

Current challenges and the future development of the Slovenian banking system

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The paper compares the main characteristics of the Slovenian banking sector and of the banking sector(s) of the euro area. This comparison allows for identification of key differences as well as the need and possibilities to overcome them. It further enlightens the importance of improving banks' cost and profit efficiency through digitalisation, consolidation and move towards greener products.

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1. Introduction

Banking business has experienced huge technical and societal changes that occurred in the since the origin of banking couple of millennia ago. Since the beginning, banking has been driving force of these changes. Nowadays banking finds itself at yet another crossroad that requires fast adoption to technological progress accompanied with major social and behavioural changes. In these circumstances, banks will have to make better use of the advantages they have over their non-bank competitors as well as include some of the FinTechs' good practices in their business activities. Slovenian banking system is not an exception. While overcoming lag behind some good practices and trends observed in the euro area in terms of traditional core banking activities, it should also encompass new innovative approaches to banking business.

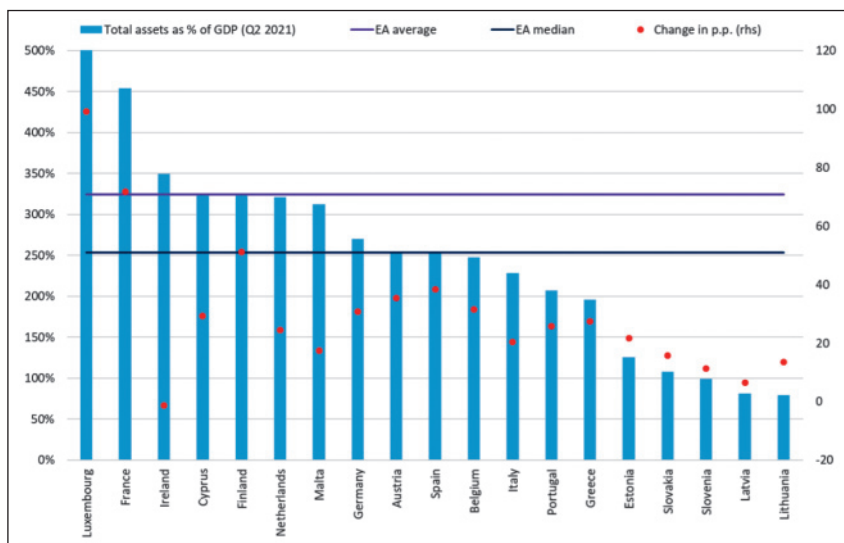
2. Slovenian and euro area banking systems compared

In Slovenia, financial intermediation, measured by the balance sheet of the banking system is relatively shallow. In the first half of 2021, total assets of the Slovenian monetary financial institutions (excluding ESCB¹, hereinafter MFIs) amounted to EUR 49.1 billion, which represented around 100% of Slovenia's gross

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¹ Excluding the European System of Central Banks that consist of the European Central Bank and the national central banks of member states of the European Union.

Chart 1: Total assets of euro area MFIs as % of GDP



Note: The scale on the left hand side is cut at 500% of GDP. The value of the total assets of Luxembourg MFIs as percent of GDP stands at 493.4%. Change in percentage points is measured from the fourth quarter of 2019 to the second quarter of 2021.

Source: ECB Statistical Data Warehouse

domestic product (hereinafter: GDP).

The average size of the banking system of the euro area (hereinafter: EA) countries was 324.5% (median value was 253.5%). The banking system of Slovakia measured through its share in GDP was slightly larger than Slovenian, while among the banking systems of EA only Latvian and Lithuanian were smaller. For the EA, MFIs are the most important financial intermediaries for households, non-financial corporations, and the public sector. However, since the global financial crisis, non-banks and financial markets are playing a greater role, particularly in providing funds for larger non-financial corporations (IMF, 2018).

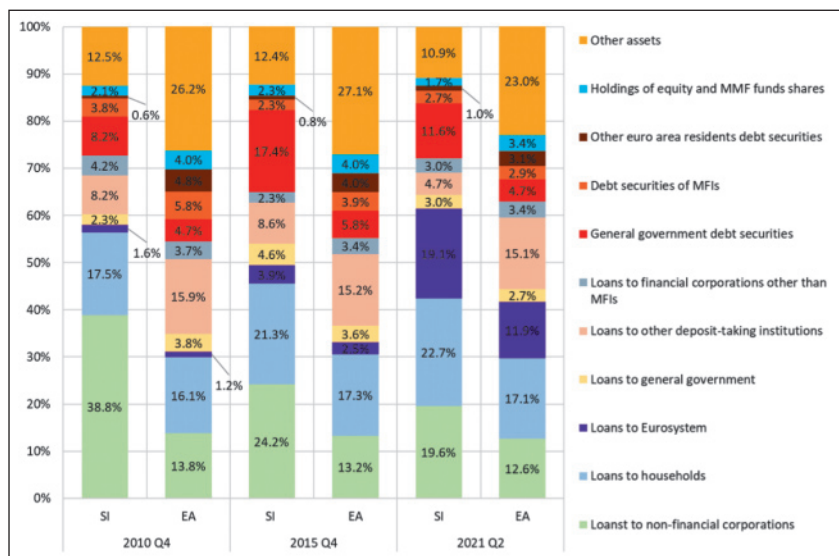
Not only the banking system as a whole, but also individual banks in Slovenia are among the smallest in Europe. The average size of a bank in Slovenia with around EUR 3 billion represents about one tenth of the average bank size in the EA (median in 2020: EUR 5.7 billion), although being comparable to the average size of banks in Estonia, Slovakia, Austria and Lithuania. At the end of 2020, the median size of Slovenian bank was about EUR 2.0 billion based on con-

