IN-DEPTH ANALYSIS

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What are the main factors for the subdued profitability of significant banks in the Banking Union, and is the ECB's supervisory response conclusive and exhaustive?

A critical assessment of the 2018 SSM report on bank profitability and business models

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Abstract

In this paper we argue that the own findings of the SSM THEMATIC REVIEW ON PROFITABILITY AND BUSINESS MODEL and the academic literature on bank profitability do not provide support for the business model approach of supervisory guidance. We discuss in the paper several reasons why the regulator should stay away from intervening in management practices. We conclude that by taking the role of a coach instead of a referee, the supervisor generates a hazard for financial stability.

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LIST OF ABBREVIATIONS

ECB	European Central Bank
ESRB	European Systemic Risk Board
GDP	Gross domestic product
IMF	International Monetary Fund
NPL	Non-performing loan
ROA	Return on assets
ROE	Return on equity
SI	Significant institution
SRB	Single Resolution Board
SSM	Single Supervisory Mechanism

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EXECUTIVE SUMMARY

The SSM THEMATIC REVIEW ON PROFITABILITY AND BUSINESS MODELS, henceforth the REVIEW, addresses the subdued level of profitability of the significant institutions in the European Banking Union and the implications it may have for financial stability in general, and the activities of the supervisor in particular. This report provides a summary and assessment of the REVIEW, and suggests some open questions regarding supervisory activity. In our view, the findings of the REVIEW do not support the business model approach of supervisory guidance. The academic literature that attempts to pindown the causal link between profitability and banking business models provides at best mixed results. When the supervisor takes a consulting role, it will likely cause undesired effects for the stability of the banking system as a whole, undermining the supervisor's own core task.

The REVIEW identifies several factors responsible for low profitability of banks in Europe, among them loan impairments and non-performing loans, digitalization and entry of fintech/big tech firms, regulatory standards, competition, and the macroeconomic environment. As the REVIEW explains, throughout in qualitative terms, the level of profitability and its main drivers differ significantly across institutions and countries. No easily identifiable common factors explaining the superior profitability of some institutions were found. Banks that are relatively cost-efficient differ in terms of size, business model and country of origin.

Moreover, the term business model is used in different ways, also in the academic literature. We review the literature in section 2 of this report. It turns out to be difficult to identify a set of main determinants of bank profitability. These observations cast doubt on the usefulness of the term bank business model as a concept for description or management.

We also note that the average level of profitability in banking may be relevant for financial stability considerations, but it should not be forgotten that profits are the outcome of a competitive process in the banking market. From this point of view, low profits may also be related to an overbanking status in the market as a whole, and poor-performing institutions may then be candidates for leaving the market, either through consolidation, or through outright exit.

This is also one of the main points raised in our report: the link between profitability and industry structure (e.g. level of exit, industry concentration and intensity of consolidation) does not receive sufficient attention in the REVIEW. The concern of supervisors with banks' micro- and macroeconomic profitability drivers, and the focus on bank management practices more generally, such as cost accounting, risk management, strategy consideration and the choice of business models is potentially helpful in understanding the risks faced by these banks. Nonetheless, we see the danger that the role of the supervisor as a referee applying regulatory standards and rules may be compromised by the alternative role of a coach who supports individual banks in raising their profitability level. Not only such an approach to supervision may stifle industry dynamics, but it might also facilitate regulatory capture and at the same time transform the supervisory policy in a coordination device.

A better approach to banking supervision would be to focus on a continuous fulfillment of capital standards, equity and bail-in able debt, and exert a serious effort to prepare for a smooth market exit of weak institutions, should the standards be violated. With respect to this last point, we emphasize the importance of completing the banking union.

PREFACE[1]

This paper is written for the use by the European Parliament, preparing a discussion of the 2018 SSM Thematic Review on Bank Profitability and Bank Business Models (henceforth the *Review*). Throughout the sections, we have proposed open questions that may help preparing the discussion in Parliament.

Section 1 summarizes the main arguments in the *Review.* Section 2 reviews existing research on bank profitability, thereby setting the *Review* in perspective to the international literature. Section 3 develops our policy conclusions, including a general assessment of the SSM approach to banking supervision. We have delegated a more detailed overview of the empirical evidence on bank profitability in Europe to the Appendix A, including the role of the macroeconomic scenario and the low interest rate environment.

1. SUMMARY OF 2018 SSM *REVIEW*

A significant fraction of EU banks under the surveillance of the Single Supervisory Mechanism (SSM) earn low profit. Persistently low profitability is a concern for SSM for two main reasons: First, banks that do not have a sufficient return on equity (ROE) to cover their cost of capital would have little capacity to build up additional capital. Second, banks may be willing to take more risks to generate profits. In 2016 the SSM has decided to investigate this issue using a bank-level micro-perspective approach and proposed a thematic review on profitability and business models with the aim to (i) analyse the main drivers behind low profits in the European banking sector; (ii) deliver tools to analyse the strengths and weaknesses of business models adopted by banks, and (iii) evaluate their capacity to detect and alleviate these weaknesses, and their capacity to monitor how low profitability affects their risk-taking behavior.

The *Review* highlights three main factors that explain why profits remain low: (i) high level of non-performing loans (NPL), (ii) macroeconomic conditions and (iii) competition. Despite a gradual decrease, the aggregate stock of NPLs is still high. One of conclusions presented in the *Review* is that the case of US banks has shown that cleaning up balance sheets quickly is beneficial to profitability. Moreover, Euro area banks still face significant litigation costs and heavy cost structure. Evidence for the latter is that, for example, "there are 40 or more branches per 100.000 inhabitants".

