An Analysis of Requirements in Risk Management in Austrian Banks for Academic Application: A Mixed Methods Study

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ABSTRACT: This paper offers an analysis of the current requirements of risk management in Austrian banks. The last global financial crisis was the trigger for the critique and the resulting transformation of risk management. Consequently, not only banks should rethink their risk analysis, also the academia and higher education in the field of finance and economics should adapt to the latest changes. This mixed-method research study analyses which requirements graduates from a finance study should bring along to start a career within the risk management department of a bank.

12 expert interviews with risk managers (m=10, f=2) working in 12 different Austrian banks were performed. The wide-ranging questionnaire consists of four requirement-blocks (risk categories, regulatory guidelines, fundamentals in economics, tools and models) regarding the topic of risk management. The participants rate the relevance of every item on a Likert scale.

The inquiry shows that the experts focus on extensive knowledge regarding risk and different risk categories. Dependent on the specialization within the risk management job, knowledge in regulations or mathematics are important. A special attention of many experts focusses on softskills and competencies like IT, English and communication skills. Attributes like an openness to change, flexibility to continuous improvement and learning-on-the-job are requested.

KEYWORDS: Risk Management, Austrian Banks, Finance Education, Requirements
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Introduction

Within this study, the current requirements for graduates of a finance and banking program are ascertained. For this purpose, interviews are held with experts in management positions in the field of risk management in Austrian banks. The analysis of the results will provide an insight into the changed requirements of risk management after the crisis and will support Austrian universities of applied sciences in expanding their education spectrum in risk management. This paper looks at the market side and analyzes the demand for graduates in risk management for banks. Exactly this consideration is linked with applied research and should provide suggestions for future curricular. The question comes up, what skills and which knowledge are necessary for the market and how this can be offered in a curriculum at an Austrian university of applied sciences. The aim of the study is to empirically determine which practice-relevant requirements for risk managers in Austrian banks are considered important for graduates. The objective is to gather new information about the current relevant requirements and to adapt university curricular.

The risk managers of banks are interviewed. The largest and most relevant banks are considered to ensure the validity of the results. This analysis deals exclusively with risk management practice and risk management education at the Austrian level. The national consideration excludes international banks and international education institutes with risk management education. The focus lies on Austrian banks and Austrian universities offering a program in finance and banking.

To respond to the expertise of the participants and still can achieve comparability, a mixed-methods approach is used. This empirical concept incorporates both quantitative and qualitative aspects (Teddlie & Tashakkori, 2010, pp. 7–8). The participants answer a comprehensive and closed questionnaire, but also can respond to open questions. The questionnaire was designed by intensive literature review to represent areas that could be relevant for a career in risk management in banks. The knowledge and skills are divided into four broad areas: risk categories, regulations, basic business administration knowledge and tools.

The results of the empirical survey can serve as a basis for refocusing University programs. The elaborated requirements represent the practical relevance on the financial market and provide the basis for adapting practice-oriented content. Furthermore, this paper will explain the current orientation and focus of risk management of banks in Austria. The results of the empirical survey are used to combine practical approaches into theory at universities. The following analysis deals exclusively with banking risk management.

Literature review

The financial crisis of 2008 and 2009 has provoked global and drastic consequences for the entire world economy. This financial crisis revealed that the methods used for early risk detection and risk analysis were insufficient. Preventing crisis requires effective recognition of emerging financial bubbles and economic dependencies. The banks are still seen as the main cause for the biggest crisis after the world economic crisis of 1929. The European and national security standards, such as the requirements of Basel II and the minimum requirements of financial market supervision, have existed but the banks have nevertheless destroyed several trillion US dollars. The implosion of the financial system and the decreasing trust into the banking system were the consequence. This laid the foundation for a sustainable realignment and further development of risk management practices in banks (Jacobs, Riegler, Schulte-Mattler, & Weinrich, 2012, p. 6).