solidated data. Fragmented Slovenian banking system has been in the process of consolidation practically since independence. The number of banks decreased from 36 in 1994 to 16 (including branches) in 2021. The concentration of the banking system's total assets, measured by the Herfindahl index (hereinafter HI) reached its maximum of around 1500 points in 2004, but by 2015 it fell below 1000 points. Afterwards it started in-

creasing again to exceed 1300 points with the merger of NKBM and Abanka in 2020. With the announced consolidation of relatively large banks, the concentration (HI) of the banking system would increase by around 400 points to unprecedented levels making the banking system moderately concentrated (DoJ, 2010). Compared with the Member States of the EA at the end of 2020 nine states had higher values of the Herfindahl index than Slovenia, after the above mentioned consolidation process only seven would have higher values. Is it worthwhile noticing, that Slovenia had quite concentrated banking system in terms of »share of five largest banks in balance sheet«, but this was mainly due to the substantial market share of the largest bank. Now the structure will considerably change in this respect. Loans to the non-financial private sector² account for almost half of the balance sheet of Slovenian MFIs. Among them the proportions of loans for consumption and loans to non-financial corporations (thereinafter: NFCs) ex-

² Non-financial private sector includes loans to households, non-financial corporations and other lending to households and non-profit institutions serving households.

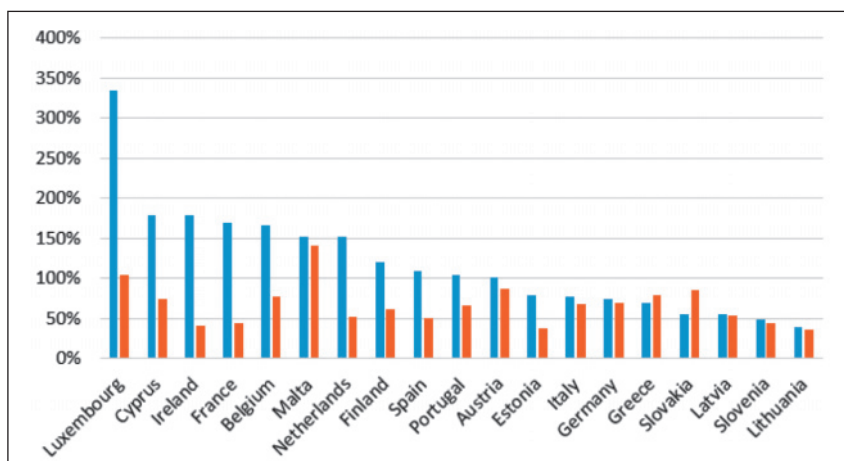
Chart 2: Aggregate assets of EA MFIs (excluding the Eurosystem) as % of total balance sheet



Note: Other assets include fixed assets, external assets and remaining assets.

Source: ECB Statistical Data Warehouse.

Chart 3: Indebtedness of NFCs in the first quarter of 2021



Source: Eurostat.

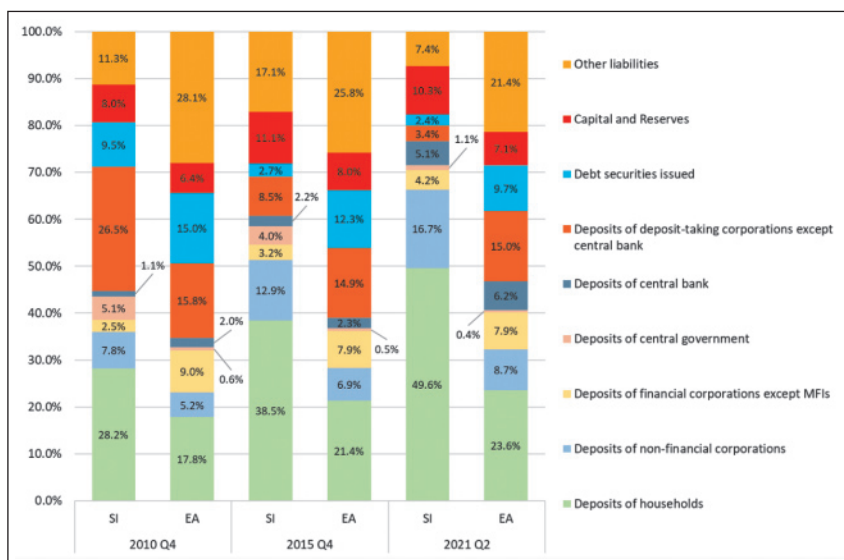
ceed those of the EA banking systems, the later mainly because of other funding sources that NFCs in EA tend to utilize. However, if we compare these asset categories as a percentage of GDP, the Slovenian banking system has among the lowest exposures being close to the EA average only with loans for consumption.³ High share of housing ownership on the other hand explains comparatively low share of housing loans in GDP in Slovenia.

³ On the other hand similarly developed banking systems, with the exception of Slovakia, exhibit much lower shares of loans for consumption purposes in GDP.

In the last decade, the asset structure of the Slovenian MFI changed considerably. In the past, loans to non-financial corporations represented the most important exposure, while loans to households have taken this role in the recent period. The share of assets held with the Eurosystem has increased markedly. These changes indicate a change in bank business models⁴, where households are becoming a more important segment. NFCs in Slovenia have largely relied

⁴ Note that in Slovenia with one or two exceptions all the banks can be classified as universal banks.

