

THE PAST, PRESENT AND FUTURE OF FINANCIAL STATEMENT-BASED RESEARCH IN HIGHER EDUCATION

KÍRA MARTIN, TÜNDE VERES *

ABSTRACT: *The activity of companies can be examined through the information contained in published financial statements, available for all interested parties. The labour market expectations regarding accounting programmes in higher education are continuously changing, but it is an objective that the accounting knowledge needed to examine the companies' financial reports be conveyed to students and that this knowledge be applied within the framework of the programme. Students demonstrate significant interest towards published financial statements due to the fact that it is by observing them that they become acquainted with the practical aspects of the field. That is the reason why students like to choose financial statement analysis as a topic for both their theses and their papers submitted for scientific competitions. The aim of this paper is to summarise the circumstances and results of studies built on financial statements of companies based on the assisted studies of the past few years.*

Keywords: *financial statement, financial statement analysis, research questions, industry analysis*

1. INTRODUCTION

The activity of companies' can be examined through the information contained in published financial statements, available for all interested parties. It is the Accounting Act that helps various stakeholders to be able to read the financial statements. One of the goals of accounting programmes in higher education is to develop the "ability to read" the financial statements. It is an objective in both undergraduate finance and accounting programmes and graduate accounting programmes that the accounting knowledge needed to examine the companies' financial reports (and, of course, befitting the level of the programme) be conveyed to students and that this knowledge be applied within the framework of the programme, thereby developing the competence expected of future

* Assistant Professor, Ph.D., Corvinus University of Budapest, Hungary, kira.martin@uni-corvinus.hu

Assistant Professor, Ph.D., Corvinus University of Budapest, Hungary, tunde.veres@uni-corvinus.hu

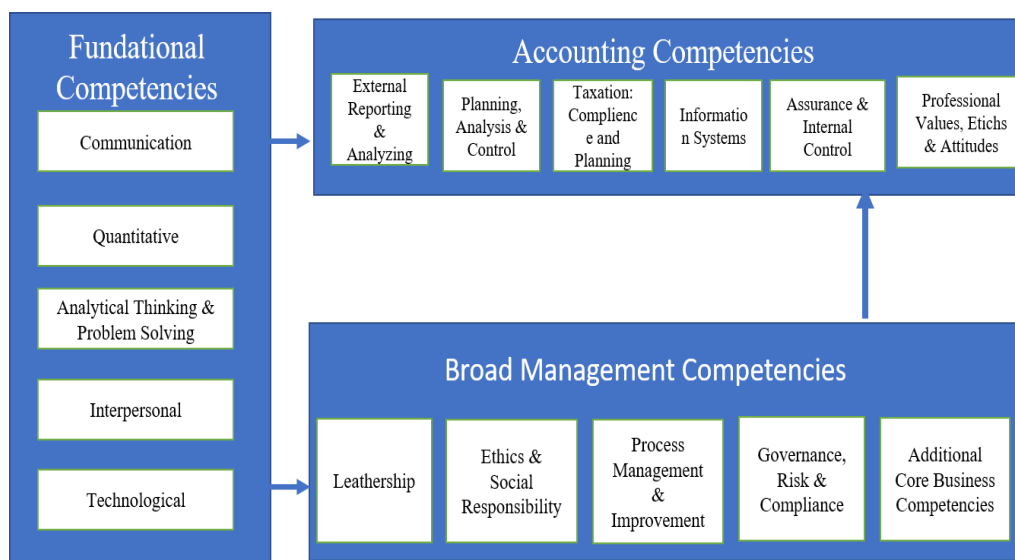
executive accounting professionals. At present, the expectations towards fresh graduates on the labour market range from professionalism built on a broad and deep basic knowledge to competencies such as continuous learning adjusted to the changing regulatory environment, group cooperation, the understanding of digital tools and systems and the ability to utilize them, the use of different databases, and professional communication in foreign languages (Erdogan, 2019). Higher education must adapt to these requirements. During the courses of the programmes, the application of a growing number of methodological and educational tools or that of educational technology advances both professional knowledge and the achievement of learning outcomes. In this article, we summarise the circumstances and results of studies built on financial statements of companies based on the assisted studies of the past few years.

