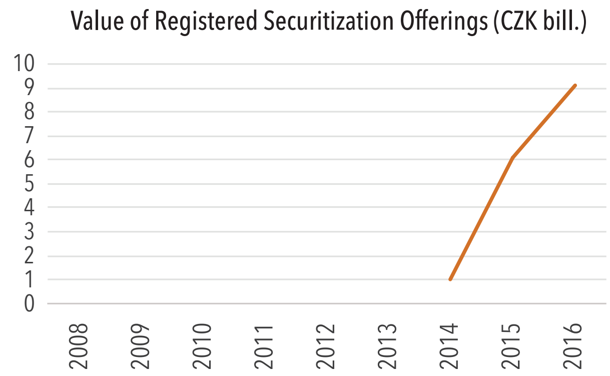

Total Value of Registered Equity Offerings (EUR billion)
0.05
0.04
0.04
0.03
0.03
0.02
0.02
0.01
0.01
0
2008
2009
2010
2011
2012
2013
2014
2015
2016

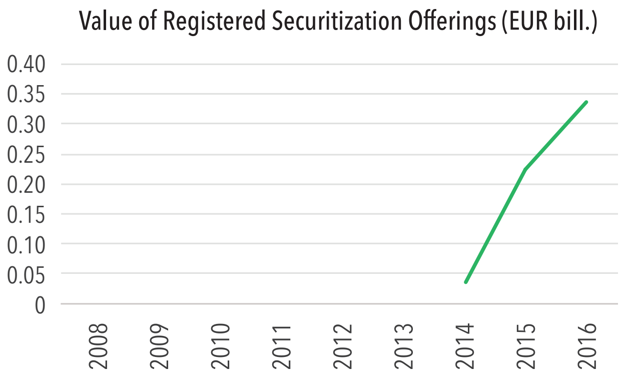

Value of Registered Corporate Bond Offerings (CZK bill.)
180
160
140
120
100
80
60
40
20
0
2008
2009
2010
2011
2012
2013
2014
2015
2016


Value of Registered Corporate Bond Offerings (EUR bill.)
7
6
5
4
3
2
1
0
2008
2009
2010
2011
2012
2013
2014
2015
2016


Value of Registered Mortgage Bond Offerings (CZK bill.)
35
30
25
20
15
10
5
0
2008
2009
2010
2011
2012
2013
2014
2015
2016


Value of Registered Mortgage Bond Offerings (EUR bill.)
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0
2008
2009
2010
2011
2012
2013
2014
2015
2016


Value of Registered Securitization Offerings (CZK bill.)
10
9
8
7
6
5
4
3
2
1
0
2008
2009
2010
2011
2012
2013
2014
2015
2016


Value of Registered Securitization Offerings (EUR bill.)
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0
2008
2009
2010
2011
2012
2013
2014
2015
2016

ANNEX 17: TAX ISSUES FOR INVESTMENT FUNDS

Eliminating Double Taxation

Qualified Investment Funds in the Czech Republic pay a 5% profits tax. Thus, currently, the "playing field" between indirect investment in the form of investment funds and direct investment is not level.

Other jurisdictions have cured this by making investment funds "tax transparent". The optimal taxation of direct versus indirect investors, in the generic setting, is set out in Figure 25 in the Main Text above.

Essentially, tax transparency means that the fund does not pay profits tax on its income (in the form of interest and/or dividends received) or on gains from sales of securities. Instead the shareholders in the fund pay tax when they receive distributions from the fund and/or sell their shares. Without this tax transparency investors are taxed twice – once at the fund level and then again upon receipt of distributions. In contrast the direct legal entity investor (that buys the security directly for its own account) pays tax only once. During the technical discussions, many persons stated that the 5% profits tax imposed on investment funds does not serve (in reality) as a meaningful disincentive to invest in funds, as opposed to direct investing.[108] Their bottom line position was that the lack of tax transparency was not a pressing problem and should be ignored. But the sense from these discussions was that the persons interviewed were concerned that if the funds were granted tax transparency then the "3-year rule" would be revoked.