Chart 4: Aggregate liabilities of EA MFIs (excluding the Eurosystem) as % of total balance sheet



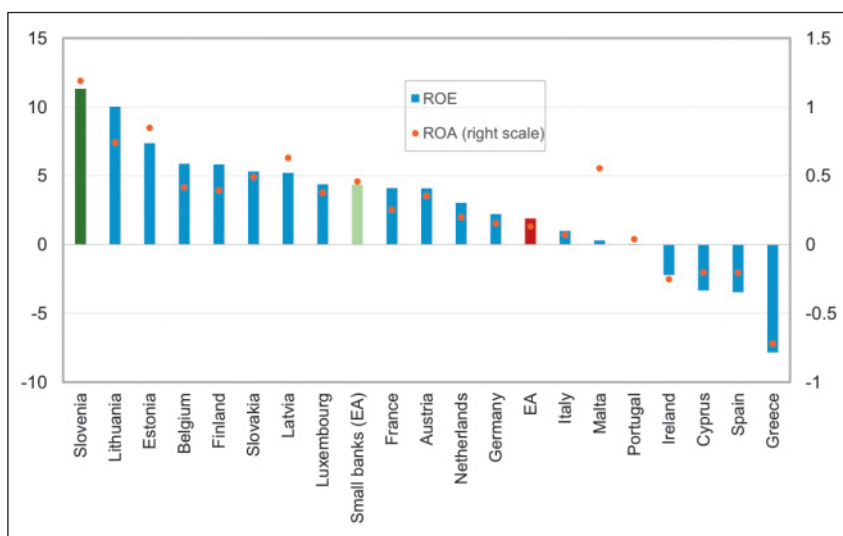
Note: Other liabilities include money market funds shares, external liabilities and remaining liabilities.

Source: ECB Statistical Data Warehouse.

on funding from abroad, source that became more prominent after the global financial crisis that affected also the ownership structure of Slovenian companies. Foreign owned companies mainly started to rely on banking services of banks of their parent companies. Another characteristic of Slovenian NFCs is relatively strong reliance on trade credit that in GDP represents around 26%, which is again close to the EA average. After significant deleveraging in the past decade, Slovenian NFCs are far less indebted than their EA counterparts in terms of both, the debt-to-equity ratio and the ratio of debt to GDP (Banka Slovenije, 2021b).

The structure of banks' liabilities has also changed significantly over the last decade. The Slovenian banking system is characterized by a marked increase in household deposits and a reduction of wholesale funding (mainly depicted as deposits of other deposit-taking corporations in Chart 4). In the second half of 2021, household and NFCs deposits accounted for almost 60% of banking sector liabilities or 64% of Slovenia's GDP. The share of household deposits in total liabilities in Slovenia is among the highest in the EA. The detailed breakdown of Slovenian households' financial assets reveals the continuing preference for currency and deposits, which account for almost half of the total, followed by equity and various insurance schemes. Financial assets of EA households are predominantly in the form of life and pension insurance (Banka Slovenije, 2021a). Despite that, the predominant sources of funding of EA MFIs are deposits of (wealthier) households, followed by deposits of other MFIs. In addition, other euro area banking systems, especially the more developed ones, make much more use of bond financing.

Chart 5: Return on equity (ROE) and return on assets (ROA) in 2020



Source: ECB, SDW (Consolidated banking data)

The Slovenian banking system achieved an above-average return on equity in the recent period (2019-2021) that amounted to 11.3% in 2020 and significantly exceeded the average value of EA countries (1.9%) or the value for EA banks of similar size⁵ (4.4%). Main reasons for high ROE of Slovenian banks were one-off factors affecting non-interest income and net releases of impairments and provisions that temporarily stopped in 2020 due to the COVID crisis, but, unlike in the majority of other EA countries, continued in 2021⁶.

Banks in Slovenia, similarly as their EA counterparts, are facing the challenges in generating stable (net) interest income. Last 25 years have been mainly characterised by declining NIM. In December 1996, the NIM

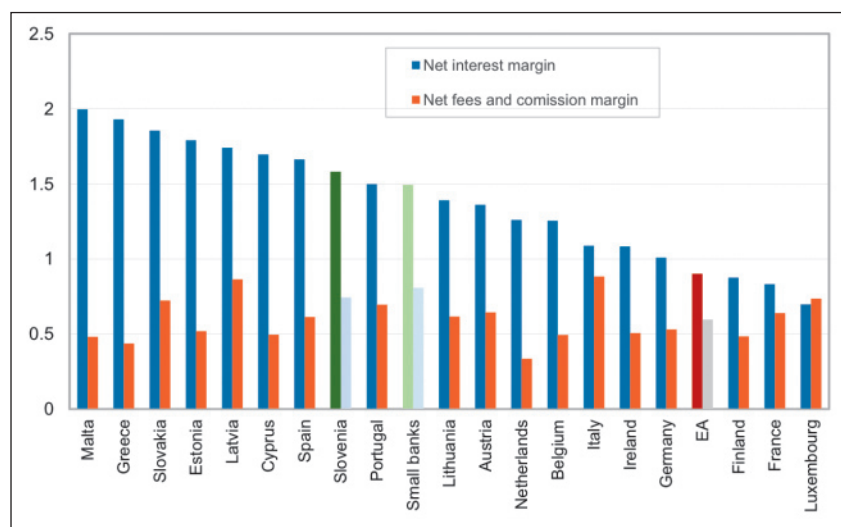
stood at 5.88%. After reaching 2.18% in December 2014 net interest margin (hereinafter: NIM) has been declining steadily since 2015. The process has been reinforced by lower or even negative growth rates of credit to non-banking sector after the epidemic crisis. Compared to other countries, Slovenian banks have relatively high interest income, as well as very low interest expenses due to higher reliance on sight deposits and deposits with shorter maturities. While the NIM of Slovenian banks in 2019 reached a value slightly below the first quartile of

EA countries, it approached the median in 2020. However, it was comparable to the NIM of small banks in the EA.

