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Role of working capital management in profitability considering the connection between accounting and finance

Amer Morshed
University of Sopron, Sopron, Hungary

Received 11 April 2020
Revised 25 April 2020
7 May 2020
11 June 2020
8 July 2020
Accepted 1 August 2020

Abstract

Purpose – The study aims to explain the relationship between accounting and finance through measuring the effect of rational working capital management on profitability.

Design/methodology/approach – Employing the methodology of semi-structured interviews with sixteen financial managers.

Findings – The findings pointed out the relationship between accounting and finance is complementary, since it supports the accountant by the critical skills and information, like project evaluation, managing the company funding resources and working capital management. These skills put the accountant up to the financial manager stage. The working capital investment and financing policies have the most significant impact on profitability. These policies related to risk and return theory; since the conservative policy will reduce both the risk and return and the aggressive one will have the opposite impact.

Originality/value – It recommends accountants to be in professional stage and increase the profitability of the company to grab both accounting and finance information and skills.

Keywords Accounting, Finance, Working capital, Profitability

Paper type Research paper

1. Introduction

Despite the strong correlation between accounting and finance, each of them influences the management of operations in a different direction (Brief and Peasnell, 2013). This link leads some people, who are not experienced and do not have the relevant knowledge, to confuse these two terms and connect some unrelated job duties to accountants (Droms and Wright, 2010). Cleary and Quinn (2016) mentioned that accounting is an essential component of financing operations since finance is a term that includes accounting information.

Thus, the information provided by accountants is the primary element in decisions made by managers in general and financial managers in particular. However, in this context, Fields (2016) added that financing incorporates more subjects than only accounting. It contains statistics, economics, mathematics and any matters which are required for financing.

The main objective of the company, in common, is to achieve the most significant profits. The company aims to gain the maximum profit, and this can be done by multiplying the volume of production or the operation. One of the essential portions of production, trading and providing service is the working capital. Therefore, companies provide liquidity for working capital to achieve business continuity. In obtaining the purposes of the company,

JEL Classification — M4 Accounting and Auditing

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Asian Journal of Accounting Research
Vol. 5 No. 2, 2020
pp. 257-267
Emerald Publishing Limited
2443-4175
DOI 10.1108/AJAR-04-2020-0023

most often, business and financial directors are entitled to implement relevant working capital management policies. These policies are needed for financing because errors in working capital management may lead the commercial operations to withdrawn. Consequently, the sequence follows up on the status of working capital. It is significant and in touch with the entire business position (Muhammad *et al.*, 2016).

Accordingly, the study aims to explain the relationship between accounting and finance through measuring the effect of rational working capital management on profitability and discussing the financial managers' responsibility. This article applies different procedures than those applied by other studies related to working capital management. The methodology adopts the qualitative method by conducting interview via Skype with financial managers from various territories in Europe and Asia to collect the data. These data reflect the best practices of working capital management from different economies, industries and sizes of capital. Hence, the results will be more generalisable.

The article found that the corporate finance skills put the accountant up to the financial manager stage. The working capital models play a significant role in advancing the profitability. Moreover, investment and financing policies have a substantial impact on profitability. These policies are related to risk and return theory since the balance between conservative and aggressive policies will contribute positive results.

Section 2 discusses a literature review of the working capital management. Section 3 discusses the methodology. Section 4 is the findings and discussion. In the end, Section 5 points out the conclusion.

2. Literature review

Explaining the profitability importance, Cakici *et al.* (2017) concluded that the companies use profitability as one of the four segments applied for the analysis of financial statements and performance. The other three are efficiency, solvency and market prospects. Managers, creditors and investors use these crucial impressions to analyse the company performance and its future potential if operations are suitably achieved. Vintilă and Nenu (2016) added that resources such as cash, overdraft and liabilities are used to cover the variable and fixed costs of the production process and to purchase the stock for resale operations. Profitability is the relationship between revenue and expenses and how well the company is performing and the potential future growth of the company and how it manages its working capital.

To explore the working capital management's effects on the profitability, Anwar (2018) examined the influence of the length of the operation cycle and the turnover of receivables and inventory on the profitability index of listed firms in Indonesia. The article concluded that reducing the turnover of both receivables and inventory leads to a decrease in the operation cycle and an increase the companies' profitability. Lazaridis and Tryfonidis (2006) reached results which show a relation between profitability and the operating cycle. Further, directors are able to generate gains for their businesses by controlling the operating cycle carefully and maintaining every different factor of the working capital to the most appropriate level. Pais and Gama (2015) pointed out many outcomes that inform the drop in the period of collecting the trade receivables and the rise in the number of days to settle their commercial liabilities are related to higher profitability. Additionally, the profitability is also an advance in return on assets with a reduction of the working capital amount.