The following authors have analyzed the financial crisis from 2008 onwards and have specifically addressed the role of the banks. Special attention was paid to risk management and the early detection of crises. Jacobs et al. (2012) show that the methods used for risk detection and risk analysis were insufficient during the financial crisis. Mertzanis (2013) also examines the past financial crisis and the need to adapt risk measurement to extreme conditions. The major mistakes that led to the collapse of the entire financial systems were not made in a crash but during a high phase. Taking risks in the boom were underestimated and overestimated in a crash, which led to a constant misperception of risk. Changing market conditions have also changed investors' attitudes towards risk (Mertzanis, 2013, p. 298). Risk is a situation involving exposure to danger. Transferred to the banking business, risk management is the handling of uncertain values in order to increase the equity (Strauß, 2009, pp. 33–34). These developments raise doubts about the traditional role of risk management elements. Huber and Scheytt (2013) wonder why risk management has remained important after the malfunction during the financial crisis in 2008. One multiplier during the crises was the mentality of credit institutions driven by monetary incentives (Jacobs et al., 2012, p. 299). Excessive risk-taking among investors played a key role (Huber & Scheytt, 2013, p. 91).

To offer a practical education in the field of banking and finance, science and academia should adapt to the changes on the financial market. The changing requirements for the Austrian banking sector should be provided by the universities. The knowledge and competencies learned should be rethought and adapted to the current needs of the market. The contents of a finance and economics study should optimally prepare for a career in the financial mar-

ket and require a combination of theoretical and practice-relevant knowledge. Considering the changes in risk management should also include academic approaches. The following articles address the criticism of academic teaching in the context of risk management and banking. The authors take up this criticism that emerged during the financial crisis and offer a broad analysis. It is clear that a reorientation of the content and the practical relevance of the theory learned are necessary. Peterson (2013) states in his study that the economic crisis has brought much criticism of the economic professions. This critique opened discussions about the adequacy of the traditional academic business education (Peterson, 2013, p. 401). Blinder (2010) states in his article that the recent events should encourage any professor of a macroeconomics or finance course to rethink their contents taught (Blinder, 2010, pp. 385–386). Friedman (2010) says that the lessons learned from the recent financial crisis should be taken as an impulse to redesign the economic views taught at the universities. The experiences from the recent financial crisis should change the thinking of the economics profession significantly. The newly gained insights should also accompany students on their way to the profession of an economist (Friedman, 2010, p. 391). Traditional approaches within economic education focus primarily on basic knowledge that neglects practice-oriented learning (McGoldrick & Peterson, 2011, p. 16). McGoldrick and Peterson (2011) also argue that the recent financial crisis created a divergence between the economic doctrine and real economic developments. The pedagogical approaches should be constantly adapted to the economic changes and crises (McGoldrick & Peterson, 2011, p. 18). Solow (1983) claims that students' dissatisfaction can be traced back to short-term models that cannot be applied to practical life. Economics is looking for simple ways of thinking to explain complex phenomena. However, simple and one-dimensional structures do not adequately reflect reality. This is the reason why it is necessary to repeatedly reject and reformulate models. Peterson and McGoldrick (2009) argue that after completing university, students should be prepared for real economic life and economic conditions. Finally, Shiller (2010) expresses in his study the dissatisfaction with the teaching of economic - especially macroeconomic - content. Students of business schools perceive their lectures as irrelevant to current crises outside the academic institution. Shiller highlights many complaints regarding the missing correlation between economic education and practice. Obsolete economic content should be discarded on an ongoing basis and the teaching should be supplemented by new relevant topics in order to offer content with a high degree of practical relevance (Shiller, 2010, p. 403).

Peterson (2013) looks at how criticism of economic education triggered by the crisis can provide a useful framework for the reorientation of economic educa-

tion. The correspondence of theory and practice with new pedagogical approaches can promote the necessary sustainability of learning. Expanding and enriching students' basic knowledge can foster the development of critical thinking. Theories should be explored by questioning and evaluating underlying assumptions. The combination of theory and practice, should provide a wide range of pedagogical strategies (Peterson, 2013, p. 405). Due to the complexity of the real world, pluralism of theory and methodology should be a part of economic education. Graduates are encouraged to make decisions and distinguish between competing alternatives (Groenewegen, 2007, pp. 22–36). The crisis highlighted the need for developing the ability to ask questions, find solutions, and apply them to existing problems. The big criticism during the crisis is the exaggerated self-confidence and arrogance of the involved decision-makers. This emphasizes the need for a stronger focus on the social dimension in economics (Peterson, 2013, p. 404). The theory of significant learning by Fink (2013) provides a framework for rethinking economics education and is seen as a response to the criticisms during the recent economic crisis. Streimikiene, Girdzijauskas, and Moskaliova (2014) write that bubbles in the asset market are the main cause for unstable situations in the economy. The exploding of a bubble has far-reaching consequences and can trigger global crises, such as in 2007. Due to globalization, the effects are not only noticeable in separate economic sectors, but also affect the entire global economy (Streimikiene et al., 2014, p. 13). This is one of the reasons why the recognition of bubbles and unstable situations is considered an important part of the academic education. Karamouzis and Minsky (1987) claim that crises do not develop according to classic or neoclassic theory. It is a cycle of investing and speculating. With stable economic growth, this speculative financing is profitable and leads to a pyramid scheme.