Slovenian banks have been trying to compensate for the decline in their net interest income by increasing the non-interest component of their income. Similar behaviour has been observed in other EA countries as well (IMF, 2020b). Net non-interest income in Slovenia positively influenced by one-off effects exceeded the weighted EA average (0.82%), but was nevertheless comparable to the margin of small banks (1.08%) in 2020. Slovenian banking system achieved higher net commission margin than other EA banking systems, but it was lower than the margin of comparably sized banks in the EA (0.81%).

In Slovenian banking sector the operating costs as percent of total assets stand at 1.56%, below the average value of small EA banks (1.78%), and above the median of EA countries (1.32%). The value of the Cost-to-Income Ratio (hereinafter: CIR) in 2020 (59.5%) was comparable to the median of EA countries (59.5%), while it was below the weighted EA average (64.2%), and significantly

Chart 6: Net interest margin and net fees and commission margin, in 2020, in %

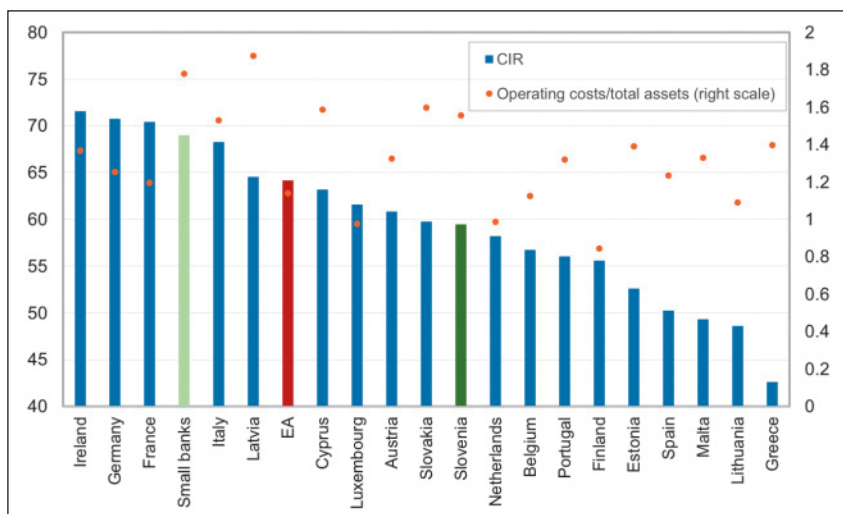


Source: ECB, SDW (Consolidated banking data)

⁵ Indicators of banking sector performance should ideally be compared with the values for banks of a similar size as they usually follow similar business models and face same issues when trying to achieve economies of scale and scope.

⁶ Note that in 2020 the return on equity before taxes would have stood at only 5.6% instead of 9.6% without one-off effects related to the merger of two banks. If we took into account also the long-term average of net impairments and provisions in gross income for the Slovenian banking system, return on equity would have been only 3.6%. Similar holds for the first-half of 2021, when the return on equity would have amounted to 3.6% instead of 10.6%, if long-term average of net impairments and provisions in gross income was generated. The figures refer to the solo balance sheet data of Slovenian banks. See also Bank of Slovenia (2021a and 2021b).

Chart 7: Cost-to-income ratio (CIR) and operating costs to total assets, in 2020, in %



Source: ECB, SDW (Consolidated banking data)

below the average of the group of small banks (69.0%). Even though this comparison somehow puts Slovenian banks in positive perspective, one must note that some similar banking systems (Lithuanian and Estonian) in EA stand out with even higher cost efficiency. Optimising the cost structure thus remains an important challenge for Slovenian (and EA) banks.

3. Future path of the Slovenian banking system

Banks' short and medium term profitability will be determined by credit activity and the quality of their credit portfolios. Necessary medium and long term adaptations of banks' business models will have to focus on increasing gross income, cutting costs and improving banks' risk management and will be importantly influenced by digitalisation and the green agenda (Cardillo, 2021). This holds especially for universal banks as Slovenian.

3.1 Opportunities arising from bank balance sheet and income structures

As described in the previous chapter financial decisions of Slovenian households and NFCs importantly determine the asset and liability side of the

Slovenian banking system as well as its efficiency. However, banks could influence these financial investment decisions through carefully designed and focused development and marketing of new and existing products. Credit for housing purposes is under-represented in Slovenia in comparison with other EA countries, which could be partially explained with high housing ownership rates. Additional housing loan products dedicated to financing energy efficient and anti-seismic retrofitting measures supported by state or communal grants would help to overcome main deficiencies of existing housing stock.⁷ Banks could also step in by offering better financing conditions and reverse the trend of financing NFCs with trade credit which would increase their role in financing NFCs that diminished after the financial crisis of the previous decade. Knowledge based economy puts more emphasis on intangible assets, which puts firms from this industry into worse position regarding access to finance and borrowing conditions (Dell'Ariccia et al., 2020). As such types of firms are becoming more

⁷ More on financing instruments for this type of products in Bertoldi (2020) and in chapter 3.3.

widespread with the transformation of the economy, banks should put more emphasis on understanding their specificities which could also ease their access to finance and increase client base of the banks.