Our observation: Since the financial architecture differs significantly between Europe and the US, benchmarking characteristics of one financial system (e.g. number of branches per 100.000 inhabitants) against another may be misleading. For instance, the role of banking *vis-à-vis* capital markets for firms and households is generally much smaller in the US than in Europe. This leads the first question below:

- *Question 1: What should the appropriate density of branches for Europe be? More generally, what defines benchmarks if the role and importance of banks and capital markets differ across countries and continents?*

Second, general macroeconomic conditions, including heterogeneous labor markets and asymmetric expansions in the euro area push revenues down. Above all, unconventional monetary policy and low interest rates contribute to the persistence of low profitability, keeping interest margin compressed for an extended period. However, according to the *Review*, this is at least partly offset by its stimulating effect on loan growth and a reduction

[1] The authors thank Patrick Blank from Research Center SAFE and Goethe University Frankfurt for outstanding research assistantship.

in the cost of risk to the point that the aggregate net interest income has not suffered a significant decline from 2016 to 2018. For a detailed description of our assessment of the effects of macroeconomic factors and low interest rates environement on bank profitability see Appendix A.

Third, competition is putting pressure on revenues. On the one hand, the market remains highly fragmented, which gives a comparative advantage to bigger foreign banks. On the other hand, SSM banks face competition by non-banks. So far, fintechs have mostly restricted their business activities to the payments sector and there may be opportunities to develop partnerships. If, however, big tech companies enter the banking market, they are very likely to make use of their customers base and superior technological knowledge to compete independently[2].

However, on closer inspection, half of the SSM banks managed to increase their net interest income during the period considered in the *Review*. Supervisors, therefore, decided to hold managers accountable and started reviewing banks' business models in the light of their capacity to generate profits. The aim seems to be to learn from the better-performing banks in order to improve the performance of the others.

Our observation: It is surprising that among the three main factors that affect banks' profitability highlighted in the *Review*, two of them (macroeconomic conditions and banking competition) has not much to do with the business models. In fact, assuming competition is effective, an improvement of cost structures or a strengthening of strategic capabilities at the level of all banks simultaneously will likely not increase bank profits by a lot – the competitive pressure will eat away some or all of the additional profit margin.

- *Question 2: Does it make sense, in a competitive environment, to assume that learning from better-perfoming banks will increase profits across the board? Moreover, why should increasing profits of poor-performing banks be an objective of the SSM? In the limit, should the SSM engage itself in precluding the potential exit of low-performing banks?*[3]

The *Review* shows at some length that profitability varies from one institution to another irrespective of its size, its business model or its country of origin. Given these observations, the *Review* concludes that banks differ in their ability to strategically steer for profitability. That is, managers' capacity to align their course of action with the bank's long-term goals. The evaluation results, presented in the *Review,* cover the governance structure and several bank internal processes dealing with cost and income factors, loan pricing and strategy development.

It appears that profitable banks have on average better strategic steering capabilities. High ability seems to be reflected by (i) a greater effectiveness of their Asset and Liability management, (ii) their distribution channels, (iii) their overall pricing process, (iv) their capacity to measure ex-ante and ex-post profitability individually and (v) their capacity to break down the cost structure.

- *Question 3: What are the benchmarks used to assess such diverse criteria as governance, strategy development, and risk pricing? What exactly are the empirical findings, what is their statistical and economic significance? In other words: From a purely*

[2] Facebook´s proposal of Libra, Google's announcement concerning payment services (see FT Nov 13, 2019), and Apple's credit cards plans are all serious steps in that direction.

[3] In a presentation at the Research Centre of Supervision and Regulation of the Financial Sector in Lisbon in July 2019, Andrea Enria, Chair of the Supervisory Board of the ECB, pointed out that overbanking was at the root of the problem of low profitability. He stated that there is "fierce competition, but only a few banks exit the market". This statement corroborates the point we raise on the importance of exit.

methodological point of view, how strong or weak is the statistical basis for the conclusions drawn in this Review?

Based on these findings, the *Review* derives conclusions concerning suboptimal management capabilities at the level of individual banks and also summarizes a variety of effective strategies observed among SSM banks to address the profitability challenges. What emerges is that there is no one-size-fits-all solution to low profitability and supervisors are required to pay attention to the subtleties specific to each business model. More specifically, some banks have increased their lending volumes, they have diversified their income sources and reoriented their business towards fee and commissions-generating activities like cross-selling, private banking, asset management and insurance. Moreover, many weak banks have cleaned up their balance sheets and the best-performing banks have expanded internationally. Most banks regard the digital transformation as their key strategic priority. The agenda covers not only the provision of customer services but also the digitalization of internal processes.

The *Review* is not entirely explicit about what is the understanding of the SSM when referring to different business models. However, chapter 5 is the closest that the report comes to providing a characterization of those models. The 22 SIs with the highest ROEs and ROAs are divided into three different groups according to different identified strategies: i) the first group followed a high-income strategy, which is characterized by high costs but even higher income-generation capacity; ii) the second group employed a strategy of high cost-efficiency, and iii) the third group lies in the middle with a medium income generation capacity but also moderate operating costs.

Our observation: We show in the next section of the paper that the literature is very heterogeneous when it comes to the characterization of business models in banking. Together with the lack of a clear definition in the *Review*, we pose the following question:

- *Question 4: What is exactly the current understanding of the SSM of banking business models? To what extent does the SSM use this notion as the basis for a supervisory tool?*

In 2018, the banking supervision initiated a dialogue with banks about their internal processes. There, institutions were encouraged to run firm-specific risk-mitigation programmes to counteract increased risk-taking by banks in response to persistently low profits. In the *Review*, three types of risk are considered relevant: First, banks are said to be overly optimistic about the long-term success of their business model. Execution risks from exogenous developments, including changes to the regulatory framework, more intense competition and macroeconomic shocks, are underestimated. Second, credit risks arise, among other reasons, because credit standards have been lowered and pricing strategies have become more aggressive. Third, there are operational risks from digitalization. The *Review* emphasises that cost minimization must not be achieved at the expense of risk monitoring.

The *Review* suggests that the dialogue eventually helps banks to better understand their business model, improve its risk management practice, and ultimately increase the bank's bottom line. This leads to question 5.