2. THE FRAMEWORK OF ACCOUNTING PROGRAMMES AND THE IMPORTANCE OF COMPETENCIES

Several international studies have been conducted to examine what competency expectations could be established for accounting programmes in a continuously changing world and the circumstances of Industry 4.0. In our article, we lay the foundations of the inspection of financial statement-based studies relying on the findings of the American research group that, in 2014, systematised the outcome competencies of accounting professionals driven by long-term career goals and surpassing the category of the traditional accountant (Lawson et al., 2014). The group consider the document *The Pathways Commission* (2012) as the basis for their work, which summarises the national strategy of the USA regarding the future of the education of accounting professionals.

The Pathways Commission had already established expectations going beyond professional knowledge regarding accounting professionals, although only to a small extent. These had been geared towards the professionals' technical knowledge, the need for effective communication with the internal and external users of their work, ethical behaviour and the responsibility arising from their profession. This national strategy motivated Lawson and their research group (8 American and one German university professors serving as heads of professional organisations/institutes) to outline the framework of accounting education. In their study, they summarised the expected outcome competencies needed for the long-term success of accounting professionals of higher education, during which they brought the expectations of different organisational systems to the fore, and also emphasised the integration of professional and organisational skills demonstrated by accounting executives during their career. Figure 1 illustrates well that, apart from core competencies being obvious expectations in the higher education of economic professionals (communication skills, proficiency in analytical methods, analytic and problem-solving thinking, management of human relationships and technological proficiency), professional knowledge plays a key role in the education of accounting professionals of higher education. Building on the development and operation of the accounting processes of companies and on accounting principles and ethical values, this professional knowledge incorporates the strategic and

operative planning and control of the taxation tasks and the entire activity of a company. At the same time, to aid them in their prospective career goals, it is necessary for the students to develop executive competencies within the system of higher education, also to integrate general and professional competencies.

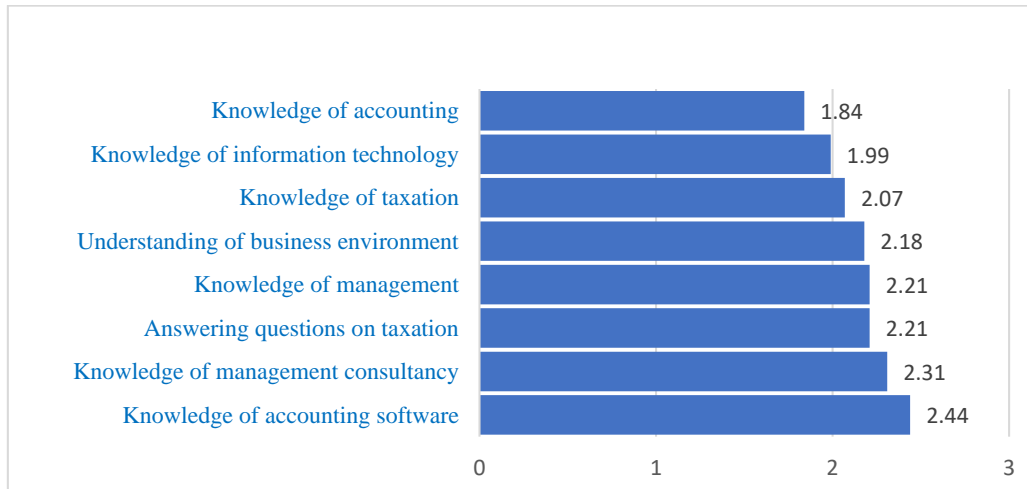


Source: Lawson et al (2014), pp300.