Impact on the 3-year Holding Exemption

As noted above in the main text, there is an exemption from the capital gains tax for any holdings held 3 years or more.[109] In addition any income within the account not distributed prior is also exempt in that it is included in the gain. Thus, for these longer term holdings the investor is not taxed but the fund is. In essence, this cures the double taxation problem at the investor level of the equation, not the fund level. And, it is more advantageous given that the rate for the fund is 5% while the rate for natural person investors is 15% and the rate for legal entity investors varying but well above the 5% level.

This said, the double taxation problem still exists for holdings less than 3 years.

Thus, it should be noted that granting investment funds tax transparency may conform the Czech Republic to the treatment found in other jurisdictions, but may result in a pyrrhic victory. Funds would no longer be taxed at 5% but natural person investors holding less than 3 years would be taxed at 15% while legal form entities would be taxed at 19%. If indeed the 3-year rule is revoked as it applies to investment funds holdings, then the same result would apply to the longer term holdings. Net result would be a tax increase on both direct and indirect investors of more than 10%.

At the same time, it would not appear that the tax policy-makers would be willing to keep the 3-year rule and grant investment funds tax transparency. This would result in 0% tax (in other word no tax at both the fund and investor levels) for holding of three years or more.

---

[108] This should be considered a meaningful disincentive to foreign investors who have a high expectation that their returns will not be taxed at the fund level.

[109] This tax feature is part of a wider set of rules exempting holdings of capital assets. There are varying minimum holding periods set for varying types of assets. Thus, the 3-year rule is not limited to investment funds, or to corporate securities generally.

The 3-year rule also applies to direct holdings, and thus there is parallel treatment between indirect investment and direct investment in the same assets held for the same period of time.

In light of this, it is not recommended to change the current tax treatment for investment funds.

Eligibility Criteria

If the policy-makers were to determine to adopt tax transparency, the question then becomes what circumstances and limitations should be applied in this regard. In other markets, the most frequent limitation imposed for tax exemption does not refer to whether the fund is publicly or privately held but instead the nature of the portfolio. Stated another way, in order to qualify for the exemption, the investment fund's portfolio must be widely diversified and the fund itself should not participate in management of the portfolio companies. Some examples for consideration include:

- The fund shall not hold more than 10% of any class of security;
- The fund shall not invest more than 5% of its assets in any one security; and
- The fund shall not hold more than 10% of its assets in securities issued by any one issuer.

While most persons understand the diversification rules to be an investor protection mechanism (and they are) the rules were originally introduced to protect the tax base. Were the diversification rules not in place any real sector company could convert to holding company form, claim 'investment fund' status and then claim the exemption. Not only would this pervert the concept of investment funds but it would also erode the taxable base. Thus, limiting the tax exemption to diversified funds (which due to this limitation cannot control their portfolio companies) helps ensure that tax transparency is properly applied.[110]