- *Question 5: To what extent is it common SSM policy to advice supervised banks in achieving improved management practices, as formulated in the Review? In other words: To what extent are the findings reported in this Review used by supervisors in a way that advises, triggers, or leads individual banks towards a particular strategic direction – be it cost accounting, risk assessment, loan pricing or business model related?*

2. RESEARCH ON EUROPEAN BANK PROFITABILITY

2.1. Business models and profitability

A large and growing body of empirical papers investigates the factors that affect bank profitability in Europe and elsewhere. In this section, we summarize some of the relevant research, which attempts to identify a link between profitability of the banking industry and the choice of business models. The objective is to verify whether the focus of the Review on business models is to some extent justified by the existing research literature. We find that the literature provides no obvious nor unique definition of business models for banks. Many studies resort to cluster analysis using different performance measures. But as they should, the variables used in those studies vary according to the question of the paper. Most importantly, the conclusions drawn in the literature about the causal link between profitability and business models are shaky at best. Moreover, the fact that there is no unique business model that generates high profitability is to be expected in an industry of differentiated products and services for which a complex menu of strategies is available. We conclude that, supervisors do not have support from the scientific literature to provide informed recommendations regarding the business model choice of banks.

Farnè et al. (2017)[4], for example, argue that they are not able to identify "superior" or "inferior" business models in terms of their ability to achieve sustainable profits. The authors use a rich dataset of supervisory data in order to distinguish common business models in the European banking industry. They use a clustering methodology run on risk and performace indicators and identify four distinct business: wholesale funded banks, security holdings banks, traditional commercial banks and complex commercial banks.

Similarly, Detragiache et al. (2018)[5] show that there is no clear evidence that attributes of the bank's business model, such as higher reliance on fees and commission income, were associated with better profitability. The authors investigate the factors that affect European banks' profitability through the recent financial cycle. Unsurprisingly, they find that highly profitable banks were those that experienced smaller deterioration in loan quality and a larger improvement in cost efficiency. Perhaps more interesting would be to understand why some banks do better than others in the loan selection process. The paper identifies many factors that had an impact on bank profitability during and after the crisis, e.g. the degree of balance sheet expansions or contractions and the level of capitalization at the onset of the crisis. The authors conclude that common factors in all regions continue to depress bank profitability such as increased regulation, low interest rates and technological change.

In order to explore the relationship between business models and bank profitability, a recent study by the International Monetary Fund (IMF, 2018) displayed a scatterplot of two different ratios that are often used to distinguish business models: the deposits-to-asset-ratio and the loans-to-asset-ratio. Figure 4 in Appendix B shows that bank profitability does not seem to be correlated to any specific business model. The weakly performing banks (red dots) are rather randomly distributed across the universe of other banks. The IMF summarizes that "the incident of low ROE is strewn across a wide variation in business models."

Despite the difference of research questions, Lucas et al. (2019) and Albertazzi and Gambacorta (2009) reach similar conclusions regarding the possibility of using the choice of business models as a guidance for supervisory actions. Lucas et al. (2019) study empirically how European banks with different business models reacted to the financial crisis and cope

[4] From the ECB working paper series.

[5] From the IMF working paper series.

with today's low interest rate environment. The study clusters banks into six business model components and analyzes how these different clusters evolve over time. The authors find that the global 2008 financial crisis affected banks with different business models differently and that the business model influences how banks adapt to the low interest rate environment in the post-crisis period. Albertazzi and Gambacorta (2009) study the link between business cycle fluctuations and banking sector profitability. They find large country level differences in the ability of banks to protect net interest income from cyclic yield curve fluctuations and conjecture that differences in asset duration and the prevalence of lending relationships in some countries contribute to the heterogeneity of observed vulnerabilities.

Some papers indicate that diversified banks show a higher level of profitability. Dietrich and Wanzenried (2014) analyze the impact of bank-specific characteristics, macroeconomic variables, and industry-specific factors on bank profitability across 118 countries. The study identifies numerous factors that affect profitability. The national income level, the level of competition, bank ownership (private, public, foreign ownership), and high income diversification are all shown to be are associated with higher bank profitability. Petria et al. (2015) also investigate bank-specific, industry specific and macroeconomic factors of bank profitability in 27 EU countries. The study also includes one factor that is related to the bank's business model: a business mix indicator that measures the relative importance of "other operational income". The study shows a positive association of diversification and bank's return on equity.

Several studies (see e.g. Becalli et al., 2015; Menicucci and Paolucci, 2016) investigate the impact of size and economies of scale for European banks. These studies generally find evidence of increased profitability levels for large banks. However, the link of this result to business model choice is weak. Large banks display considerable heterogeneity with respect to their business models.

Bonaccorsi di Patti and Kashyap (2017) attempt to shed light on the factors governing the speed of bank recovery from large adverse shocks. Their analysis of banks hit by the Italian crisis shows that the ability to recover is mainly driven by idiosyncratic risks and therefore difficult to forecast by systematic factors such as business model choice. Interestingly and counterintuitive to common supervisory thinking, the study shows that banks with concentrated loan portfolios recover more often than banks with well diversified loan portfolios. Supervisory guidance on business models such as the encouragement of better loan portfolio diversification thus may undermine bank recovery after a crisis.

Rossi et al. (2018) investigate the balance sheet characteristics and other determinants of bank profitability in the Euro area before and after the financial crisis. The authors observe that the academic literature has identified different factors that affect bank profitability over time. There are two possible explanations for such changes. One of the reasons provided in the paper is that a changing industry and competitive scenario is likely to reward a different set of strategies. However, another explanation we see and also a reason for concern with this exercise is that not all factors identified might be structural, in other words, the real determinants for profitability. These causal variables are not easy to identify. Characteristics such as size that might be seen as a determinant of performance, might be instead caused by performance itself. A well-performing bank is likely to gain market-share and grow. This implies that supervisors should be cautious on deriving recipes for winning-strategies based on such analysis.