Figure 1. Integrated competency expectations acquired in accounting programs

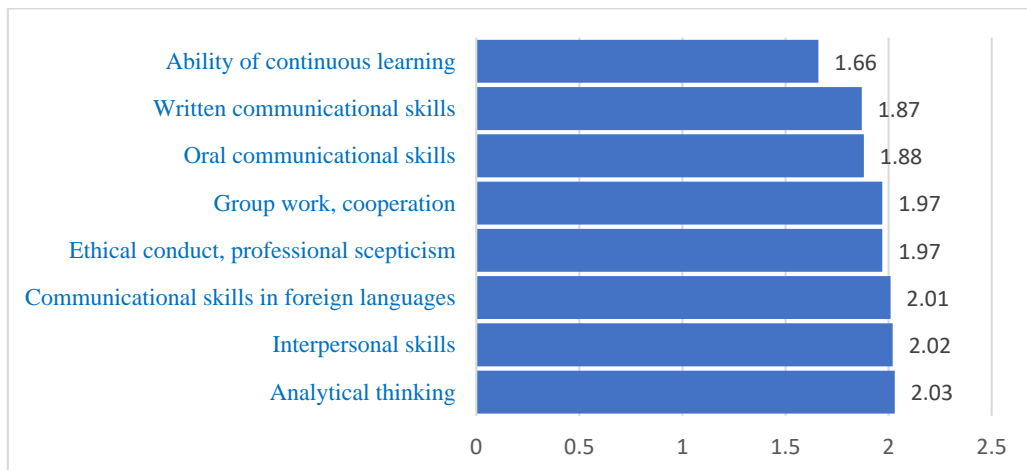
A Hungarian survey research (Balázsine – Kardos, 2016) asked the senior accounting professionals of small companies about the competencies of graduate juniors of the field. Respondents mainly comprised of employees of executive position in the accounting and taxation fields who rated professional and other competencies of graduate juniors on a 5-point scale (1 = has the competency, 5 = completely missing the competency). It was reassuring to see that the programmes are recognised in terms of professional knowledge, and that students do become prepared for tasks in accounting and taxation and those of executive nature by acquiring not only a proficient understanding of regulations but also the IT basics essential for the management and flow of the companies environment and information (Figure 2).

The survey discusses neither the boundary between undergraduate and graduate education nor the distinction of the perception of students gaining employment at enterprises or multinational corporations and that of juniors at small companies. However, according to the responses, graduate juniors are prepared to achieve their career goals by continuous learning, communication, group cooperation, professional scepticism, and analytical thinking. In addition, the admission system of higher education and the rules applying to degree attainment helped students with foreign language proficiency to a great extent.



Source: based on Balázsine Farkas – Kardos (2016)
(1 = has the competency 5 = completely missing the competency)

Figure 2. Professional knowledge and competencies among graduate juniors



Source: based on Balázsine Farkas – Kardos (2016)
(1 = has the competency 5 = completely missing the competency)

Figure 3. Other competencies

3.THE FOUNDATION OF FINANCIAL STATEMENT ANALYSIS IN OPERATIONAL CURRICULA

As per modern expectations, the emphasis on professional competencies is fundamental among the objectives of higher education programmes. The descriptions of each and every Hungarian higher education programme highlight as learning outcomes the national and international accounting knowledge pertaining to regulations, audit and taxes, along with theoretical and methodological knowledge and the ability of using it.

On the other hand, the descriptions of graduate programmes have started to feature career pathways and executive positions that could make the field more attractive for students.

At the Accounting Department of Corvinus University of Budapest, the operational curricula of both undergraduate and graduate programmes include subjects that are aimed at the application of comprehensively grounded professional knowledge. As for undergraduate programmes, students with a financial accounting major study the subject *Annual Report and Analysis* in the sixth semester. During this course, students review the information extracted from financial statements regarding the income situation of a company (by processing topics like the generation and distribution of income along with collateral and cost analysis), assess the financial situation of the company after examining liquidity and cash flow, and they also analyse the wealth structure, asset structure and indebtedness of the company. The basic goal of the course is to improve the students' ability of reaching economic conclusions and preparing decisions in different company contexts on the basis of their knowledge of financial accounting and by analysing annual reports.