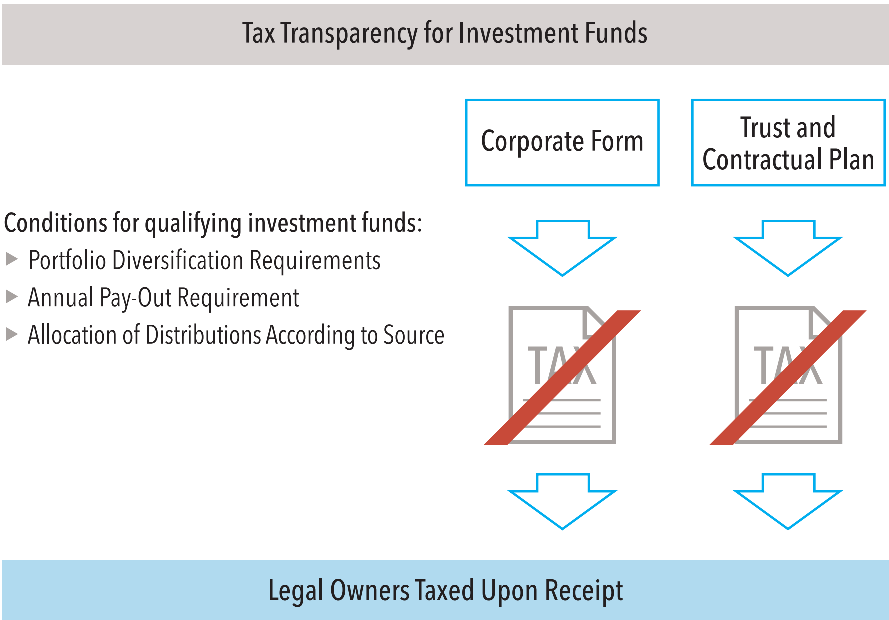
The question remains how government bonds funds should be approached. Technically under the above diversification requirements, a government bond fund invests all its assets in the securities of one issuer and thus would not be eligible for tax transparency. But in the case of the treasury the default risk is considered zero, and the fund cannot control the management of the MoF. Thus, the policy drivers for these requirements are absent. Government bonds funds should be exempted from the issuer concentration rule and treated as tax transparent.

Another requirement for the tax exemption is that the fund shall pay out its investment income at least annually. This is designed to match the accrual of taxable income to the payment of taxes on such. Otherwise taxable income could accrue within the fund, be retained and no taxes paid upon it, to the disadvantage of the tax base.

A third common requirement is that distributions be classified by their source origin. The reason is that there are several types of tax liabilities depending on the nature of the passive income.

[110] An example of the diversification rules is at the U.S. Tax Code, Subchapter M appearing at Title 26 United States Code §861 et. seq. A user-friendly site for Tax Code sections is https://www.law.cornell.edu/uscode/text/26/subtitle-A/chapter-1/subchapter-M

Figure 37: Conditions for Tax Exemption for Investment Funds



Source: WB Project Staff Graphic

Taxation of PE and VC Funds

A further policy issue to be decided is the tax treatment of **venture capital and private equity funds**. In developed markets, VC and PE funds are treated as tax transparent, not by tax code exemption but because of the legal form they adopt. Most often this is the Limited Partnership format. Funds formed with a General Partner along with numerous Limited Partners are not taxed as legal entities. Instead they are viewed as "pass through entities". The income to the LP is deemed to be the income of the individual partners, with income tax paid by them *regardless of whether the partnerships incomes is indeed distributed to them*. Thus, for the Czech Republic, there are two alternatives (1) create a tax exemption for funds operating as VC or PE (with qualification requirements to be determined), or (2) if the GP/LP entity form is adopted as recommended under this Assessment specify that all GP/LPs shall be tax exempt.

ANNEX 18: ADDITIONAL NOTES ON THE PENSION FUND SECTOR

Types and Sizes of Pension Funds

In the Czech Republic, there are two types of private pension funds managed by pension management companies: (a) Transformed funds and (b) Participant funds. Both types are voluntary (third pillar) and provide tax advantages for their participants, in terms of tax deductions for contributions and also matching contributions from the State (see below).