The education at a University of Applied Sciences especially in Austria has exactly this pluralistic approach as their goal. Students are prepared for actual work environment through practical content during their studies (Brugger, 2014). The literature shows that in certain areas the academic business education is inadequate for the changing market situation. There is a need to fill these gaps and determine which requirements are relevant for Austrian banks. To analyze the requirements and adapt the education in finance and banking, the following questions should be answered during the research.

Research Questions & Hypotheses

(1) Which requirements in the form of knowledge and skills in risk management are requested by risk managers from Austrian banks to finance and banking graduates?

> (a) Which of the requested requirement blocks (risk categories, regulations, basic business knowledge and tools) are the most important for the risk management experts?
>
> (b) Which knowledge and competencies have the most relevance within the different blocks?

(2) What additional skills, competencies and knowledge about the content of (a) should be acquired during a study in finance?

In addition to the research questions, hypotheses are formulated to create a targeted research.

H1: A basic business administration and financial education is more important than specific risk knowledge for a job in the risk management of a bank.

H2: Knowledge about liquidity risk is most important in comparison to other risk categories.

H3: Experts in the field of risk management are solely looking for graduates with excellent mathematical and statistical skills.

This paper offers a look at the market side and questions the necessary content at the universities to be able to satisfy the market. Exactly this consideration is linked to a targeted research. Relevant content for the curriculum of a university program should not be generated from textbooks, but determined directly from the market. This results in a combination of market and research side. New insights are expected on the focus of the market side for education, ie what knowledge and skills are demanded in Austrian banks. The added value of this research is the focus on the market to address the need for graduates with financial degrees. The expected results can change the focus of the future curriculum of higher education studies to a practice-oriented and market-adapted education.

Methodology

Research Method & Sample

To answer the research questions and to choose the best possible design for the research, the mixed-methods approach is chosen. This combines the use of quantitative and qualitative methods. In the same research project both approaches with their procedures and techniques are integrated into each other. The mixed-methods design subordinates the method to the objective of the research. Through this multimethod approach a better understanding of complex problems is provided (Baur & Blasius, 2014, p. 153; Kuckartz, 2014, pp. 30–33). The mixed-methods research design is used to conduct complex research. Often, research problems cannot be examined sufficiently by quantitative or qualitative methods alone. Mono-method designs are often inadequate for dealing with complex and application-oriented problems. The immediate practical relevance and the application of the results have priority within mixed-methods. Complex problems can be better understood through the combination of qualitative and quantitative approaches. This multi-method approach enables broader and more comprehensive results and creates a complete picture (Kuckartz, 2014, pp. 51–54).

Selecting the participants and interviewing experts represents the qualitative aspect. The quantitative design of the survey instrument gives numeric values. This novel approach offers an individual design of the survey tool. It combines the advantages of both traditional quantitative and qualitative approaches (Teddlie & Tashakkori, 2010, pp. 7–8). By applying descriptive and qualitative methods of analysis, the results are presented both narratively and numerically.

The analysis of the changing requirements in risk management in Austrian banks and elaborating practice-relevant requirements for graduates of a finance study represents a complex problem. It is necessary to find concrete comparable numerical values for the requirements, as well as individual and subjective assessments from the experts in the risk management of the banks. Furthermore, the practical relevance and the application orientation of the research results for Austrian universities of applied sciences and their finance studies are important. For this reason, choosing a mixed-methods research design is ideally suited for the empirical collection of the data for this study.