Banks also benefit from intense acquisition of soft information that is difficult to quantify, store and transmit in impersonal way, but importantly reduce information asymmetries (Cardillo, 2021) and represents one of their key advantages over impersonal FinTechs that mainly utilise only hard computer processed information. Maintaining the so-called relationship banking could be particularly important for supporting more conservative retail clients.

Banks could be more proactive also in managing the liability side of their balance sheets. Design of alternative long-term savings products together with other participants in the financial market could either change or exploit the inclination of Slovenian households towards deposits and at the same time assure sufficient support to existing pension schemes in the future. This could also diminish the need for the introduction of negative deposit interest rates that are a double-edged sword that on one hand increases banks' income but can also lead to the loss of clients that could in the future benefit from other products and services offered and charged by the banks. Banks try to compensate for the decline in their net interest income by increasing the non-interest component of their income (IMF, 2020a), which is also the case in Slovenia. Package products have become very common on the liability, i.e. deposit side (including transaction accounts), nevertheless they should (to extent allowed by the consumer protection legislation) be more broadly developed also on the asset side. This would enable banks to increase the net fee and commission

component of their non-interest income and boost their gross income. Cost reduction will, however, remain one of the most important ways to improve the efficiency of banks (IMF, 2020a). Digitalization as well as consolidation⁸ offer two most prominent ways for its accomplishment that will be, however, marked also with unpopular decisions of reducing banks' workforce and excessive branch network.

3.2 Digitalisation

Further digitalisation of the banking system has been emphasised as a necessity for quite some time. On one hand, it affects the cost side of the banking business (both by increasing operational costs in the short-term horizon and reducing them in the long-term), while on the other hand it could boost banks' income creation. More efficient risk management supported with advanced digital solutions would also increase profit generation. In addition, evidence suggests that greater cost efficiency (through digitalisation, for example) could enhance profitability of many banks, and should be combined with a tailored approach to updating business models (IMF, 2018). Digitalisation and FinTech have important implications on cost savings and bank business models (IMF, 2017b). By becoming increasingly present in the market, FinTech companies could be seen by banks either as competitors or as potential partners and best practitioners to learn from. However, according to the EBA (2021) survey banks consider FinTech companies more as a threat than an opportunity in the area of payments and retail brokerage. On the other hand, FinTech firms bring both opportunities and threats to retail banking, while opportunities prevail in the areas

of commercial banking, trading and sales. FinTech could potentially provide cost saving solutions to banks, for example, through more cost-efficient payment system and back office operations (IMF, 2017a). Slovenian banks report price to be the main competitive advantage of FinTech companies and so-called digital banks,⁹ as most of their services are currently free (Banka Slovenije, 2021b). Shifts in retail banking customer preferences resulting from digital finance will impose changes in bank business models (IMF, 2017a). Solutions offered by FinTechs attracted also customers to seek and demand similar products from their banks. On the other hand, banks as traditional institutions primarily use proven financial technologies in their business processes and models. In the past, banks' investments in digitalisation mainly focused on the upgrades and maintenance of existing information systems. According to the survey conducted by the Bank of Slovenia (2021b),¹⁰ banks believe that the new service providers represent competitive pressure and affect banks' profitability, strategic development and business models. Banks, which include technological innovations in their business models and processes, become more competitive,

both in relation to other banks and to FinTech companies. Consequently, majority of banks started adapting their business models by including payment and settlement services using online and mobile applications. Forced by Payment Services Directive (PSD2), banks are also introducing new financial technologies related to open banking/APIs.¹¹ However, banks are increasingly including technological innovations also in their long-term strategies.

The COVID-19 pandemic accelerated digitalisation plans with emphasis on distribution channels and new services to customers, as well as further digitalisation of internal processes, resulting in some lasting adjustments. Abundance of available data and greater and more affordable computing power encouraged the use of artificial intelligence in finance and banking, especially in asset management, algorithmic trading and financial services based on Blockchain technology (OECD, 2021). According to the survey conducted by the Bank of Slovenia (2021b) banks already plan to invest more in the development of mobile wallets, biometrics, and big data. While the former two help to improve relations with banks' customers, the latter are key for improving their lending activities, especially credit risk assessment (Cardillo et al., 2021). Results of the survey show that banks do not pay enough attention to information solutions based on Blockchain, smart contracts and artificial intelligence, which can affect their future competitiveness in the market. Banks could use these technologies in the near future to offer additional

⁹ Digital online banks or neobanks that appeared in 2011 do business with customers exclusively via mobile apps or online platforms, as they have no physical branches. Contrary to other FinTechs they possess a banking license. Usually they offer the opening and management of a transaction account for households and businesses, while they plan to offer borrowing and savings services in the future.

¹⁰ The survey conducted among all Slovenian banks focused on new financial technologies and their impact on business processes and FinTech industry. The FinTech industry consists of various firms who are trying to improve on existing financial services by means of information technology and innovations. The firms aim to use technology in the financial sphere in the most innovative way possible. The use of new technologies focuses primarily on areas related to payment systems and transfers, crypto-asset trading, lending, insurance, etc. The FinTech industry largely aims to offer firms and consumers better, faster, and more efficient financial services. This is having an impact on the operations of banks and other financial institutions, particularly in the sense of the pressure from new service providers in the financial market.