As for graduate programmes, students with an accounting major experience the usefulness of the interpretation of financial statements on a broader basis in connection with Annual Report-based analysis. In the framework of subject *Financial Statements*, the objective, apart from the observation of annual reports, is for the students to assess companies taking into account various macroeconomic effects, industry traits and corporate specialities, based on their knowledge of financial accounting. Fitting into the framework of graduate education, this subject implements a methodology that requires group cooperation while also being practice-oriented by processing case studies. During the analytical process, special attention is paid to assessing the market environment of companies along with the correlations of industry specialities and regulatory factors. Students are in preparation during the entire semester to eventually select companies in the industry allocated to them (by draw) at the beginning of the semester through which they will be able to properly describe the role and state of the industry. The independently conducted comprehensive analysis of financial statements of companies through the eyes of an investor or creditor, along with rating the image of the industry to be presented by the group and the selected companies according to a criteria system for investment and credit requires extensive analytical work and collaboration from the students, which they consider to be very useful.

Especially due to the positive feedback from students, we need to highlight subject *Financial Statements* which constitutes part of the operative curriculum of the finance major of graduate education. Although it cannot not be expected that the students have the financial accounting basics required for this subject (and this significantly increases the time needed to discuss the content of accounts and to highlight the correlations), using an approach similar to the methodology of the accounting major prompted a considerably more positive result. Students believe that the use of the official electronic database of financial statements, the inspection of the annual reports and market position of real companies, outlining the image of the industry and carrying out individual analyses, introduced recently, fit well into the system of knowledge expectations which they will be able to use in the future.

In terms of accounting programs, the ultimate goal is for the students to develop an

understanding of the “usability” of financial statements and therefore to strive to improve the quality of information published in the future. This is stimulated by the fact that students are faced with countless shortcomings during their research which they will hopefully avoid in their prospective work. As for the finance major, it is important to reinforce in students that they use financial statements as a basic piece of information when making a financial decision.

4. THE RELEVANCE OF STUDIES BASED ON FINANCIAL STATEMENT ANALYSIS

Students demonstrate significant interest towards financial statements due to the fact that it is by observing them that they become acquainted with the practical aspects of the field. That is why students like to choose financial statement analysis as a topic for both their theses and their papers submitted for the Scientific Students’ Associations Conference. What does the responsibility of the thesis supervisor assisting the student in their research mean in selecting the topic? Numerous questions emerge during their mutual work: to what extent are the companies’ financial statements suitable for accounting research? To what extent is it possible to examine the actual performance and the critical operational areas from the data published? Does comparing the companies’ annual reports in a certain industry provide a realistic image about the performance of the industry? Beside the issues mentioned above, one of the most important objectives is to recognise current economic effects and tendencies during the course of the research, confirming and justifying the usefulness of public financial statements.