The relevant sample includes Austrian banks, as the focus of the analysis is on national risk management practices. To ensure the validity of the results, the largest and most market-relevant banks are considered. The representativeness of the sample is determined based on the size of the balance sheets of the Austrian credit

institutions. Both, big banking houses and private banks are included in the sample, with a focus on big banking houses. To achieve statistical relevance, the market of Austrian credit institutions should be adequately covered. This is achieved when the decision-making risk managers of the market-relevant credit institutions act as participants. The risk managers of the Austrian banks are the experts used for the following investigations.

Due to the status and the expertise of the participants, the personal survey is a qualitative expert interview. Kaiser (2014, p. 41) identifies experts about position, status and attributed knowledge. All respondents are specialists in risk management, have an intensive background in the banking sector and provide subject-specific knowledge in this area. The individual expert knowledge results from the professional position and the ongoing further education (Baur & Blasius, 2014, pp. 570–571).

To best answer the research question and to generate expert knowledge, the participants are systematically selected. This corresponds to a criteria-driven selection of the sample. The quota sample is compiled on the basis of theoretical considerations and selected characteristics (Baur & Blasius, 2014, p. 273). For the research process of this study, the participants were selected as a quota sample. Criteria such as the total size of the balance sheet, the market relevance and the sector (private and large banks) of the respective bank play a role in the selection.

All 12 participants hold senior management positions in risk management at Austrian banks. Furthermore, all have completed an academic career. Two women and ten men represent the 12 participants. For reasons of anonymity, both the name of the participant and the name of the bank are treated strictly confidential and are not mentioned in this paper. The trend.Top 500 publishes an annual ranking of Austria's largest companies. In the banking category, the 17 largest Austrian banks are listed on basis of their balance sheet (trend.Top 500, 2016). Nine out of the 17 listed banks fall into the chosen sample, which represents a percentage of the total balance sheet of 85.29%. Nine major banks and three private banks are considered to expand the range of different aspects. This shows the relevance of the chosen sample. A large amount of graduates of a finance or banking study are going to work in one of the banks within the sample.

Research Instrument & Procedure

Due to the limited time of the participants and the analytical orientation of their position, the questionnaire was chosen as a suitable method. It breaks the complex research topic down to easy-understandable questions, provides a closed framework

through its structure and gives the opportunity to quickly access relevant data. The requirement to compare the answers is given and it focuses the attention of the participants on the presented topic (Petersen, 2014, pp. 17–18). The survey tool is a questionnaire that has mostly quantitative aspects to ensure comparability of the results. In the questionnaire, the most important aspects of risk management are queried using Likert scales for 61 items. The participants chose between 5 answers: "very important", "fairly important", "important", "slightly important" and "not at all important". In addition, weightings and rankings of individual areas are added. For example, "Please put the following risk categories in an order. Take the capital adequacy / ICAAP (Internal Capital Adequacy Assessment) into account. 1 is the highest value and 5 the lowest value. Any number from 1 to 5 may only be used once and all fields must be filled out." or "Please indicate a ranking of importance. For the ranking you have 10 points available. Please spread 0 to 10 points on each risk category. A high score is more relevant to the bank in which you work. The sum of all information must be 10 at the end."

The questionnaire is divided into four blocks: risk categories, regulations, basic business administration knowledge and tools. At the end of each block and at the end of the entire questionnaire there are open questions to encourage participants to make additional comments. These supplements are noted and used for qualitative data analysis. The content of the entire questionnaire was compiled through an intensive preliminary search. Here, the financial risk of banks was presented in a tree diagram and broken down to its individual components. This risk tree is the basis of the four risk blocks and was used to select the items.

The survey was held in person of the two-person research team to be able to respond perfectly to questions during the interview. One person takes the role of the interviewer and asks the questions. The second person of the research team - in the role of the observer - notes all additions, reactions and comments from the expert and acts as a support. Answering the 11-page questionnaire takes about 30 minutes.

In the evaluation of the results, both quantitative and qualitative analysis methods are used. The weights and values from the Likert scales give concrete numeric values and the importance of the individual areas is presented in points. This ensures a comparability of the resulting values. These results are presented as a descriptive and explorative analysis. The additional open and written information were analyzed qualitatively through coding. The code book contains of 15 categories with 48 subcategories in total.