A part of the literature identifies the importance of corporate governance practices for banks' performance. Hau and Thum (2009) provide evidence of a systematic underperformance of Germany's state-owned banks and relate it to the quality of bank governance, documenting that the magnitude of bank losses in the financial crisis are associated with board incompetence in finance. Cuñat and Garicano (2009) show that the Spanish Cajas whose

chief executives had no prior banking experience and no graduate education - but did have strong political connection - extended more loans to real estate developers and fared substantially worse both before and during the crisis. The close connection between politicians and bank managers was also a factor in Spanish supervisors' regulatory forbearance during the crisis, and the banks' forbearance on bad loans to developers (Garicano, 2012). Similarly, the debacle of Monte dei Paschi di Siena in Italy – whose main shareholder is a foundation largely controlled by local politicians – originates from the botched acquisition of Banca Antonveneta in 2007, performed by a politically connected bank chief.[6] In our view, these dynamics are common to other countries with strong community-owned savings banks.

The most important finding is the fact that bank recovery depends to a large extent on the ability of banks to become more stringent when extending credit to their riskiest customers. This ability bears most likely little relation to business model choices. In a related study, Bongini et al. (2019) also investigate how European banks perform in periods of recovery of crisis. Consistent with the results of Bonaccorsi di Patti and Kashyap (2017), they conclude that recovery is mainly driven by credit risk and lending policy decisions. Business models of banks seem to play no major role.

Profitability seems also closely related to the channels that generate overbanking and excessive risk taking in Europe: see ESRB's Advisory Scientific Committee (2014) report on "Is Europe Overbanked?". This report identifies three channels responsible for Europe's overbanking: "(i) public support for banks and inadequate prudential supervision; (ii) political support for banks, encouraging them to over-expand; and (iii) technological innovations and increased competition in banking.

In this section, we made repeatedely the point that there is no empirical justification, based on the existing literature, for the superiority of certain banking business models, which could be of guidance to the supervisory activity. We conclude with the following questions:

- *Question 6: What exactly are the types of business models identified by the SSM?*
- *Question 7: What enables the SSM to identify strong performance differences among bank business models that are absent in the academic literature? Is it superior information, a novel empirical evaluation of such models, or a different interpretation of the term "business model"?*

2.2. Benchmark for banking industry profitability

The SSM *Review* describes the European banking industry as "lagging behind" their American counterparts in terms of profitability.[7] This wording seems to suggest that it is only a matter of time until European profitability levels rebound to pre-crisis levels, following with some delay the American banking industry.

Our view is more gloomy as we see a stronger parallel of the current European scenario to Japan, rather than to the US. We believe that structural factors, such as a given level of overbanking and a strong role of government-owned banking, tend to depress profitability in Europe. This renders a quick bank recovery from the crisis, as it was experienced in the US, less likely for Europe. In contrast, another widely studied recovery from a banking crisis has perhaps more similarity with the European situation: the case of Japan. The Japanese banking

[6] See the ESRB's Advisory Scientific Committee (2014) report: 35-40.

[7] ECB (2018), p. 8: "While US banks managed a faster recovery after the crisis, SSM banks are still adjusting."; "Euro area banks' profits are still lagging behind."

crisis emanated from the collapse of real estate and other asset prices in the early 1990s and resulted in a decade of low and mostly negative bank profits.

Whether Europe today is more similar to the US or to Japan is of great importance for the consequences one may draw from the subdued profit level in European banking. If Europe follows the US, then the longer-term outlook for bank profitability is rather positive, and tactical or strategic adjustments will help to reach higher profitability sooner or later. However, if Japan is the more realistic model, then efficiency gains at the level of individual banks will not automatically lead to a profit enhancement any time soon. For a comparison of aggregate return on equity of banks in Japan, US, and Europe see Appendix A.[8]

3. POLICY CONCLUSIONS AND RECOMMENDATIONS

The SSM thematic review on profitability and business models concludes that many factors are responsible for the subdued profitability of European banks, among them high impairments, legacy of NPLs, the economic environment, digitalization and new fintech and big tech competitors, tough regulation and low levels of market consolidation.

Moreover, the analysis in the *Review* shows very clearly that banks are not affected uniformly by these factors. In contrast, the level of profitability and its drivers differs widely across institutions. The *Review* rejects the hypothesis that there are some easily identifiable common factors explaining the superior profitability of some banks. The report concludes: "For some this was due to being very cost-efficient, while others managed to generate significantly higher revenues (relative to their total assets) than their peers. These banks are diverse in terms of size, business model and country of origin. This emphasizes that each bank needs to find its optimal trade-off and that it is feasible to be profitable even in challenging macroeconomic conditions regardless of a bank's business model."

We find this to be an important observation, and possibly the major insight of the *Review*. Changing bank business models is no panacea for improved profitability, let alone for increased financial stability. We also stressed in the paper based on the review of the academic literature and on the *Review* itself, there is no clear-cut definition of how business models for the banking industry should be defined.

Moreover, it is paramount to stress that the concern of the SSM with profitability should be of a restricted nature. **The question that the supervisor has to be concerned with is*: "How does low profitability affect stability of the European banking system?"*** Low profitability reduces the ability of banks to build buffers to live through negative stocks. This justifies the concern of bank supervisors with low profitability. At the same time, it also shows that maximizing profitability of the industry is not and should not be a concern of the supervisor. There are many reasons for high or low bank profitability, and it is difficult to find a unique driver for an increase in bank market valuation and profitability when the individual institutions are subject to competition amongst themselves, and from new entrants that threaten to debase established business models.

We note that even if it were possible to identify drivers of profitability, it remains highly contentious that improved management practices on the side of several banks will lead to a profitability increase for all these banks. In fact, increasing efficiency at the level of many

8 At a first glance, Figure 1 may suggest that the performance of European Banks as measured by ROE follows a more similar path to the US banks than of Japan. That may be well true during the period following the Japanese banking crisis, but as much as the ROE of Eurpean and US banks co-move, they are not at the same level. The US banking system was always operated with higher returns, with the exception of the period between 2008 and 2010. What we would like to strees on Figure 1 is the speed of recovery of the US banking system when ROE drops below 0. That, we believe, is a unique feature of the US banking system.

banks simultaneously may well lead to lower market prices rather than higher profits, or a mix of both.