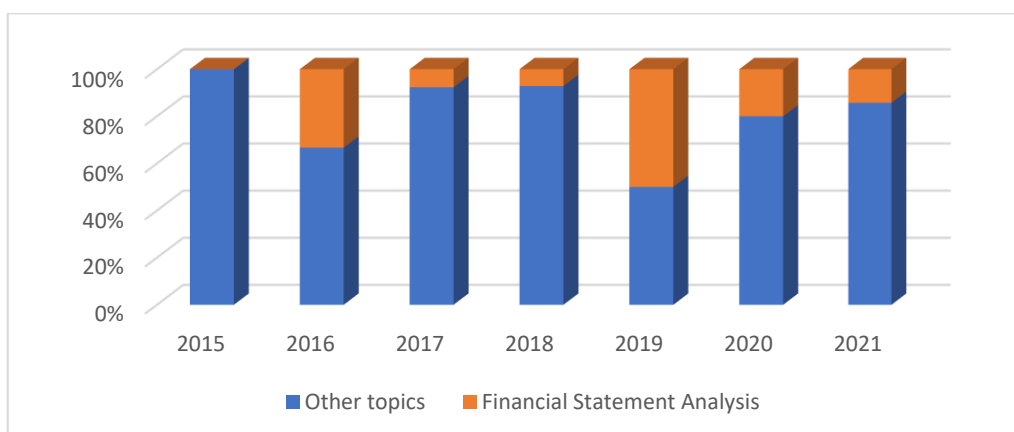
In order to accomplish this, students can use databases (e.g. EMIS) applicable during the examination of the market environment of the selected companies’ activity as a basis. Based on them, what truly gives a direction to students in the analysis and assists them in formulating the research objective is the rating of the industry players and the market share. The financial statements themselves are available in the official electronic database of financial statements. It is through this research that students are faced with the significance of notes, mentioned quite frequently in theoretical studies. The majority of companies only attribute a short informative role to the notes. In case of studies on accounting, knowing the content of the main documents fundamentally helps with information expectations and reading the informative notes, and therefore also with the assessment of the activity inside the industry or group. The research experience of students becomes complete when the news of professional press and the information content of the annual report are in harmony. It is especially exciting to point out the factors of the macro-environment which play a significant role in economic communication, such as tax changes, the fluctuation of foreign currency rates, government decisions on subsidisation and strategy, the fluctuation of the prices of raw materials, and possibly other trends regarding environmental conservation or lifestyle. The relevant effect of the aforementioned factors concerning the inspected companies’ activity and their manifestation in financial statements appeal to students more and more often. Consequently, the continuous development of financial statement-based research has become the centre of attention for students whose ambition is the application of their

accounting knowledge, and so they will become interested in conducting empirical studies on real economic effects, correlations and results.

5. THE LEARNINGS OF STUDIES SUBMITTED FOR THE SCIENTIFIC STUDENTS' ASSOCIATIONS CONFERENCE

The goal of the Scientific Students' Associations Conference (SSAC) is to provide students with the possibility to examine the topic they are interested in during the courses of the programme and before the preparation of the thesis concluding their studies. Students inspect their chosen topic starting from a premise of scientific value and exceeding the limits of the curriculum. During this process, they obtain new results which can serve as a basis for further research. Encouraging students to partake in the SSAC programme is important for several reasons. Firstly, participating gives students a chance for practice before preparing their actual thesis as they receive feedback from two reviewers. Secondly, students can participate in a scientific competition first within the institution, and if they receive favourable feedback, at national level as well. Lastly, the SSAC programme plays a key role in replenishing the next generation of researchers and in awakening the interest of students towards scientific activity.

There is no minimum length requirement for papers submitted for the conference due to the fact, that the programme prefers to encourage students at various levels of education to participate. The only limitation of this kind is a maximum length of 80 pages. However, experience shows that this seems to be indicative only, as the majority of papers remain at an average length of less than 50 pages. Far more important than length restrictions are the expectations on content, an element of which is laying the theoretical foundations of the topic by processing the relevant source material. Another expectation is the practical application of the presented theory using a comprehensive methodology built on scientific research, along with the thesis-like articulation of the results.