The quality criteria of research ensure the quality of the method used. Objectivity, validity and reliability are the classic quality characteristics of a test (Schmidt-Atzert, Amelang, Fydrich, & Schmidt-Atzert-Amelang, 2012, p. 131).

The objectivity was ensured. The reliability was tested through the split-half reliability (0,868), the Cronbach's alpha coefficient (0,906) and the Spearman-Brown reliability (0,929). The validity was ensured through content validity, criterion validity and construct validity.

Findings

The graph below (Figure 1) shows the average rating of the importance of the requirements within all 61 items from all 12 experts. The highest ranking of the items is within block A "Risk Categories". The value of 3.86 indicates the average value of all 12 experts in risk management. The second and third place are blocks C and B. Block D, "Tools and Models", was ranked as least important.
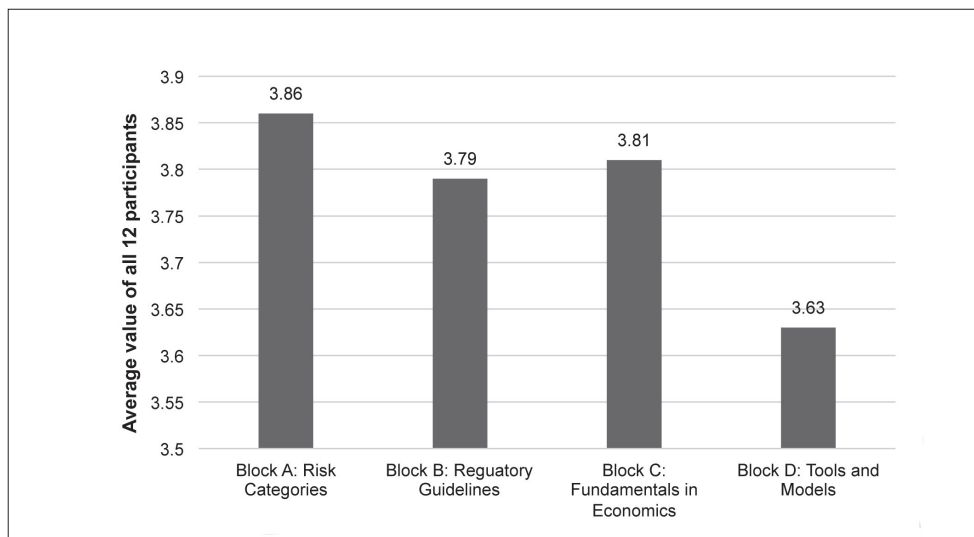