¹¹ Under the PSD2 FinTechs have to follow the same rules as the traditional payment service providers (registration, licensing and supervision by the competent authorities), which enables them to offer their services across the EU. Banks that offers online access to accounts cannot reject to share certain data with FinTech companies or with other banks providing such services (European Commission, 2019).

⁸ Both of them will be presented in detail in the following chapters.

banking products like instant payments or cloud services making them more competitive towards both, other banks and FinTech industry. In the following years we can expect the entry of Big-Techs to the banking market (by obtaining banking license) which could represent another push towards reduction of prices of banking services (especially payments services or retail brokerage). Digitisation can also accelerate consolidation of the banking system and lower merger costs. However, digitalisation also brings caveats. More the banking processes gets digitised, more important cyber security will become and banks have to put enough emphasis on activities building resilience against cyber-attacks. If digitalisation replaces traditional services, banks' access to more traditional bank clients, especially elderly and less educated could be weakened. General suggestion to follow diversified business models and avoid herd behaviour applies here as well.

Banks should on the other hand also exploit their main advantage over FinTechs and digital banks that offer depersonalized, technology-based and software-mediated contacts. Personal contact typical for relationship banking that uses soft information is especially beneficial for new enterprises and in crisis periods, but could be used also to explore new, niche (including green) oriented consulting and investment services (Cardillo, 2021).

3.3 Green finance

The transition towards a more green business model is supposed to have less disruptive effects on banks' organization than the digital transformation (Cardillo et al., 2021). Anyway, the increasing importance of banks in supporting of green transition is a trend that will continue in the context of EU drive to achieve carbon neutrality

by 2050 (COM(2018) 773 final). Cardillo et al. (2021) identify three main channels through which banks can increase their role in the climate agenda: the reallocation of market portfolios via sustainable investment strategies; the direct financing to green companies/projects and the provision of specialised advisory services. Today several Slovene banks offer 'green loans', which can be used for the purchase and construction of energy efficient RRE and for investments in energy efficient systems (e.g. solar panels, heat pumps, recuperation systems, etc.) (Banka Slovenije, 2021b). The share of these loans is still low, in the first half of 2021 only 51 loans, less than 0.1 % of all new loans to households, were approved for energy efficient systems. In the same time only 250 (5 % of the total amount) housing loans secured by RRE were approved for purchase or construction of energy efficient RRE.¹² Although households account for around one-fifth of total carbon emissions, economy-wide decarbonisation requires ample investment in the NFC sector. A high share of industry in value added of 27% compared to an EU average of 19% indicates relatively higher transition risks,¹³ but on the other hand also the opportunities for banks to finance the greening of the brown sectors. Exposures to climate-sensitive activities (manufacturing, construction, electricity and transport) reflect the structure of the economy and amount to between one-third and roughly 60% of the

¹² Energy performance classes: A1, A2, B1 and B2. The banks are required to report energy efficiency of RRE pledged as collateral only for housing loans where the real estate collateral is in the form of a flat or a house, the loan purpose is purchase or purchase of land and construction and the RRE pledged as collateral is the one being purchased or constructed. Therefore, the share of loans for energy efficient RRE could be underestimated. This covers about 48 % of all new housing loans secured by RRE.

¹³ Transition risks occur when moving towards a less polluting, more sustainable economy. More in: Sokolovska (2020).

NFC bank loan portfolio. Banks should support further decarbonisation efforts, depending on the technological readiness of energy-efficient solutions across sectors (e.g. renewable energy in the electricity sector, e-mobility in the transport sector). Supporting green innovation is also a necessity and is encouraged to the extent viable in terms of the relevant credit risk parameters. Same applies to project financing focusing on green investment, as well as other types of projects.¹⁴ Banks should also improve data collection practices in this area and continue offering loans for energy efficient RRE and systems. The economic fallout from the COVID-19 crisis poses a challenge to decarbonisation efforts, as tighter financial constraints are associated with worse environmental performance, though it could also represent an opportunity to accelerate the transition to a low-carbon economy through climate policies and green investment packages (IMF, 2020c).

3.4 Consolidation

Consolidation¹⁵ represents another opportunity for improving economies of scope and scale. Optimal size of banks is increasing and especially small and medium-sized intermediaries may not be able to finance large IT investments (Cardillo et al., 2021). Conversely, there is also considerable empirical evidence that large banks

¹⁴ In year 2021 was the project financing increasing at the Slovenian banking level (annual growth is more than 27.5 %). The share of project financing in relation to the total financing by banks is over 3.2 %. Banks are approving for the purpose of the project financing the following: loans for commercial real estate (42 %) and loans for business activities (58 %).