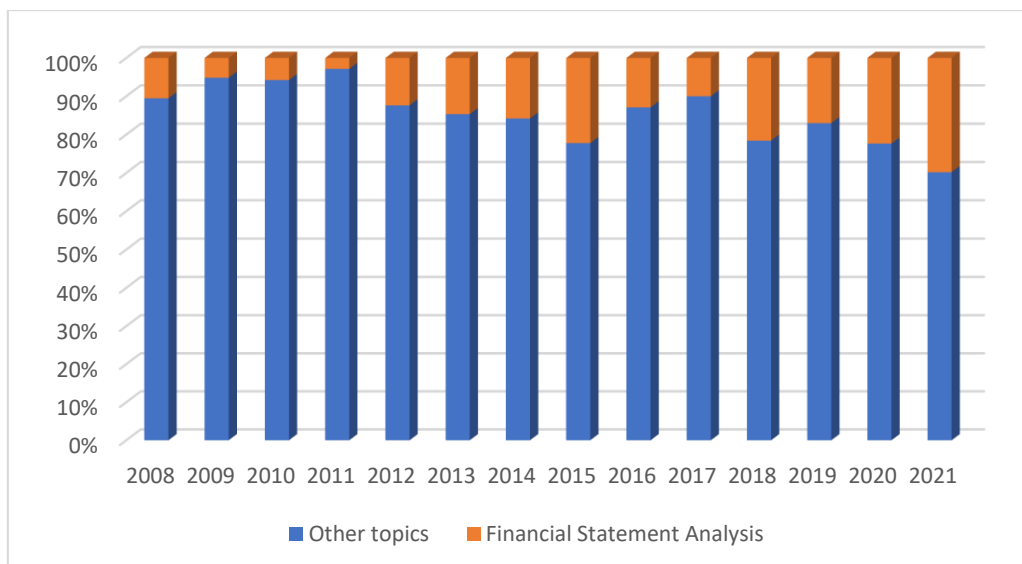
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Figure 4. Proportion of financial statement-based research papers submitted for SSAC between 2015 and 2021

As per Figure 4, the enthusiasm of students was inconsistent between 2015 and 2021 in the Accounting section at our university's SSAC. Upon inspection of their chosen topics, however, we can determine that financial statement analysis was present during the larger part of the examined period (SSAC database). The fact that papers of this topic placed several times in this section proves the relevance of financial statement-based research. In case of successful research topics, choosing unique, timely and interesting topics was an important factor in addition to their outstanding processing. As an example, a student who examined the role of Hungary in pharmaceutical trade chains took first place in the section. This study gave a comparative analysis of a given year of 13 companies, and paid special attention to the transactions between the associates and the question of financing inside the corporate group. In a certain year we examined, the second place was granted to a paper titled *The Relevance of Financial Statements of Hungarian Start-ups When Making Investment Decisions*. This study investigated start-up companies by comparing their financial statements and examined the role of venture capital funds in financing as well. A student who finished third submitted a research paper titled *Tendencies on the Housing Market in the Light of the Financial Statements of Construction Companies*. In this study, she explored the characteristics of the industry and the main reasons for the recent increase in the prices of real estate.

6. EXPERIENCES OF THESIS RESEARCH

It is expected of students studying accounting at Corvinus University of Budapest that, in their thesis, they process a modern topic appropriate for the major while relying on the theoretical foundations of the topic by building on relevant source material.

