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**A review of the doctoral dissertation of Mr Robert Peter Sasse, titled
"Consumer Preferences for the New Technologies in Banking", written under
the scientific supervision of Dr Anna Maria Nikodemka-Wołowik (Professor
of the University of Gdańsk) and Dr Joanna Adamska-Mieruszewska
(Supporting Supervisor)**

Dissertation's scope, objectives and structure

The basis for the review was a letter (February 23rd, 2023) from Dr Przemysław Borkowski, Professor of the University of Gdansk and the Chairman of the Economics and Finance Scientific Council at the University of Gdańsk, with the attached documentation concerning the preparation of the review of the doctoral dissertation of Mr Robert Peter Sasse, titled "Consumer Preferences for the New Technologies in Banking". The dissertation was written in English. The assessment of the doctoral thesis was prepared following the Regulation of the Minister of Science and Higher Education of 19th January 2018 regarding the detailed procedure and conditions for conducting activities in the doctoral dissertation, in habilitation proceedings and in proceedings for granting the title of professor (Dz.U. 2018, Item 261, Par. 6) and on the basis of the Act of 14th March 2003 on academic degrees and academic title (Dz.U. 2017, Item 1789).

The doctoral dissertation of Mr Robert Peter Sasse addresses the valid, engaging and relevant issue of the impact of new technologies on buyer behaviour. In these times of developments in artificial intelligence, blockchain, virtual reality and metaverse – as well as the discussion of the opportunities and risks presented by ChatGPT – the subject matter undertaken is worth acknowledging and appreciating. The dissertation refers to the banking industry and focuses,

to a great extent, on social media while not being limited to them. In this context, it is worth noting that the dissertation's emphasis on social media, such as the separate chapter in the theoretical part, should be reflected in the dissertation's title – especially considering that a significant portion of the key hypotheses and conclusions refer to social media.

The choice of the financial sector as a field of scientific exploration is to be welcomed – not only in view of this sector's significance for the modern economy and market functioning, but also of the changes taking place within it. In addition to the trends and directions in the evolution of the financial sector (particularly banking) indicated in the paper, it is also worth emphasising – as the dissertation regarded that to a lesser degree – that the boundaries of this sector are changing with the emergence of new business models, substitutes and competitors creating pressure to adapt and implement new forms and methods of operation. This is leading to increasing use of digital-based tools and methods in the sphere of process automation, individualisation of market activities, customer experience management and others.

As a result, the dissertation regards the sphere of new technologies, particularly social media, buyer behaviour and the banking sector. At the same time, several ambiguities have to be pointed out concerning both the definition of the field concerned by the dissertation and the coherence between its title and objectives on one hand, and its hypotheses and research questions on the other. In the introduction to the dissertation, the author identifies two converging but, nevertheless, slightly different fields which he intends to explore: the first is more general and points to how the end customers deal with the challenges and limitations of using financial products ("The way end customers deal with financial issues is a research topic") [p. 13]. The second relates to the perception and use of new technologies, products and services and is limited to the banking sector ("The major subject of this study is perception and use of new technologies, products and services as well as customer preferences in banking") [p. 14]. While recognising the convergence of the two fields indicated, it is significant to note the different boundaries of the dissertation for the areas of study thus defined.

Similar imprecision can be found when it comes to defining the purpose of the dissertation and referring its purpose to its research objectives and questions (Study 1) and its hypotheses

(Study 2). The purpose of the work is defined on p. 14 ("The main aim of the research is twofold. This study tries to identify how a fragmented, relatively unaffiliated group of prospective customers and current customers perceive products and services in banking. Thus, this study attempts to uncover customers' preferences regarding the banks' offers. Furthermore, this dissertation aims to find out how banks can fulfil customers' requirements, especially when using social media") and distinguishes, first and foremost, between the prospect and current customer and, secondly, restricts the new technologies previously mentioned in the title (e.g., social media). When confronted with the objective of the research indicated on p. 88 ("the objective of Study 1 was to identify the role of social media in financial decisions and in the use of the new technologies by the customers"), the emphasis here was put on such variables as "social media, trust, online banking, and gender" [p. 88]. This seems very ambiguous, mostly within the scope of limiting the perspective to 'trust' as an element determining buyer behaviour and distinguishing 'gender' as a differentiating variable.