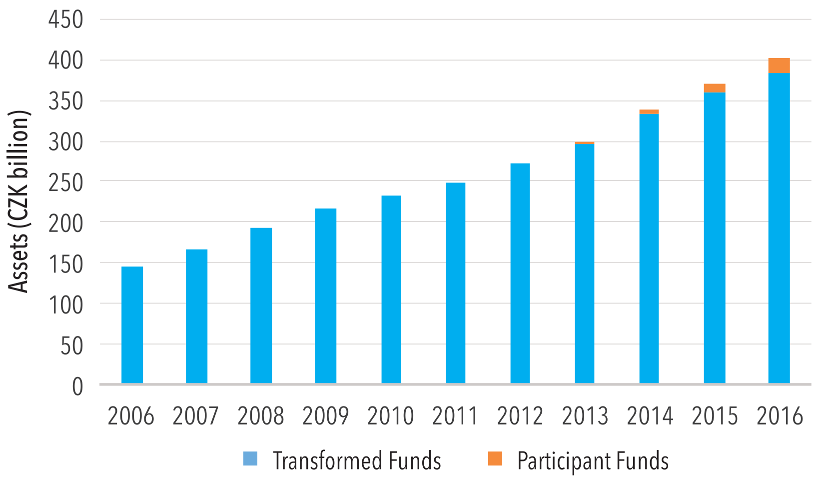
The most notable feature of the Transformed funds is that, by law, they are designed to prohibit negatives rates of return (i.e., at a minimum, all the capital contributed is protected). If the fund's yield falls below the zero percent level in any given year, the fund management firm is liable to make up the difference. (This of course significantly impacts the manager's investment decisions, as discussed below). The Transformed funds hold 95% of total pension fund assets, with approximately 4 million participant accounts. There are eight such funds, five of which hold the bulk of the segment's assets. Three are bank owned, four are owned by insurance companies, and one is owned by an independent local firm. Since 2013, as part of the pension reform package, new entrants into the Transformed funds are not permitted.

The Participant funds were established in 2013, as part of pension reforms. These funds were established at the time that the second pillar (mandatory) pension funds were closed. Participant fund managers are not subject to the "no losses" guarantee and thus can invest in riskier assets and generate slightly higher yields. At the same time, these funds require a higher contribution in order to receive matching fiscal contribution. The Participant funds hold about 5% of total pension fund assets, with approximately 500,000 participant accounts.

The Participant funds currently have four types of portfolios by level of investment risk. One portfolio, the "conservative fund", has a similar portfolio composition of the Transformed funds, and meant to avoid volatility and portfolio losses. Thus, the prohibition against new entrants in the Transformed funds is partially offset by a parallel fund in the Participant category. Although the "no losses" guarantee is not mandated for the Participant Funds, some funds offer long term guaranteed minimum returns. Investments in OECD securities and a small share outside OECD are permitted, and there are concentration limits by company. Most of the allowable percentage of foreign investments is through UCITS or ETFs.

Assets under management (AUM) have grown as follows, and also as set out in Table 14 in the main text above.

Figure 38: Pension Fund AUM (2006-2016)



Source: CSOB Factoring

The Government has a public first pillar (social security type system) which includes a basic benefit as well as a salary based defined benefit. Contributions for the pension portion of the first pillar are 25% of salary, as well as a medical benefit which adds an additional 3% contribution.

Pension Investment Incentives and Practices

The State provides three important incentives for participating in the pension funds. First, the State provides matching contributions for individuals investing in the voluntary pension funds, in a monthly amount up to CZK 230 against participant's monthly contributions of up to CZK 1,000 (if participant contributions exceed CZK 1,000, there is no incremental government matching amount). Second, participants can deduct pension contributions from taxable income up to CZK 24,000 per year. Employers can deduct about double that amount for their contributions on behalf of employees. Third, once retired, if the payout of the funds is phased over a 10+ year period, withdrawals are not taxed.

However, contributions remain low. The average monthly contribution to transformed funds, for example is estimated at around CZK 600 or CZK 7,200 annually (about EUR 317), a rather tiny amount. The average level of pension savings is only around CZK 100,000 or EUR 3,800.

Costs and Fees of the Industry

Fees chargeable to the pension funds are strongly regulated. For the Transformed funds the management fee is capped at 0.8% of (AUM and the performance fee is capped at 10% of earnings. Participant fund fees vary by the risk level of the portfolio. The most conservative fund has an AUM fee cap of 0.4% and a performance fee cap of 10%. The other three Participant funds have AUM fees capped at 1.0% and performance fees at 15%. Fund managers have to cover within these fees, any transaction costs of purchasing securities or commissions charged for the purchase of UCITS or other funds, unlike some pension industries where such fees are charged to the portfolio.