Figure 1. **Ranking of requirement blocks**
Source: Author's editing

As a further presentation of the results, the average values of the individual items within the blocks are analyzed. Here, the focus is especially on particularly high and low values. In this case, values greater than 4.3 are considered particularly high and values less than 2.8 are considered particularly low. These limits were deliberately determined to show a tendency within the individual blocks. A comparison within and between the blocks is possible.
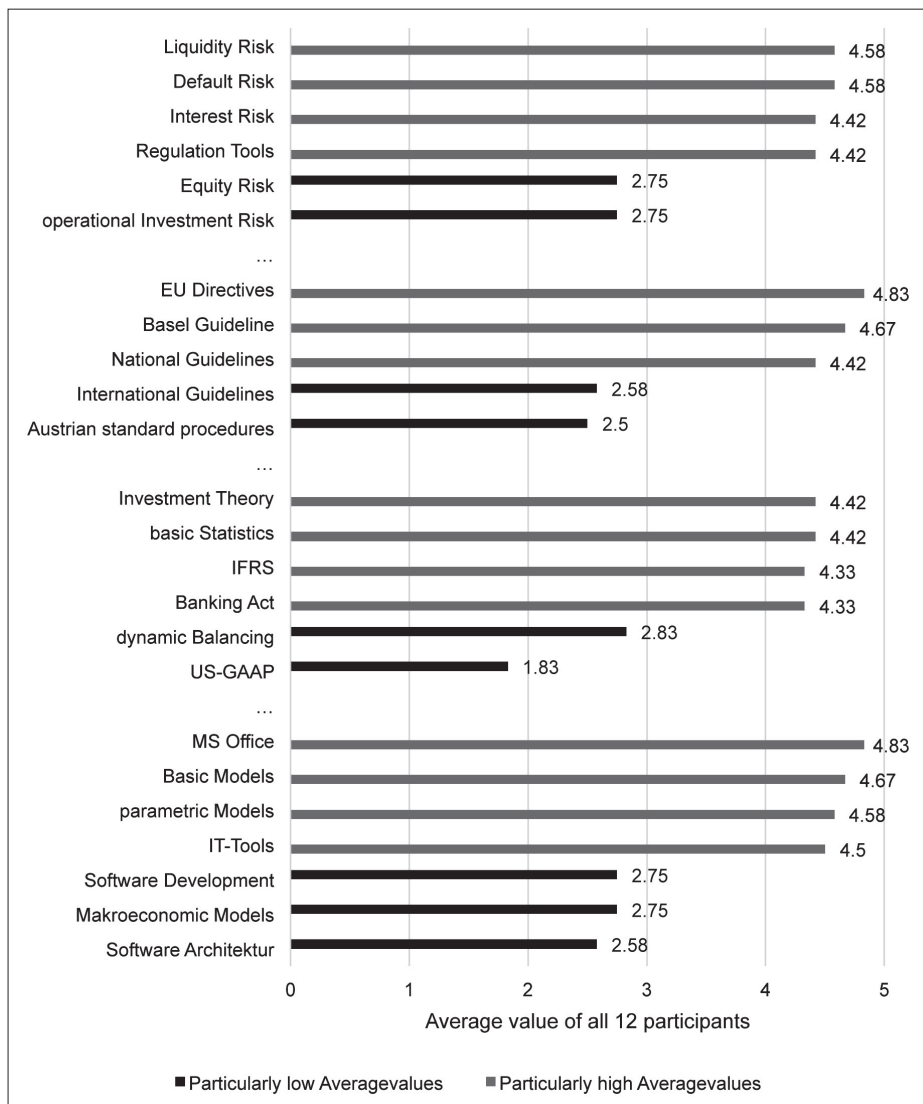
Figure 2. **Ranking of individuel items**
Source: Author's editing

In block A, the " liquidity risk" and "default risk" are rated as most important. "Equity risk" and "operational risk" are considered to be least relevant. The average importance rating as a requirement within Block B is greatest for "EU Directives". Less important from block B are "international guidelines" and "Austrian standard procedures". The average assessment of importance as a requirement within Block

C is greatest in "investment theory / discounted cash flow analysis" and "basic statistics". Less important from block C are "dynamic balancing" and "US-GAAP". The average importance rating within Block D is greatest in "MS Office". Less important from Block D are "software development", "macroeconomic models" and "software architecture". A comparison between the items shows that the average importance rating across the entire questionnaire is greatest for "MS Office" and "EU Directives". The least important of all items is rated "US GAAP".

The open comments from the risk managers were collected, coded and evaluated. Figure 3 shows the main categories which emerged during the qualitative content analysis. The value in the category is the product of the number of statements on a specific topic and the number of participants who have addressed the respective topic. This parameter compares how often and how much the risk experts talk about a specific topic. However, a low value does not indicate the irrelevance of the topic. Figure 3 shows this created parameter in a comparative diagram.
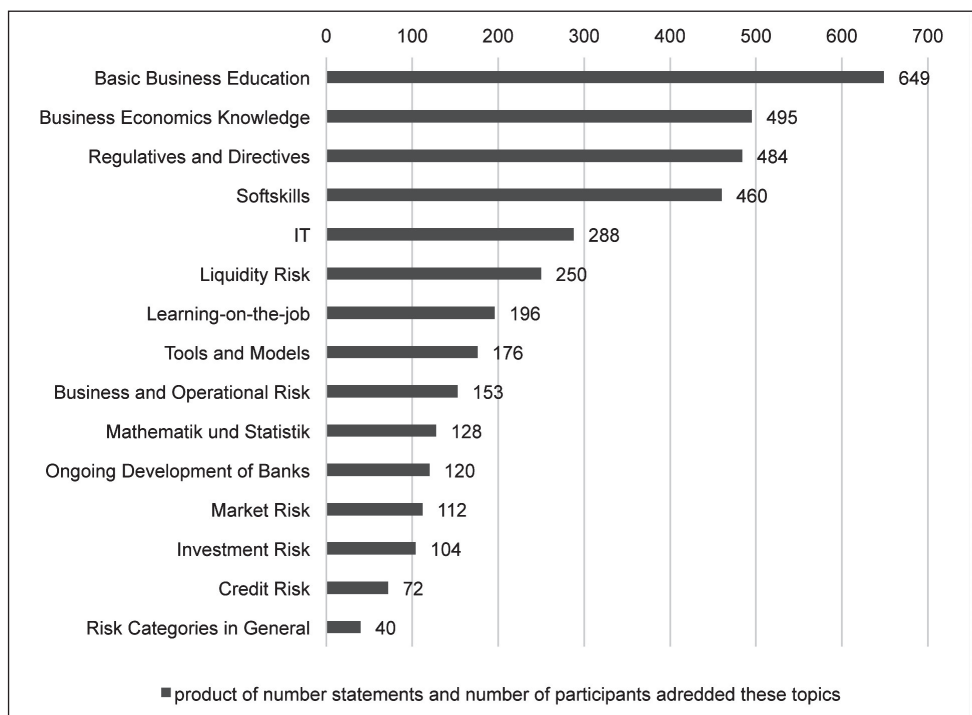