This incoherence is also reflected in the research questions (Study 2) and hypotheses (Study 1) defined. The research questions combine the perspectives of new technologies and social media but add a previously unmentioned behavioural economics context (RQ1) – RQ_1: Can expectations of the new technologies in banks be described with the concepts of behavioural economics? RQ_2: What role can social media play in making financial decisions and deciding customers' use of new technologies? RQ_3: What are consumers' preferences concerning new technologies in banking?" [p. 14].

One may also feel similar regarding the research hypotheses specified in Study 1 and their concordance with the dissertation title, field and purpose. The five hypotheses defined in Item 5.1 ("H1: There is a positive relationship between the use of social media and trust in banking; H2: There is a positive relationship between the use of social media and online banking tools; H3: There is a positive relationship between the trust in banking and use of online banking tools; H4: There is no difference in the use of social media between women and men; H5: There is a significant difference in the use online banking between men and women") focus on the issue of social media, trust and gender as a differentiating factor. These hypotheses are mostly consistent with the indicated purpose of the study (Study 1, p. 88), but much less so when it comes to the dissertation's title, field and purpose. These inconsistencies are not

contradictory within the entire intellectual construct (the dissertation's topic, field, purpose, problem and research questions and hypotheses), but they promise much more. It would be worthwhile [for the author] to take greater care of the consistency of these interdependent elements in his future research projects.

The dissertation consists of an introduction, three theoretical chapters and three empirical chapters. There is a noticeable lack of an ending, compensated for by Chapter 7 ("Conclusions: Implications, Limitations and Future Research"). The theoretical part provides a good introduction to the research and the analysis of its results and is based on more than 320 items of literature – scientific articles, books, statistical reports and internet sources. The starting point is the issue of the behaviour of buyers – in particular, their preferences and decision-making process in times of the new economy, the progressive digitalisation of market activities and the assimilation of new technologies. A part that deserves to be highlighted regards the consideration of the achievements of behavioural economics and referring it to buyer behaviour. This is important not only because of the need to take 'bounded rationality' theory into account when it comes to buyers' decisions, but also in the context of the impact of new technologies on customers' choices. A polemical comment on this section concerns the excessive reference to the financial sector. Building a broader context based on unified and accepted theoretical knowledge relating to buyer behaviour would be expected, especially since the following chapter ("The State of the Banking Sector in Germany – Selected Aspects and Challenges") explicitly addresses this market sphere and analyses the German financial sector – particularly the banking sector. This provides a good starting point for the final chapter in the theoretical section, which deals with the nature, importance and scope of the use of social media – particularly concerning the financial and banking sector. The overall assessment of the theoretical section is positive, although it would have been desirable for the author to have attempted to summarise and identify the key conclusions after each section. It would allow defining the boundaries of the considerations and the point of view adopted by the author for further deliberations. This is because the essence of the theoretical part is not only to learn about the current state of knowledge in a given field, but also to identify the perspective and assumptions adopted for the research.

The empirical part comprises three chapters, two of which are based on two different research projects, while the third one attempts to make a conclusion and indicate scientific and practical implications. What makes this part of the dissertation very valuable is the extensive research carried out on large samples, which meets the condition of triangulation (of sources, methods, respondents, etc.). On the other hand, there is a distinct lack of a comprehensive research model that would translate the theoretical construct (and, as I have mentioned, the current one is not fully coherent) into an intelligible empirical formula. Although the author has demonstrated the ability to plan and conduct the research independently, as well as the ability to analyse the results and make inferences (albeit in a rather basic manner – through descriptive statistics and an analysis of correlation and regression), the indicated lack of development of a comprehensive research model and scheme should be considered a shortcoming. Nevertheless, the research carried out and the analysis of the results make it possible to find answers to the research questions put forward and verify the hypotheses formulated. On this basis, it can be stated that both the structure of the thesis and its logic are correct and meet the basic requirements for doctoral dissertations.