Furthermore, a related remark relates to the knowledge about bank management practice at the level of the supervisory agency. Although the tone of the *Review*, in our reading of the text, is unequivocally optimistic as to the competency of supervisors to understand and to guide existing business models, the actual findings reported in the *Review* flatly reject any claim for superior knowledge or better understanding of what banks do or ought to do in order to raise profitability. That is not surprising in a regulator-regulated firm relationship. In fact, the literature on regulated industries often prescribes a type of regulation that keeps the regulator away from suggesting the type of business model.[9] The regulator should not diminish, to the extent possible, the dynamism of the industry. **In our view, playing a consulting role to the industry would generate exactly the opposite effect than the one intended. In addition, generating a hazard for financial stability.**

Seen through the lens of research findings, as reported in the previous section, the supervisory concept underlying the main hypotheses in the *Review*, namely the assistance of banks to improve their business model, is uncovered as what it really is: a pretension, and a dangerous one for that. There are many statements in the *Review* that suggest having or claiming to have a rather detailed bank management knowledge on the side of bank supervisors, including an understanding, superior to the one held by actual bank management, of what individual banks ought to do in order to succeed in a competitive market environment. Surprisingly, the broad analytical attempt to find a reliable set of explanatory variables in a statistical exercise clearly failed. For us, as readers of the *Review*, it is therefore incomprehensible why the obvious conclusions from the own findings are not even mentioned, let alone heeded: **the *Review's* findings reject t*he business model approach to supervisory guidance*.**

The fact that common drivers of business model profitability cannot be identified does not surprise us. In competitive markets profits, in particular high profits, are derived from innovations and market power – both aspects cannot easily be engineered through standard management practices. Moreover, even if some engineering would be possible, its effect on profits would easily be wiped out if all competing institutions would follow simultaneously the same path, the same advice. Aside from stifling the industry dynamics, there is an obvious danger of transforming the supervisory policy in a collusion device, or at least to foster some sort of herding behavior on the side of the banking industry. When all banks use the same pricing guidelines, consumer prices may increase and competition may be weakened.

This brings us to a central point of our conclusion: the supervisory pretension, embedded in the business model approach, is potentially dangerous – for the banks, and for the SSM. The SSM may be tempted to tailor its regulatory requirements around its own assessment of what constitutes good and bad business models. As a consequence, banks will tend to follow the pressure from the supervisor, and build their business models, their cost accounting formulae, their risk management strategies, their loan pricing tools, and so on, on the concepts championed by the supervisor. However, there is no substantive basis for business guidance on the side of supervisors.

One may even conjecture, disturbingly, that it will be the weakest banks in particular that are inclined to follow the business model guidance of the supervisors closely, in an attempt to appear compliant and win the supervisory recognition.

9 See Vives (2016) for an analysis of regulation specific for the banking industry.

Consistent with the supervisory pretense, or hubris, hypothesis, the SSM also claims in its *Review* that banks with better strategic steering capabilities, according to the assessment of joint supervisory teams (JST), have generated higher profits than other banks.[10] The *Review* is quite precise in its definition of what constitutes strategic steering capabilities. For example, the report lists

- a detailed understanding of the income drivers across business lines or geographical areas;
- breakdown of costs by business line or distribution channel;
- a cost allocation system that allocates costs to business areas or to the lowest level possible;
- and a comprehensive loan pricing framework and pricing models that includes a minimum price (pricing floor) to cover all costs and risks.

There is evidence that the SSM is actively influencing individual banks in their own business decisions. A study of Moody's (2018) states that the SSM has issued bank-specific recommendations regarding the necessary improvements to strategic steering or risk management capabilities as a result of the thematic review project. The recommendations involve understanding income and expense drivers, cost management and allocation, and loan pricing and strategy-setting processes. The report further states that SSM will monitor implementation of the expected improvements in strategic steering capabilities as part of the ongoing supervision.

In our view, this is first evidence of direct interference by bank supervisors into bank management decision making. This evidence is disturbing, in our opinion, since we believe that such active or passive guidance for business practice may eventually hit back and may even destabilize the banking system.

The reason is obvious: the advice given by the supervisors will enhance herding in bank behavior, particularly among weak banks. Moreover, the *business model approach to supervisory guidance* is likely to create an implicit liability on the side of the SSM.

Assume the supervisor guides an individual institution in the direction of a particular business decision, say allocating capital to a purportedly profitable, or rather safe activity. Assume further that there is a sudden economic shock that reduces profits at the wrong place or creates uncertainty where there was none before. Clearly, the supervisor may now face pressure for rescue-and-relief measures which it might find difficult to reject. **The *business model approach to supervisory guidance*, therefore, entails the risk of regulatory capture, caused by overstepping the mandate, and becoming too close to the supervisee.**

In fact, according to the rule book of the regulator, the supervisor is supposed to act as a referee in a competitive banking game, showing yellow or red cards to players that do not wish to, or are not capable of playing by the rules. This should not encourage the supervisor to be, or act as, the coach of the various players. Much like in football, roles of referees and coaches are well defined, and distinct, for a good reason.

Our criticism of the *Review*, in which the SSM seems to fall prey of dangerous hubris, raises the **natural question: how would a better supervisory approach look like**? May it suffice to say, in this report, that an alternative approach to banking supervision would concentrate on two characteristics of banks: **first, a sufficiently high level of capital at individual banks, i.e. a sufficiently high sum of equity and bail-in able debt, and second, a sufficiently credible preparation for bank resolution.** The role of the SSM,

10 ECB (2018), p. 15: There is no discussion about endogeneity in the document, importantly required to single out cause and effect.

together with the SRB, is in this alternative scenario foremost an enabler of orderly exit, when needed, rather than a preserver of an incumbent institution.