Figure 3. **Open and Additional Categories**
Source: Author's editing

Answering the research questions & responding to the hypotheses

(1) Which requirements in the form of knowledge and skills in risk management are requested by risk managers from Austrian banks to finance and banking graduates?

      (a) Which of the requested requirement blocks (risk categories, regulations, basic business knowledge and tools) are the most important for the risk management experts?

Figure 1 shows the average score of the individual blocks, which is the average score of all questions given by all interviewed experts summed up within the blocks. This presentation places "Block A: Risk Categories" in the first place, "Block C: Fundamentals in Economics" in second place, "Block B: Regulatory Directive" in the third place, and "Block D: Tools and Models" in the last place.

      (b) Which knowledge and competencies have the most relevance within the different blocks?

As presented in Figure 2, the average performance values of the categories within Block A have shown that "liquidity risk" and "default risk" are rated highest. The experts feel the least relevant is the "market risk". Banking regulations reached the highest levels within block B. The last is the "Austrian standards procedures". Within Block C, the legal bases and statistics have reached the highest levels. Accounting has the lowest average value. The average score in block D is highest for "parametric models" and basic IT skills. The lowest value is given by the "macroeconomic models".

(2) What additional skills, competencies and knowledge about the content of (a) should be acquired during a study in finance?

The experts have particularly emphasized the importance of a basic business education. An understanding and a basic knowledge is of great importance to be able to specialize. This specialization is achieved through learning-on-the-job and requires continuous further education. Furthermore, it has often been mentioned that flexibility and the application of knowledge to different situations are importance for the practice. One of the experts proposes learning through case studies while studying. For some of the risk managers, a comprehensive understanding of the overall process is very important.

    Especially soft skills should be taught more during the studies. English, analytical thinking, communication skills and the ability to summarize are the main approaches.

    Furthermore, the area of IT knowledge has a strong focus for the participants. Students should develop the handling of data and Excel to very good level.

Occasionally, programming, prototyping and dealing with core banking systems are assumed.

Regulations, directives and laws are of massive importance for a banks' risk management. This area should, according to the respondents, be a main part of a university curriculum in finance and banking. However, the experts also assume that it will not be possible to convey the complexity of the regulatory system to an appropriate extent.

Another addition to a banking and finance program could be the specialization of certain occupational groups within risk management. The participants distinguish two groups: legal experts and "quants". Each of these two professions requires the basics, but should specify into the legal or mathematical field.

The three hypotheses show the expectations of the research.

H1: A basic business administration and financial education is more important than specific risk knowledge for a job in the risk management of a bank.

Considering the research question (1)(a) and the results shown in figure 1, the hypothesis is refused. A basic business administration and finance education is seen as a very important requirement, but the expertise in risk knowledge needs to be strengthen during the studies. Basics are important for every job, but knowledge about risk categories is mandatory for working in the risk management of a bank.

H2: Knowledge about liquidity risk is most important in comparison to other risk categories.

Looking at the research question (1)(b) and the results shown in Figure 2, this hypothesis is accepted. Liquidity risk is rated as the most important risk categories from the experts. Even in the open questions, 10 experts emphasize the importance of liquidity risk after the financial crisis.