Investment Returns

Investment yields for the two types of funds are set out in Figure 22 of the Main Text above. These levels of returns, coupled with low contribution levels, raise concerns regarding the replacement incomes that can be generated by the overall pension scheme and the need for a more significant contribution from the voluntary pillar.

Adequacy of the Third Pillar for Pension Income and the Relation with Investment Practices

The government first pillar is a defined benefit system and is estimated to generate approximately 48% of final salary as replacement income. OECD norms typically recommend at least a 60% replacement income as an adequate post retirement pension. Thus, with the modest contribution rates in the third pillar, private pension funds and the low rates of returns in the portfolios, it is not clear that participants' retirement income will be sufficient, and if the first pillar ever experiences fiscal pressures, there is little in terms of meaningful safety net in the third pillar.

The average wage in the Czech Republic for Q1 2017 was CZK 27,889. Assuming: (a) a 33 year work life, (b) pension fund returns of 2% (the average over the last 11 years), (c) a salary contribution of CZK 1,150 (around 5% of salary) from the worker, along with (d) a matching contribution by the government of CZK 230, and (e) another contribution of the same amount (CZK 1,150) by the employer (generous assumptions), calculations show that at retirement and using a phased withdrawal of the accumulated investments accrued to that date, the worker would only receive 15.8% of his/her final salary as a pension from the third pillar transformed funds.

This almost low replacement rate presents substantial policy issues for the financial authorities and the private sector. Results could be improved if investment policies and other incentives were better aligned.

The investment regime and return guarantees

Portfolio composition limits for both the Transformed and Participant funds are established in the law and regulation (See Table 45 below). These limits do not necessarily restrict the level of returns such funds can obtain but given that 95% of pension fund assets are in Transformed funds (which require the minimum guarantee) the resulting investment composition leans toward the least risky (low return) assets (also shown in the adjoining columns in Table 45 below). As can be seen, a large portion of assets are invested in government securities, either from the Czech Republic or other countries. This orientation also hampers developing the Czech capital market because the pension funds (*with CZK 402.12 billion (EUR 14.88 billion) in total assets as of 2016*) do not pose strong demand for higher yielding private sector bonds, equities or other securities.

Thus, the level of replacement income that would be possible with riskier but higher return assets cannot materialize under the existing regulatory regime. For example, for Transformed funds the regulatory equity limit (domestic and overseas) is 70% of the portfolio, but the funds only invest 0.12%. Similarly, the limit on investment/UCITS funds is 70%, but only 1.85% of the portfolio is invested in this category. The bulk of investment of Transformed Funds is in public sector bonds (78% of total assets) followed by private sector bonds (12%) and bank deposits (7.4%).

The above does not apply equally to the more aggressive Participant Funds but these represent less than 5% of all funds under management and even in their non-conservative funds, their average actual investments in equity and investment/UCITS funds add up to only 30%.

At the same time, the data is clear that fund balances are not being transferred out of the Transformed Funds into the Participant Funds (as is allowed under the rules). Again, this relates to the narrative during the technical discussions that the general public prefers to protect their savings (i.e., the contributed principal) even at the risk of low returns. This distaste for risk appears to be rooted in past negative experiences in financial investments and loss of confidence in the market after the voucher privatization process of the 1990's.

In sum, the prevalence of the assets in the Transformed Funds, coupled with the imposition of the "no loss" guarantee, and reinforced by the participants' reluctance to transfer into the higher yielding Participant Funds means the third pillar is not really a pension scheme. It is akin to a tax-advantaged savings account. The system should not be presented to the public as a source of meaningful future replacement income.