In other words, a possible benchmark for the supervisory strategy would prescribe how the SSM prepares weak banks for a smooth exit from the market, thereby yielding room for entry, innovation and change in the industrial organization of Europe's banking industry. An exit-friendly-orientation of the SSM would quite naturally enhance the role to be played by the SRB in the financial system – as it was originally envisaged by the architects of the new banking regulation in Europe.[11]

This brings us to a final comment, which we believe to be essential for the stability and sustainability of the European financial system: namely the completion of the banking union, including the need for harmonization in resolution and liquidation. A Banking Union that is not complete can hardly be sustainable. A truly integrated European banking market would in turn facilitate the job of the SSM in achieving its main goals, i.e. to *"increase financial integration and stability"*[12] of the European financial system[13].

[11] See the 2012 Liikanen report on reforming the structure of the EU banking sector, and Götz et al (2017).

[12] See SSM website: https://www.bankingsupervision.europa.eu/about/thessm/html/index.en.html

[13] A similar point was made by Kerstin af Jochnick in her keynote speech at the 7th Frankfurt Conference on Financial Market Policy organized by SAFE on th 15th of November 2019. https://www.bankingsupervision.europa.eu/press/speeches/date/2019/html/ssm.sp191115_1~1274db139d.en.html

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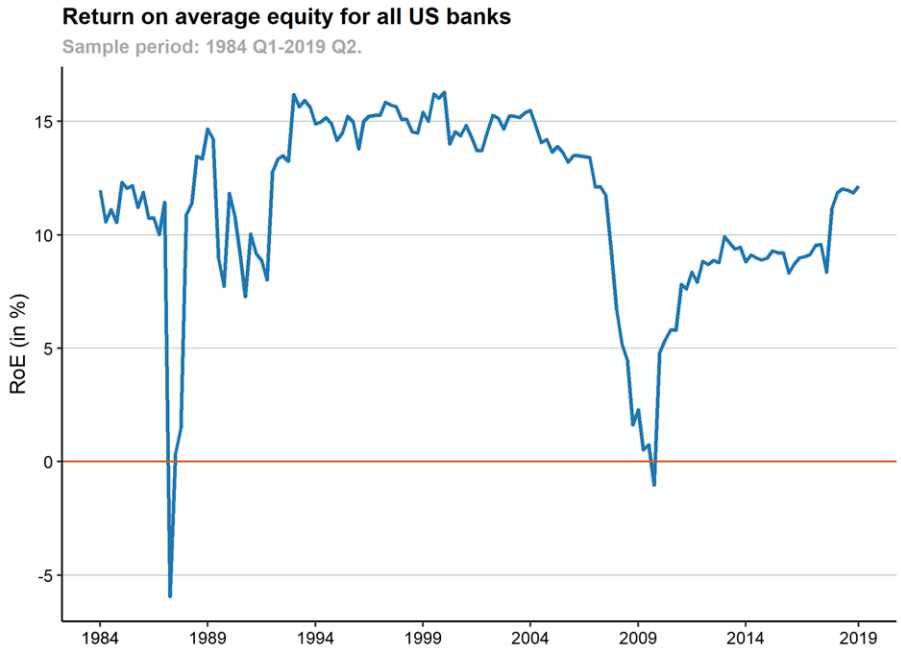
ANNEX

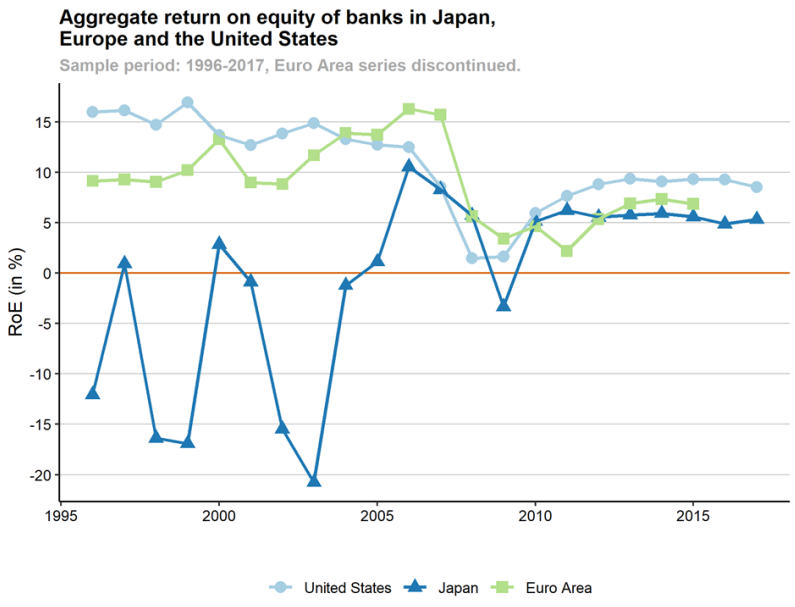
Appendix A on the level of European bank profitability

A comparison of aggregate return on equity of banks in Japan, US, and Europe shows large differences in bank profitability in post crisis times[14]:

Figure 1: Differences in return on equity



Source: Federal Financial Institutions Examination Council (US), Return on Average Equity for all U.S. Banks, retrieved from FRED, Federal Reserve Bank of St. Louis, November 18, 2019.



Source: World Bank, Bank's Return on Equity, retrieved from FRED, Federal Reserve Bank of St. Louis.