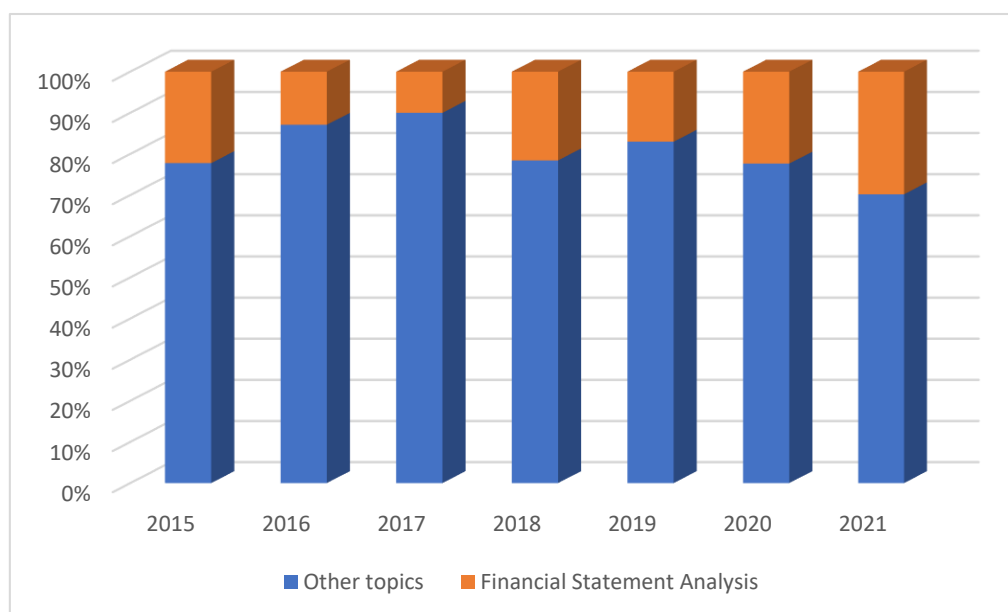


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Figure 5. Proportion of theses built on financial statement analysis in accounting education 2008 – 2021

In addition, the practical application of comprehensive methodology presented in theory needs to be supplemented by thorough data collection and the presentation of comparative data to help with assessment. The changing world gives challenges to the companies. This is the reason why the interest about their performance is increasing continuously and the financial reports get more and more attention. It is realisable in the students' researches too.

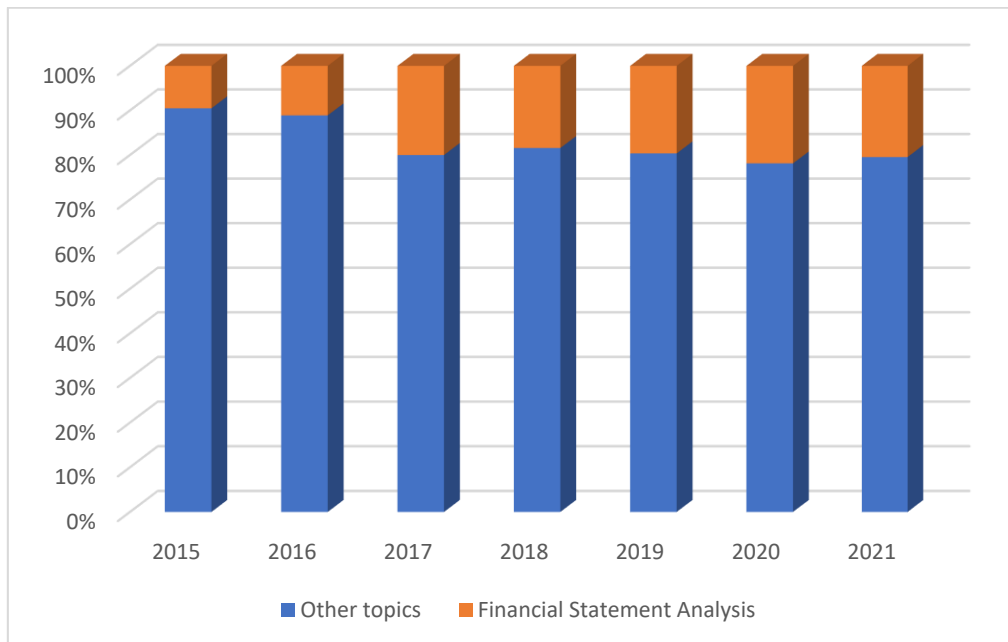
As mentioned previously, within the frame of undergraduate education, the methodology of financial statement analysis is processed and practised at a smaller extent, as a subject taught weekly in one-time slot. Furthermore, the expectation regarding the length of the thesis students prepare at the end of their programme specifies a limit (30-35 pages). Consequently, students can realise the examination of the chosen companies' annual reports only superficially, by shortening either the theoretical introduction or the analysis itself. A typical solution in this case is laying the theoretical foundation in a targeted manner, in very close connection to the analysis, typically while inspecting the given company. The alternative to that is a targeted industry analysis that builds on processing particular problems typical to the activity of multiple companies, complemented by research on the given problem with respect to the theoretical background. As the data in Figure 6 show, undergraduate students like to choose financial statement analysis as a topic for their thesis (Database 2015-2021). In the examined period, not only did the number of theses in this topic increase, but the proportion of them among all thesis also exceeded 20% in several years.