¹⁵ Consolidation refers to the process of changing the governance of economic agents in a market, which usually leads to a change in the state of market concentration. In general, such consolidation of the banking system involves a "concentration" of its resources (capital) and thus of its management, either due to the smaller number of banks or due to the reduced rivalry between them (BIS, 2001). The primary method of bank consolidation comprises traditional mergers and acquisitions of banks (within individual countries and cross-border), where a bank with unified management emerges from two independent banks.

tend to be less efficient than smaller credit institutions (Bonin et al., 2005; Matousek, 2008; Sufian, 2010; Montgomery et al., 2014), however the relationship between efficiency and size is probably non-linear. The motives for consolidation are many, e.g. maximizing the value resulting from a reduction in costs and/or an increase in the merged bank's revenues; increasing economies of scale and increasing market power. Relatively strong tendency to consolidate in the banking sector itself exists, as large banks that enjoy "too big to fail" status have higher credit ratings (Morgan, Stiroh, 2005) and are therefore willing to pay merger premiums to fall into this category (Brewer, Jagtiani, 2013). Advantages persist despite the creation of the status of a so-called 'systemically important bank' that brings additional regulatory requirements for those banks (Vogel, 2020). An empirical analysis of the Slovenian banking system in the period 2004-2018 (Volčjak, 2018) showed that efficiency of the banking system in Slovenia in the studied period first increased with the growth of concentration, reached its optimum at the value of HI of 1440 points, and then began to decline. It is also shown that with the increasing concentration of the banking market, the stability of the banking system increased on average. However, it should be emphasized that on average the growth of the stability of the banking system has been declining with increasing market concentration. Also the theory does not have an unambiguous answer, as on the one hand bank mergers can stabilise both individual banks and reduce systemic risk, as consolidation can lead to increased diversification of bank assets and consequently larger capital buffers (Weiß et al., 2014), and on the other hand, despite the fact that diversification reduces the risk

exposure of individual banks, the system may become more vulnerable, as individual risks within the system are only reallocated but not eliminated and this reallocation of risks causes individual banks to become exposed to similar risks, making it easier for micro level shocks to be transmitted to the entire system (Wagner, 2010). Trends from abroad further point to another direction of bank consolidation, namely in connection with the development of new digital financial products. Smaller banks are consolidating in order to provide funding for the digitization of their products and services ("digital maturation"), but offering financial products and services via internet platforms may lead to less emphasis on mergers and acquisitions to achieve entry to the market and enables the specialisation of individual (niche) providers of financial products and services. Another possibility is consolidation of operations between banks and FinTech players, where the former incorporate new digital approaches and target new business segments while the latter acquire access to banking license (Deloitte, 2020).

4. Conclusion

Banks are facing several challenges in conducting their day-to-day operations. However, these challenges differ significantly from those faced a decade ago. In that period banks experienced lack of deposits which pushed them to pay excessive interest rates to stay properly funded. Nowadays they charge the depositors for keeping their money. Ten years ago they provided majority of funds to non-financial companies, currently they finance mainly households. Which challenges will be on the table in ten years? It is obvious that the only constant in (business) life is change. Ability to adapt to changes will be key for banks' future success. For conservative

and traditional institutions such thinking might be more difficult to encompass than for some other players in the financial world. In the short run banks will have to tackle the consequences of the pandemic, as well as challenges that have influenced their activities in the recent period, such as low interest rates and regulatory changes. Although it is difficult to predict how the banking business will look like in ten years or even longer it is sure that it will be marked with the digitalization of banks' business processes. When competing with FinTechs banks should build on their traditional advantages and at the same time encompass new technologies.

Reference:

- Banka Slovenije (2021a). *Financial Stability Review, April 2021* [Online]. Available at: [fsr_april_2021_en.pdf](https://www.fsr.gov.si/files/fsr_april_2021_en.pdf) (windows.net)
- Banka Slovenije (2021b). *Poročilo o finančni stabilnosti, oktober 2021* [Online]. Available at: https://bankaslovenije.blob.core.windows.net/publication-files/fsr_oktober-2021.pdf
- Bertoldi, P., Economidou, M., Palermo, V., Benigna B., Todeschi, V. (2021). 'How to finance energy renovation of residential buildings: Review of current and emerging financing instruments in the EU', *WIREs Energy and Environment*, 10(384) [Online]. Available at: <https://wires.onlinelibrary.wiley.com/doi/10.1002/wene.384BIS> (2001). *Group of Ten - Consolidation in the Financial Sector*, [Online]. Available at: <https://www.bis.org/publ/gten05.htm> (Accessed: 15. September 2021)
- Bonin, J.P., Hasan, I., Wachtel, P. (2005), 'Bank performance, efficiency and ownership in transition countries', *Journal of Banking & Finance*, 29(1), p31-53.
- Brewer, E., Jagtiani, J., (2013), 'How much did banks pay to become too-big-to-fail and to become systemically important?', *Journal of Financial Services Research*, 43(1), p1-35
- Cardillo, S., Gallo, R., Guarino, F. (2021). 'Main challenges and prospects for the European banking sector: a critical review of the ongoing debate', *Banca d'Italia Occasional Paper series*, No. 634. [Online]. Available at: <https://poseidon01.ssrn.com/delivery.php?id=143119101106099074113071010127108064029078039067056007087005122097103096090073111077049049044034012025110028109028122004002100049001036077001000085>