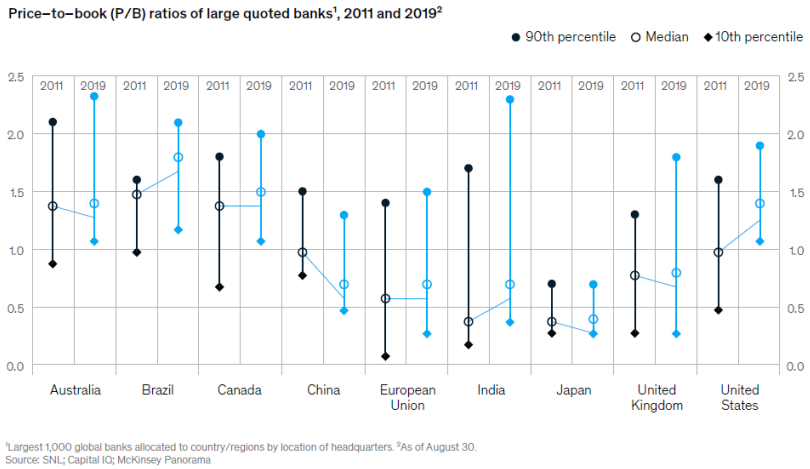
[14] The difference in time interval from the two graphs of Figure 1 is due to data availability. In the first graph, one can see both US banking crisis fo the 80s and of the 2008.

Source: Own figure. Top panel shows data from the US, bottom panel compares Japan and Europe to the US.

The two U.S. banking crises of the 80s and of 2008 are associated with strongly negative returns on equity which are followed by a quick rebound to pre-crisis profitability levels. In stark contrast, the Japanese banking crisis resulted in a full decade of negative or near zero return on equity figures for Japanese banks. European banks show a decade of lowered post crisis profitability with profitability levels well above the post crisis time period in Japan. The data shows that a financial crisis has very heterogenous effects on post-crisis profitability. There is little reason to believe that the European banking sector will follow the US experience with some delay as the SSM thematic review seems to suggest.

The stock market valuation of European banks continues to be alarmingly low. The following figure compares market-to-book-ratio in 2011 and 2019 for major global banking markets. It shows that the median market-to-book-ratio for European banks is substantially below 1 and did only slightly improve between 2011 and 2019. Low price-to-book ratios may have two explanations that probably both contribute to the observed findings: First, assets on the balance sheet such as NPLs or investments in associate corporations may not have been written down yet and the market expects additional future write-downs. It is widely acknowledged that many European banks still have elevated stocks of legacy assets and future profitability will be reduced by write-downs of these assets. Second, the market does not seem to expect that banking returns to an adequate level of profitability in the future.

Figure 2: Market-to-book-ratio in 2011 and 2019 for major global banking markets[15]



Source: McKinsey (2019)

Macroeconomic Factors

The market outlook on bank profitability is presumably also subdued by macroeconomic factors. ECB vice president De Guindos recently stressed that "cyclical factors have helped to improve bank profitability in recent years" (De Guindos, 2019). But GDP growth has been

[15] This graph is extracted from th McKinsey Global Banking Annual Review 2019. In the text they are explicit about the difference between Continental Europe and European Union, which includes the UK. Therefore we assume the report is consistent in its methodology, which implies the UK is also included in the European Union bar.

declining recently and the prospect of an upcoming recession may further weigh on bank profits.

A recent paper published in the ECB Financial Stability Review (Andersson et al., 2018) finds that "the level of earnings for many banks is still below that required by investors and bank profitability is still vulnerable to a possible turnaround in the business cycle." The study quotes the following challenges for the European banking industry: "low cost-efficiency, a lack of consolidation and high levels of non-performing loans (NPLs) in some jurisdictions." A natural question to ask is: when and how will the process towards consolidation and improved cost-efficiency start? Initiatives to improve cost-efficiency should be viewed as a long-term investment project. They are very cost-intensive in the beginning because they require massive investments in information technology and massive reductions in workforce.

Both are expensive and beyond the financial capacity of many banks, particularly in countries with highly protective labor laws, where severance payments act like a tax on workforce reductions. The likely outcome is that only few banks can afford to invest in modern information technology and can afford to reduce their workforce significantly. These banks will in the long run increase their competitive strength and drive other banks out of the market. Only after a substantial number of banks have exited the banking market, the remaining banks can be expected to achieve the scale of operations that allows a sustainable level of profitability for the majority of the remaining banks.

- *Question 8: Are the policies of the SSM impeding, or delaying the process of consolidation in the banking industry and, thus, a more rapid improvements of the cost-income ratio?*

Low interest rate environment

The prospect of continuing low interest rates and negative policy rates can be expected to decrease European bank profitability further in the future. Jobst and Lin (2016) investigate in detail how negative interest rates affect bank profitability. In order to understand the impact of interest rates on bank profitability, three interest rate environments should be distinguished: (i) declining rates, (ii) stable low rates, and (iii) increasing rates. In order to understand the profitability impacts, it is important to notice that bank assets tend to have a longer maturity than liabilities and are therefore repriced less often.

The repricing of bank's assets and liabilities is further characterized by the fact that asset (loan) rates typically respond strongly to market interest rate changes while liability (deposit) rates react in a weaker extent to market interest rate changes.[16] Current accounts are an important funding source of banks and do not react at all to interest rate changes as most current accounts do not pay any interest rates.

(i) Declining rates: Most post-crisis years were characterized by declining interest rates. This increased bank profitability through several channels: First, funding costs decline faster than interest rate earnings on (longer-term) loans because of longer maturity assets. Second, declining rates increase bond prices and thus causing an increase of trading profits from bond holdings. Third, banks benefit from low defaults as borrowers find it easier to service loans.

(ii) Stable low rates: In a period of stable low rates, funding costs cease to decline further but a bank's asset returns (on loans and bonds) continue to decline gradually as more and more maturing old (high yielding) assets need to be replaced by new low yielding loans. The profit deterioration continues until all high yielding loans (and bonds) have matured and

[16] Take current accounts from retail customers as an example. These constitute a liability for banks which usually comes with zero interest rate costs irrespective of the prevailing interest rate level.

replaced by new low yielding loans. The interest rate margin earned by banks is further depressed when liability rates hit a lower bound of zero interest rates.[17]

Lower asset returns cannot be further compensated by lower liability costs and the margin deteriorates further. Jobst and Lin (2016) stress that the reduction of profitability caused by negative policy rates also depends on the excess liquidity situation of banks. Excess liquidity is the amount of short-term liquid customer funds that is invested in liquidity reserves and earns negative interest rates.