In future years, the minimum guarantee aspect may pose a separate threat to the system. If it is perceived (realized) by the general public that the third pillar will not provide meaningful replacement income, one can expect participation to decline, something that will happen anyway as the fund is closed to new entrants. If this occurs and the funds begin to experience more and more pay-outs as the system matures, overall AUM can be expected to decline. This may be exacerbated by lower future yields. As the low interest rate environment persists, the funds will have their higher yielding bonds mature. Overall returns will fall and so too the level of performance fees. These factors, taken together, mean that the pension fund management business may become unprofitable. The segment may see a radical reduction in the number of fund managers, with an impact on the competitiveness of the industry.

Table 45: Portfolio Composition Limits by Type of Pension Fund

Funds	**Transformed fund**		**Participation fund (voluntary conservative schemes)**		**Participation fund (other voluntary schemes)**	
Equity	Limit on equity traded on OECD regulated markets = 70%	0.12%	0%	0%	Limit for equity traded on regulated market or multilateral trading facility verified by the Czech National Bank = 100%	10.14%
	Limit on non-OECD equity = 5%	0.00%			Limit for other equities = 0%	0.00%
Real Estate	10%	0.49%	0%	0%	0%	0.00%
Bills and bonds issued by public administration	Limit for bonds and money market instruments of OECD members or international institutions Czech Republic belongs to = 100%	77.38%	Limit for EU and OECD member states' bonds and money market instruments = 100%	73.19%	Limit for bonds traded on EU regulated market or EU MTF verified by CNB=100%	26.45%
	Limit for bonds and money market instruments of other countries=70%	0.73%			Limit for other bonds=0%	0.00%
Bonds issued by the private sector	Limit for the bonds issued by the private sector traded on OECD market = 70%	11.68%	30%	2.19%	100%	24.86%
	Limit for the bonds issued by the private sector non-traded on OECD market = 5%	0.16%				
Investment funds	70 % This limit refers to open-ended funds traded on OECD regulated market.	1.70%	30 % This limit refers to money market funds with qualified rating	0%	Limit for collective investment funds authorized to be publicly offered in the Czech Republic = 60 %	18.02%
	Other investment funds = 5%	0.15%			*Within the limit for the collective invetment funds can be invested to specialized investment funds up to 20%*	1.93%
Loans	5%	0.00%	0%	0%	The fund can borrow up to 5%, however, it can lend up to 0%	0.00%
Bank deposits	Limit for deposits and deposits certificate in OECD banks = 100%	7.42%	"Limit for regulated banks = 100% Limit for other banks = 0%"	24.60%	Limit for regulated banks = 100% Limit for other banks = 0%	20.43%

Note: the conservative Participant funds also require 100% coverage against currency risk.

ANNEX 19: PRIMARY LEGISLATION AND REGULATIONS APPLICABLE TO THE CAPITAL MARKETS

Primary legislation	Acronym used	References
Transparency	Transparency	Directive 2003/71 Directive 2010/73 and Directive 2013/50
Credit Rating Agencies	CRA I	Regulation No 1060/2009 Regulation No 513/2011
	CRA II	Regulation No 462/2013 Directive No 2013/14
Shareholders Rights		Directive No 2007/36
Accounting (financial information)		Directive No 2013/34
Accounting standards (IAS-IFRS)	IAS	Regulation No 1126/2008 and Regulation No 1606/2002.
Non-financial information		Directive No 2013/34 Directive No 2014/95
Statutory auditors		Directive No 2006/43 Regulation No 537/2014 Directive 2014/56
Central depository	CSDR	Regulation No 909/2014 Regulation No 2016/1033
Deposit and investors compensation scheme	ICSD/DCSD	Directive No 97/9 Directive No 2014/49
Recovery and resolution	BRRD	Directive No 2014/59
Anti-money laundry	AML	Directive 2005/60 Directive (EU) 2015/849
Settlement Finality	SFD	Directive No 98/26
Capital requirements	CRR/ CRD IV	Regulation No 575/2013 Directive No 2013/36/EU
Financial transactions	SFTs	Regulation 2015/2365
Package retail investment products	PRIPS	Regulation No 583/2010 Regulation No 1286/2014