- 104098086091125024065024075026095082023125106014103124094024017108105092106108001088070067023004087121&EXT=pdf&INDEX=TRUE (Accessed: 15. September 2021)
- Deloitte (2020). *2021 banking and capital markets outlook*. [Online]. Available at: <https://www2.deloitte.com/us/en/insights/industry/financial-services/financial-services-industry-outlooks/banking-industry-outlook.html> (Accessed: 15. September 2021)
- Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC, OJ L 337, 23.12.2015, p. 35–127.
- EBA (2021). *Risk Assessment Questionnaire – Summary of Results Spring 2021* [Online]. Available at: https://www.eba.europa.eu/sites/default/documents/files/document_library/Risk%20Analysis%20and%20Data/Risk%20dashboard/Q1%202021/1016351/RAQ%20Booklet%20Spring%202021.pdf (Accessed: 15. September 2021)
- European Commission (2018). *A Clean Planet for all A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy* (COM(2018) 773 final), Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018DC0773&from=EN> (Accessed: 23. September 2021)
- European Commission (2019). *Frequently Asked Questions: Making electronic payments and online banking safer and easier for consumers* [Online]. Available at: https://ec.europa.eu/commission/presscorner/detail/en/QANDA_19_5555 (Accessed: 15. September 2021)
- Dell'Ariccia, G., Kadyrzhanova, D., Minoiu C., Ratnovski, L. (2020). 'Bank Lending in the Knowledge Economy', *Finance and Economics Discussion Series 2020-040*. Washington: Board of Governors of the Federal Reserve System, [Online]. Available at: <https://doi.org/10.17016/FEDS.2020.040> (Accessed: 5. October 2021)
- Department of Justice - DoJ (2010). 'Horizontal merger guidelines (08/19/2010)'. [Online]. Available at: <https://www.justice.gov/atr/horizontal-merger-guidelines-08192010#5c> (Accessed: 27. September 2021)
- IMF (2017a). *Spain - Financial System Stability Assessment*, [Online]. Available at: <https://www.imf.org/en/Publications/CR/Issues/2017/10/06/Spain-Financial-System-Stability-Assessment-45321> (Accessed: 25. September 2021)
- IMF (2017b). *Spain - Financial Sector Assessment Program- Technical Note-Determinants of Bank Profitability*, [Online]. Available at: <https://www.imf.org/en/Publications/CR/Issues/2017/11/13/Spain-Financial-Sector-Assessment-Program-Technical-Note-Determinants-of-Bank-Profitability-45390> (Accessed: 25. September 2021)
- IMF (2018). *Euro Area Policies: Financial System Stability Assessment*, [Online]. Available at: <https://www.imf.org/en/Publications/CR/Issues/2018/07/19/Euro-Area-Policies-Financial-System-Stability-Assessment-46100> (Accessed: 26. September 2021)
- IMF (2020a). *Banking Sector: Low Rates, Low Profits?, A Global Financial Stability Report: Markets in the Time of COVID-19*, [Online]. Available at: <https://www.imf.org/en/Publications/GFSR/Issues/2020/04/14/global-financial-stability-report-april-2020> (Accessed: 26. September 2021)
- IMF (2020b). *Italy - financial sector assessment program - technical note – systemic risk analysis and stress testing of the banking and corporate sectors*, [Online]. Available at: https://www.imf.org/-/media/Files/Publications/CR/2020/English/1ITA_EA2020008.ashx (Accessed: 28. September 2021)
- IMF (2020c). *Corporate Sustainability: Firms' Environmental Performance and the Covid-19 Crisis*, *Global Financial Stability Report: Bridge to Recovery*, [Online]. Available at: <https://www.imf.org/en/Publications/GFSR/Issues/2020/10/13/global-financial-stability-report-october-2020#Chapter5> (Accessed: 6. October 2021)
- Matousek, R. (2008), 'Efficiency and scale economies in banking in new EU countries', *International Journal of Monetary Economics and Finance*, 1(3), p235–249
- Feyen, E., et al. (2021), *Fintech and the digital transformation of financial services: implications for market structure and public policy*, *BIS Papers*, No 117, July 2021. [Online]. Available at: <https://www.bis.org/publ/bppdf/bispap117.pdf> (Accessed: 15. September 2021)
- Montgomery H., et al. (2014), 'Too big to succeed? Banking sector consolidation and efficiency', *Journal of International Financial Markets, Institutions and Money*, 32, p86–106
- Morgan, D.P., Stiroh, K.J. (2005), 'Too big to fail after all these years', *Staff Reports*, 220, Federal Reserve Bank of New York
- OECD (2021). *Artificial Intelligence, Machine Learning and Big Data in Finance: Opportunities, Challenges, and Implications for Policy Makers*. [Online]. Available at: <https://www.oecd.org/finance/artificial-intelligence-machine-learning-big-data-in-finance.htm> (Accessed: 15. September 2021)
- Sokolovska, I. (2020). *Poročilo o podnebnih tveganjih v Sloveniji*. Banka Slovenije, Prikazi in analize 3/2020. [Online]. Available at: https://bankaslovenije.blob.core.windows.net/publication-files/pa_3_20.pdf (Accessed: 15. July 2021)
- Sufian, F. (2010), 'Financial crisis and the efficiency of the Malaysian banking sector: foreign vs. domestic banks', *International Journal of Monetary Economics and Finance*, 3(2), p140–158
- Vogel, U. (2020). *O-SII designation and deposit funding costs*. *Economics Letters*, 192(3), Available at: <https://www.sciencedirect.com/science/article/abs/pii/S0165176520301786?via%3Dihub#d1e529> (Accessed 15 September 2021).
- Volčjak, R. (2018), 'Konsolidacija in koncentracija bančnega sistema v Sloveniji – oris optimalne tržne strukture in njenih kriterijev', Banka Slovenije, internal document
- Wagner, W. (2010), 'Diversification at financial institutions and systemic crises', *Journal of Financial Intermediation*, 19(3), p373-386
- Weiβ, G., et al. (2014), 'Systemic risk and bank consolidation: International evidence', *Journal of Banking & Finance*, 40, p165–181