H3: Experts in the field of risk management are looking solely for graduates with excellent mathematical and statistical skills.

During the research for creating the questionnaire, risk management was generally described as the identification, evaluation, control and minimization of risks with mathematical and statistical tools. The interviews with risk management experts reveal that mathematical excellence is not important for every expert within the risk management of a bank. As already mentioned above, experts distinguish between two groups. The "quants" definitely need to bring a high level of mathematical skills with them. The legal experts within the risk management doesn't need to be math experts. Experts are not solely looking for "quants", therefore the hypothesis is refused.

Conclusion

As mentioned before, Peterson (2013) sees the expansion and enrichment of students' basic knowledge as necessary to promote critical thinking. She believes that future decision-makers in business and banking should be humbler and more skeptical. During their studies, students should make a development into critical, creative-thinking and practical-oriented individuals. The mindset and attitude of students should be adapted to deal with crises more appropriately in the future. Theories should be explored by questioning and evaluating their underlying assumptions. The big picture should be captured by combining and integrating different approaches. Just like Peterson, the participants, which are experts in risk management, have a similar view. The focus should be on a broad base of knowledge and a specialization going into detail. Furthermore, critical thinking and questioning is an important learning process to succeed in decision making. Especially the learning-on-the-job was emphasized. Peterson and McGoldrick (2009) highlight the relevance of integrating pedagogical approaches into content. The application of active learning, experiments, simulations, field work and cooperative work offer the opportunity to capture and support the interests of students.

The results have shown that knowledge of risk categories is most important for a job in the risk management of a bank. This suggests that, despite a strong focus on soft skills and communicative competences, the know-how aspect has remained as important as ever. It seems that having a basic business and finance education is important but not enough. Being an expert within the core issues of risk management is necessary to start a career within a bank. The orientation of the job in the risk management plays a major role. The required mathematical or regulatory knowledge depends if a graduate is a "quant" or a legal expert within the risk management of a bank.

The results of this research should serve Austrian universities of applied sciences to rethink the curriculum of their studies in finance, banking or risk management and adapt it to the current requirements. The universities can thus adapt the financial studies to the market demands and use information directly from the experts in risk management in banks. The main suggestion for universities derived from this study is to implement a specialization within the study into math or law. The math branch needs to work with higher IT, statistics and high-level calculations, whereas the law branch focuses on directives, national and international guidelines and the regulatory standards of the EU. Both branches need to bring an expertise of risk categories and managing risk along. To acquire competencies in critical thinking and applying

the theory into practice, leaning-on-the-job and case studies need to be part of a applied university study programme.

Limitations
During the interview the research team received the feedback, that some experts see a big difference between theory and practice. Some necessary knowledge, which is of great importance in a bank, cannot be taught at a university because of its complexity and specialization. The focus of the questionnaire could have been worked out more clearly in advance to minimize the need for explanation during the survey. Another methodological critique is the open design of the qualitative questions. After each block open supplementary questions were asked to gain additional inputs. Although the information generated is very valuable, it is broad and difficult to pool. A restriction to concrete and specific open questions would have made the evaluation process much easier and focused attention on the essential.

Further Research
The research on "Requirements for risk management" could be deepened by supplementary analyzes.
• A survey of new entrants in the risk management department in a bank would be an appropriate supplement to the survey of managers. This could probably bring new insights or reinforce the results already found.
• In addition, discussions could be done with the human resource department of the respective bank or with external recruiters. These experts bring a different perspective on requirements and competencies and could also provide complementary results.
• An analysis of job postings from entry-level positions could define the skill set for risk management jobs in the bank. On advertisements for the respective position the requirements are very narrowly worded. The necessary competencies selected by human resource show the relevant requirements for the job.
• The internal development and training programs of a bank also show in which direction employees should develop. The training courses for young entrants in risk management reveal the importance of different skills for the job. For this reason, an analysis of the internal training programs could enhance the findings of the survey conducted.
• An adaption of the research on an international base could bring new insights and compare different approaches of universities.

Based on the results found, a curriculum for a university program in the field of banking, finance and risk management could now be refined. The content could be adapted to the market and corresponded to the requirements of future entrants and newcomers to risk management in Austrian banks. A practice-oriented design of the teaching contents and the educational approaches could offer the university a clear added value of training for the financial market.

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