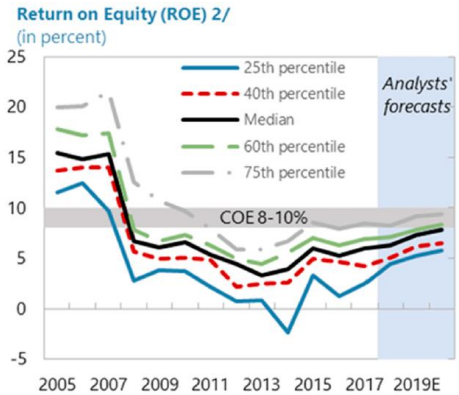
The amount of excess liquidity strongly depends on the macroeconomic environment: banks in countries with current account surpluses such as Germany and the Netherlands have higher excess liquidity and thus suffer from negative policy rates in a disproportionate way. Summing up, a continuation of the current low interest rate environment will not only lead to perpetuated low profits but can indeed be expected to reduce bank profits even further.

(iii) Increasing rates: Should the future lead unexpectedly to a period of increasing interest rates, the situation is unlikely to improve quickly. In this scenario, bank profits will come under even more pressure at least during an adjustment period. Credit losses will increase as borrowers find it more difficult to service debt. Bond prices decline and cause trading losses. Finally, the balance sheets of banks may be characterized by a large amount of low yielding loans that may be fixed-rate and have been originated in the low interest rate environment. While banks will be forced to pay higher market interest rates to short term depositors, the income from the loan portfolio will grow much slower because long maturity loans will be replaced only gradually by new and higher yielding loans.

Another factor that increasingly threatens bank profits is the fact that advances in information technology make it easier for bank customers to compare bank products and prices. For example, bank customers increasingly use internet searches and web platforms in order to find attractive deposit rate offerings. Some FinTechs operate deposit platforms such that consumers can easily choose between the offerings of many banks and are able to transfer their funds from one bank to another quick and easy with few mouse clicks. As a result, competition and market contestability increases and profit margins in the retail deposit market come under increasing pressure.

A study by the IMF forecasts European bank profitability for the coming years. It concludes that most large European banks are not expected to realize a return on equity that covers their cost of capital as required by capital markets. (IMF, 2018)

Figure 3: Return on equity forecasts for Euro area banks (significant institutions)



[17] We assume that banks find it impossible to charge negative rates to a sizeable fraction of their customers.

Source: IMF (2018)

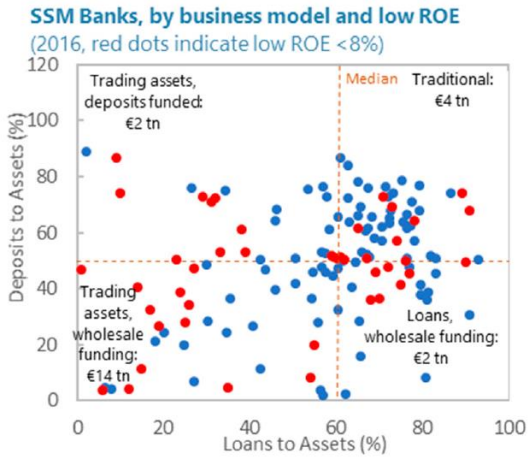
- *Question 9: Are there any structural differences between the banking markets in the US and Europe that weigh on profitability levels, e.g. overbanking, fiercer or weaker competition, and structure and performance of the national/regional economy? What do these differences imply in terms of individual bank business models?*

Structural overcapacity and entry of fintech and big tech

See the paper of the ESRB's Advisory Scientific Committee (2014).

Appendix B: Figures

Figure 4: Scatterplot of different business models among SSM banks



Source: IMF (2018). Red dots indicate weakly performing banks where ROE is below 8%.

Appendix C enumerates the questions

1. In comparison with the US, what should the appropriate density of branches for Europe be? More generally, what defines benchmarks if the role and importance of banks and capital markets differ across countries and continents?
2. Does it make sense, in a competitive environment, to assume that learning from better-perfoming banks will increase profits across the board? Moreover, why should increasing profits of poor-performing banks be an objective of the SSM? In the limit, should the SSM engage itself in precluding the potential exit of low-performing banks?
3. What are the benchmarks used to assess such diverse criteria as governance, strategy development, and risk pricing? What exactly are the empirical findings, what is their statistical and economic significance? In other words: From a purely methodological point of view, how strong or weak is the statistical basis for the conclusions drawn in this *Review*?
4. What is exactly the current understanding of the SSM of baking business models? To what extent does the SSM use this notion as the basis for a supervisory tool?
5. To what extent is it common SSM policy to help supervised banks achieving improved management practices, as formulated in *the Review*? In other words: To what extent are the findings reported in this *Review* used by supervisors in a way that advises, triggers, or leads

individual banks towards a particular strategic direction – be it cost accounting, risk assessment, loan pricing or business model related?

6. What exactly are the types of business model identified by the SSM?
7. What enables the SSM to identify strong performance differences among bank business models that are absent in the academic literature? Is it superior information, a novel empirical evaluation of such models, or a different interpretation of the term “business model”?
8. Are the policies of the SSM impeding, or delaying the process of consolidation in the banking industry and, thus, a more rapid improvements of the cost-income ratio?

   Are there any structural differences between the banking markets in the US and Europe that weigh on profitability levels, e.g. overbanking, fiercer or weaker competition, and structure and performance of the national/regional economy? What do these differences imply in terms of individual bank business models?

In this paper we argue that the own findings of the SSM THEMATIC REVIEW ON PROFITABILITY AND BUSINESS MODEL and the academic literature on bank profitability do not provide support for the business model approach of supervisory guidance. We discuss in the paper several reasons why the regulator should stay away from intervening in management practices. We conclude that by taking the role of a coach instead of a referee, the supervisor generates a hazard for financial stability.

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