Examples of additional primary and secondary legislation and regulations applicable to market participants

Markets in financial instruments
MIFID I
Directive No 2004/39
Directive No 2006/73 Regulation No 1287/2006 Regulation No 152/2013
MIFID II
Directive No 2014/65 Regulation No 600/2014 Directive No 2016/1034
Commission Delegated Regulation (EU) 2017/565 - organizational requirements and operating conditions for investment firms and defined terms for the purposes of that Directive; Commission Delegated Regulation (EU) 2017/566 - ratio of unexecuted orders to transactions in order to prevent disorderly trading conditions; Commission Delegated Regulation (EU) 2017/567 - definitions, transparency, portfolio compression and supervisory measures on product intervention and positions; Commission Delegated Regulation (EU) 2017/568 - admission of financial instruments to trading on regulated markets; Commission Delegated Regulation (EU) 2017/569 - suspension and removal of financial instruments from trading; Commission Delegated Regulation (EU) 2017/570 - determination of a material market in terms of liquidity in relation to notifications of a temporary halt in trading; Commission Delegated Regulation (EU) 2017/571 - on the authorization, organizational requirements and the publication of transactions for data reporting services providers; Commission Delegated Regulation (EU) 2017/572 - RTS on the specification of the offering of pre- and post-trade data and the level of disaggregation of data; Commission Delegated Regulation (EU) 2017/573 - on requirements to ensure fair and nondiscriminatory co location services and fee structures; Commission Delegated Regulation (EU) 2017/574 - level of accuracy of business clocks; Commission Delegated Regulation (EU) 2017/575 - data to be published by execution venues on the quality of execution of transactions; Commission Delegated Regulation (EU) 2017/576 - annual publication by investment firms of information on the identity of execution venues and on the quality of execution; Commission Delegated Regulation (EU) 2017/577 - volume cap mechanism and the provision of information for the purposes of transparency and other calculations; Commission Delegated Regulation (EU) 2017/578 - requirements on market making agreements and schemes; Commission Delegated Regulation (EU) 2017/579 - direct, substantial and foreseeable effect of derivative contracts within the Union and the prevention of the evasion of rules and obligations; Commission Delegated Regulation (EU) 2017/580 - maintenance of relevant data relating to orders in financial instruments; Commission Delegated Regulation (EU) 2017/581 - clearing access in respect of trading venues and central counterparties; Commission Delegated Regulation (EU) 2017/582 - obligation to clear derivatives traded on regulated markets and timing of acceptance for clearing; Commission Delegated Regulation (EU) 2017/583 - transparency requirements for trading venues and investment firms in respect of bonds, structured finance products, emission allowances and derivatives;

Commission Delegated Regulation (EU) 2017/584 - organizational requirements of trading venues;
Commission Delegated Regulation (EU) 2017/585 - data standards and formats for financial instrument reference data and technical measures in relation to arrangements to be made by ESMA and competent authorities;
Commission Delegated Regulation (EU) 2017/586 of July 14, 2016, supplementing MiFID II with regard to RTS for the exchange of information between competent authorities when cooperating in supervisory activities, on-the-spot verifications, and investigations;
Commission Delegated Regulation (EU) 2017/587 - transparency requirements for trading venues and investment firms in respect of shares, depositary receipts, exchange-traded funds, certificates and other similar financial instruments and on transaction execution obligations in respect of certain shares on a trading venue or by a systematic internalizer;
Commission Delegated Regulation (EU) 2017/588 - tick size regime for shares, depositary receipts, and exchange-traded funds;
Commission Delegated Regulation (EU) 2017/589 - organizational requirements of investment firms engaged in algorithmic trading;
Commission Delegated Regulation (EU) 2017/590 - reporting of transactions to competent authorities;
Commission Delegated Regulation (EU) 2017/591 - position limits to commodity derivatives;
Commission Delegated Regulation (EU) 2017/592 ancillary activity.
Some additional RTS and ITS have not been approved or published in an updated format by the commission.