Content evaluation – theoretical and empirical perspectives

Despite the overall positive assessment of the dissertation, its weaknesses with regard to individual parts and chapters must be highlighted. The shortcomings related to the issues of consistency of the key elements of the theoretical construct (topic of dissertation, field, purpose, problem and research questions and hypotheses) certainly affected the quality of both the theoretical and empirical parts. The detailed key comments are included below:

- Chapter 1 ('Introduction') – the opening section, which has a methodological nature and presents the main elements of the dissertation – the field, purpose, methodology and research questions and hypotheses. The polemical remarks have been described earlier and mainly concern the intellectual construct. It should also be underlined that the description of the study's methodology is not fully comprehensible, which is largely duplicated in Chapters 5 and 6. A key prerequisite for scientific work is the so-called "intersubjective communicability". Its absence prevents not only the proper verification and evaluation of the work, but also the actual scientific progress and new discoveries.

- Chapter 2 ("Literature Review") – above all, the wording of the title itself raises reservations as it is rather vague and identifies the method instead of emphasising the problem-centred approach to the topic of the dissertation and indicating the nature and field of the subject matter. The chapter layout is correct and logical. It provides a good introduction to the subject matter of the dissertation and outlines the space for considerations. What is valuable in this chapter is, among others, an interesting comparison between the old and new economy, identification of technological drivers of change, highlighting the complexity of buyer behaviour and decision-making (especially concerning digitisation and digitalisation), an interesting description of factors influencing buyer behaviour (broken down into information perception), information processing and decision-making, and also the inclusion of achievements of behavioural economics in terms of discovering and understanding the specificity of buyer behaviour. The shortcomings mainly include the superficiality of the analysis, the unnecessary and excessive (in this part of the work) references to the financial and banking sector and the not taking full advantage of the available literature (e.g., the absence of important, valid publications by authors such as Simon, Thaler, Ariely, etc.). However, what needs to be stated as the main reservation, which applies to the majority of the subsections of the theoretical part, is the lack of summaries, the formulation of conclusions and the definition of the boundaries and point of view for further considerations. In fact, the reader is left alone with this and does not fully understand the author's assumptions.
- Chapter 3 ("The State of the Banking Sector in Germany – Selected Aspects and Challenges") – this chapter has great substantive value and is also valuable in terms of shaping the market field for the topic and purpose of the dissertation. It is a presentation of the historical development and current state of the German banking sector and the ongoing processes of digitisation (transition towards the digital system) and digitalisation (scope of use of digital technologies) leading to changes in the financial and banking sector (new services, business models and competitors). The considerations in this chapter are concluded with the following sentence: "In general, it can be said that the financial services sector is facing major challenges and an immense change" [p. 58]. It opens up the field for further exploration, announces the

need for more in-depth coverage of the issue of new technologies in the banking sector and introduces Chapter 3.

- Chapter 4 ("The Use of Social Media in Banking") – this chapter describes social media in detail (essence, features, benefits, etc.), analyses their scope of activity and the specificity of their users, and identifies their role in the financial services market. The interesting segmentation of social media users (connector, expert, seeker, self-sufficient, seller, unclassified) is noteworthy. What may be questionable about it is that almost two-thirds of the users are classified in the last category ("The last type is the 'unclassified'. More than 60% of all users correspond to this user type") [p. 62]. This must raise questions about the criteria for such segmentation, its accuracy and, thus, about its final value. The initial, more general part of this chapter is concluded by pointing out the great potential of social media in the activities of financial institutions ("many financial services companies have not yet recognised the opportunities of social media in customer communication") [p. 64]. This provides space for a more detailed analysis of the use of social media in the banking market, insurance market, etc. The theoretical part is concluded with an analysis of the social media activities of selected banks (GLS Bank, Fidor Bank, Deutsche Bank) together with an indication of the key challenges for such activities. It is undoubtedly an interesting and valuable chapter. However, one is left unsatisfied by the lack of in-depth findings and conclusions on the current status and development direction of social media in the German banking market. Furthermore, despite the content itself being interesting, the reason for undertaking an analysis of social media activities in the insurance market and other sectors of the financial industry is not explained. This goes beyond the subject of the dissertation – the banking sector.
- Chapter 5 ("Empirical Study 1: Relations Among SM, Trust and Online Banking") – a chapter that presents the first of the two research projects carried out to find answers to the first and third research questions (RQ_1: Can customers' expectations referring to new technologies in banks be described with the concepts of behavioural economics? RQ_3: What are consumers' preferences concerning the new technologies in banking?") [p. 14]. The initial section is a description of the study's