Source: own construction

Figure 6. Proportion of thesis built on financial statement analysis in undergraduate programmes between 2015 and 2021

In graduate education, students already have a broader knowledge spectrum, a greater number of courses apply educational methods build on individual research, and the management of the inspection of the economic environment and the effects of regulators and mechanisms is paid special attention. Length restrictions (50-70 pages) in place for these concluding graduate education allow students to give a far deeper overview of a certain industry by analysing either several significant companies or one unconventional company in the industry over a long period of time. All this requires significant research with respect to theory as well. As Figure 7 demonstrates, these detailing research on financial statement analysis were constantly present between 2015 and 2021. The proportion of this topic among all other accounting topics showed a smaller fluctuation than in case of undergraduate theses, it was always fixed at approximately 20%. This demonstrates well that a great amount of students prefers to examine corporate practices and the operation and main characteristics of a certain industry in this way (Database 2015-2021).



Source: own construction

Figure 7. Proportion of thesis built on financial statement analysis in graduate programmes between 2015 and 2021

By reviewing the thesis topics in the examined period, we can determine that students sensed well which areas of the economy would serve as good candidates for analysis from a certain aspect as being highly relevant and interesting. Certain topics are worth mentioning, for example that of paper titled *The Recipe of Health, or The Financial Statement Analysis of Hungary's Five Largest Private Healthcare Providers*. In this paper, the student explored the characteristics of this special service activity with

the help of five years of data of five private healthcare provider companies. Thesis titled *The Effect of Foreign Currency Loans in Hungarian Hotel Industry* was interesting due to its objective of reviewing the long-term effects of foreign currency loans by examining a ten-year (!) period of four companies. Thesis titled *The Position of the Fintech Sector on the Financial Market: A Comprehensive Analysis of the Balance Sheet and Income Situation of TransferWise Ltd.* explored a new and special activity. In this study, the student compared this new type of financial service activity with the traditional bank activity with the help of nine years of company's annual reports.

7. SUMMARY: LIFE ALWAYS PROVIDES NEW TOPICS

The cyclical nature of the economy always aids in choosing exciting industries and economic processes which are especially suitable for analysis. In the past, such topics were the question of circular debts, the effect of the financial crisis, the effect of globalisation in the internal transactions of multinational corporations, or the characteristics of the subsidisation systems of housing policy and tourism. Leading economic sectors were always popular in research with topics such as the decisions of the players of the automotive industry with regard to manufacturing in Hungary, or the economic effects of agricultural subsidisation, or the representation of these issues in annual financial statements. Students turned to the examination of new kinds of activities such as the fintech sector or start-up companies more and more eagerly. A current example of this is the unique circumstance of the COVID-19 pandemic, both the immediate effects and long-term consequences of which provide possibilities for future research with respect to various industries and economic processes. All in all, the events of our ever-changing world continuously provide researchers with new topics, whose research results serving as feedback help form the future in return.

The results of our empirical study pointed out the fact that financial statement analysis can be regarded as a popular and relevant research topic. Whether they be papers prepared for a competition or theses concluding an educational level, these research topics allow students to synthesise their knowledge, immerse themselves in research, apply their theoretical knowledge in practice, develop a deeper understanding of economic processes, and at the same time have a sense of achievement. Thanks to this, they are suitable for improving young students' problem sensitivity, and also for awakening their interest and maintaining it, leading to further research activity.

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