Market infrastructures

EMIR

Regulation No 648/2012

Regulation No 153/2013	Decision No 2015/2039	Regulation No 2015/1515
Regulation No 876/2013	Decision No 2015/377	Regulation No 148/2013
Regulation No 1002/2013	Decision No 2014/755	Regulation No 2017/104
Regulation No 2016/2251	Decision No 2014/753	Regulation No 1247/2012
Regulation No 2017/323	Decision No 2015/2042	Regulation No 2017/105
Regulation No 152/2013	Decision No 2014/754	Regulation No 149/2013
Regulation No 876/2013	Regulation No 1249/2012	Regulation No 484/2014
Regulation No 2016/1073	Regulation No 285/2014	Decision No 2016/2275
Regulation No 2016/2271	Regulation No 2016/822	Decision No 2016/2277
Regulation No 2016/2272	Regulation No 2015/2205	Decision No 2016/2269
Regulation No 016/2270	Regulation No 2016/592	Decision No 2016/278
Regulation No 2016/2273	Regulation No 2016/1178	Decision No 2016/2274
Regulation No 2015/2038	Regulation No 1248/2012	Decision No 2016/2276
Regulation No 2015/2040	Regulation No 667/2014	Regulation No 153//2013
Decision No 2014/752	Regulation No 1003/2013	
Decision No 2015/2041	Regulation No 151/2013	

Market abuse

MAD II and MAR

Directive No 2014/57 Regulation No 596/2014
Corrigendum to Regulation No 596/2014
Regulation No 2016/1033

Regulation No 2016/909	Regulation No 2016/957
Regulation No 2016/1368	Regulation No 2016/1055
Regulation No 2016/378	Regulation No 2016/347
Regulation No 2016/1052	Regulation No 2016/523
Regulation No 2016/1060	Regulation No 2016/958
Regulation No 2016/1959	Regulation No 2016/2392
Regulation No 2016/908	Regulation No 2016/522

Benchmark Regulation short selling		
Regulation No 2016/1011 Regulation No 236/2012 Regulation No 909/2014		
Regulation No 2016/909 Regulation No 2016/1368 Regulation No 2016/378 Regulation No 2016/1052 Regulation No 2016/1060 Regulation No 2016/1959	Regulation No 2016/908 Regulation No 2016/957 Regulation No 2016/1055 Regulation No 2016/347 Regulation No 2016/523 Regulation No 2016/958	Regulation No 2016/2392 Regulation No 2016/522 Regulation No 919/2012 Regulation No 918/2012 Regulation No 826/2012 Regulation No 827/2012
Short selling		
UCITS		
Directive 2009/65 Directive 2014/91		
Regulation No 584/2010 Regulation No 583/2010 Directive 2010/43 Directive 2010/44		
Collective investment schemes		
AIFMD		
Directive 2011/61/ 13		
Regulation No 231/2013 Regulation No 694/2014 Regulation No 447/2013 Regulation No 448/2013		
Alternative fund		
PD		
Directive No 2004/109 Directive 2008/11/EC Directive 2010/73 Directive 2013/50/EU		
Regulation No 211/2007 Regulation No 2015/1604 Regulation No 1787/2006 Regulation No 759/2013	Regulation No 382/2014 Regulation No 310/2012 Regulation No 809/2004 Regulation No 862/2012	Regulation No 486/2012 Regulation No 1289/2008 Regulation No 311/2012 Regulation No 2016/301
Prospectus		
Please note that a New Prospectus Regulation has been approved in April 2017 (applicable in 2018 and 2019)		

WORLD BANK GROUP

European Commission