methodology – which, however, is incomplete and unclear. It is not entirely clear, for example, what method (CAWI?, PAPI?, CATI?) of data collection was used or what type of sampling was employed – one can only guess that it was a non-random selection. All the empirical material has been appropriately elaborated. The descriptive statistics have been applied well. What may be somewhat questionable is the rather cursory analyses and the lack of more complete detailed conclusions. In addition, it would be desirable in Item 5.3. to contrast the description of the sample structure with the structure of bank customers or the structure of society in the Federal Republic of Germany. It would also be worthwhile to use a more problem-oriented approach instead of rather generic subsection titles ('Descriptive data', 'Data analysis and results' etc.) and to use 'Not Rejected' instead of 'Accepted' in Table 7 [p. 97].

- Chapter 6 ("Empirical Study 2: Consumers Towards Digital Technology in Online Banking") – this chapter presents the research results obtained in the second research project carried out for the doctorate. Again, the scale of the study should be emphasised. Over 4,000 respondents took part in it, which is certainly valuable. The critical comments are similar to those applicable to Study 1 – a somewhat unclear description of the methodology, lack of reference of the sample structure to that of the bank's customers, superficiality of the analysis and modest conclusions. This last reservation can be partly explained by the work layout formula adopted by the author, where Chapter 7 contains deeper inference. In addition, two further key limitations must be pointed out. Firstly, the research was conducted in 2016, seven years ago, which can be considered a weakness of the dissertation in such a dynamic world. Secondly, it is incomprehensible that not only German, but also Swiss and Austrian customers were surveyed. This can have a negative impact on the quality of the survey results obtained. Another limitation is that the research includes, on a par with the core issues, areas that are somewhat peripheral to the core theme and purpose of the dissertation. This includes "FinTech and internet companies" and "The future of online banking". Despite the limitations indicated, the effort involved in carrying out such a large-scale study and attempting to find answers to the research questions adopted should be appreciated.

- Chapter 7 ("Conclusions: Implications, Limitations and Future Research") – this chapter concludes the entirety of the reflections contained in the study. In its essential content, it refers to the empirical part. It largely compensates for the weaknesses identified in Chapters 5 and 6 related to the poor analytical part and the partial conclusions. The author correctly addresses the research questions, hypotheses and objectives when concluding the research dimension.

The evaluation of the theoretical and empirical dimensions of the work is positive. The layout adopted in the dissertation corresponds to the standard of scientific articles. Nevertheless, it seems worthwhile for a paper of this type to be summarised with an ending in which the accepted scientific construct and the research results are juxtaposed. This issue does not decisively affect the final evaluation but reduces the overall impression of the work.

Dissertation evaluation – formal, linguistic and technical perspectives

From a formal and technical perspective, the work is properly structured and written. It is necessary to emphasise its correct style, language and communicative form. However, the author did not shy away from certain faults – the avoidance of which, in the future, will result in a higher quality work. This regards, among others:

- a change in the style of writing the paper – first person plural (p. 21)
- internet sources should have the author, title and date of downloading stated
- formal errors – e.g., on p. 122, the text indicates a 'chart', and we are talking about Table 11

Final conclusion

Despite the polemical comments raised, I would like to state that this dissertation meets the requirements set for doctoral dissertations indicated by the Act on Academic Degrees and the Academic Title of 14th March 2003, as well as by the "Law on Higher Education and Science" Act of 20th July 2018. The author has demonstrated fundamental knowledge of the subject matter in question and the ability to conduct research independently. I, therefore, request the Economics and Finance Scientific Council at the University of Gdańsk to admit the doctoral dissertation of Mr Robert Peter Sasse to public defence.