The role of working capital management policies arose when Padachi (2006) concluded that excellent working capital control and policy affect the formulation of a company's value. This conclusion came from the investigation of the working capital control policy objectives and its relation to companies' achievement and profitability. This was done by applying statistical methods using the return on total assets ratio. The results show that focussing

heavily on investments in high capital causes low profitability ratios. Muhammad *et al.* (2016) added that firms can use working capital management, which is one of the essential determinants to influence their profitability. The result reveals that there is an association between working capital elements and profitability. This is defined as the increase in the cash conversion cycle influences the profitability negatively. Additionally, directors can produce a definite amount for the company by minimising the cash conversion cycle at the most suitable level and performing a proper working capital policy and by taking care of each element of it at a sharp level. The findings of the study of Singh *et al.* (2017) confirmed that working capital management is linked with profitability, which indicates that aggressive working capital investment and finance policies drive higher profitability. Moreover, the cash conversion cycle is observed to be related to profitability negatively. The paper examined the working capital management variations and profitability by analysing the connection among changes in working capital management and firm profitability.

The previous literature review provides evidence of the significant roles of working capital management on the accounting profitability and assures that both accounting and finance are strongly associated. This article will apply different procedures than those applied in other studies related to working capital management to provide a deep discussion of the role of working capital management in profitability with the connection between accounting and finance.

3. The methodology

Aiming to approach practical information related to the study purpose and find practical generalised implications, this paper examines the opinions of interviewees gathered from semi-structured interviews with a group of participants consisting of sixteen financial managers. All the interviewed persons are actively involved in the financial decisions of their companies. Those interviewed found a strong desire to study objects and thus produced a fruitful penetration in this article. The respondents were selected depending on the country, industry and the size of capital as in the following table (see Table 1):

The researcher conducted semi-structured interviews to gain relevant data for the research objective. The meetings were carried within a reasonably free connection. Therefore, some questions proposed were not planned. Only the main questions to start the conversation were planned.

Numerous questions were automatically asked through the interview, providing elasticity to both the interviewer and the participant. This elasticity helped to examine and explain additional features or to recognise other vital details. This is unlike a structured interview, where questions are designed and arranged beforehand.

The key questions of the interviews were:

Do you find corporate finance important to accounting?

How do working capital management models improve profitability?

How do working capital management policies affect the profitability?

Country	Industry	Size of capital
Austria	Agricultural manufacturing	Listed firms
Bangladesh	Electronic device retailing	SMEs
Hungary	Foodstuff manufacturing	
Jordan	Grocery retailing	
Qatar		
Turkey		

Table 1.
Sample (own sources)

The meetings were in the structure of a dialogue. The interviews were conducted via Skype during the period of May 2019 until February 2020. The meetings were in Arabic and English, and the Arabic interviews were translated into English. They were recorded, transcribed and coded manually by the researcher. Finally, the researcher compared the interview proceeds with related literature in order to find the results.

The method proceeded by including the analysis of discussion records and applying qualitative coding and manual recoding by the researcher. This technique depends on the researcher's qualifications of the subject since the researcher has an eleven years' experience in accounting and auditing and, additionally, professional certificates in accounting.

4. Findings and implications

For the purpose of exploring the connection between the accounting and finance, the conversation started by the question:

4.1 Do you find corporate finance important to accounting?

The following responses were recorded, *"I have been working as a financial manager for over several years; there is no way to be a financial manager without combining both accounting and finance."*

> If you do not understand how to use corporate finance, you will pass as a simple accountant. It is called financial management. How can any manager take a financial decision without it?.

Accordingly, using hermeneutic analysis, financial management supports and advances the accountant to be a financial manager.

During the meeting, the participants added:

> I have completed my master's degree in accounting and finance, and there were two compulsory subjects related to corporate finance. There are many universities that have departments named finance and accounting, that means the instructors have information on both accounting and finance.

> I am a CMA holder; the second part of this certificate is ultimately about corporate finance. The association of chartered certified accountant providing the ACCA, and this certificate include two critical papers about corporate finance which are financial management and advanced financial management.

These abstracted sentences provide tangible evidence for the connection between accounting and finance. This realisation came from the point that professional accounting bodies consider financial management as an essential part in their certifications.

On the other hand, the participants provided valuable information related to accounting education. Universities provide the junior accountant to the market. Therefore, they should consider the financial management as a vital part of the accounting curriculum that improves the new graduates' skills.

The participants contributed skill and technique that improve the accountant. Additionally, studies showed themes related to the skills and techniques that the financial managers are using for their duties. The researcher pointed out these themes with literature, then coded sentences that discussed these themes.

(1) Investment decision skills

The previous literature shows that investment decision skills are essential for the accountant to be a financial manager. They point out some of these skills, like the net present value (NPV), internal rate of return (IRR), payback method and the equivalent annual cost method (Gardiner and Stewart, 2000; Hung and Liu, 2005; Daunfeldt and Hartwig, 2014).

Continuously, the meetings' proceeds confirm that financial skills are critical and related to advanced accountant duties.

> Imaging yourself in a meeting with the CEO, and he asks you to appraise a project. Without investment appraisal skills, you are in an embarrassing situation. As a financial manager at a manufacturing company, I have to decide when the underlying machine should be replaced. Therefore, I use the equivalent annual cost method since it could be applied to compute a maximum replacement cycle.

> Where I work, we do many projects in one year, and it is essential to predict the profitability of these projects and the time when the initial cost payback, so you have to be familiar with the NPV and payback methods.

> I know many accountants are still doing the usual accounting occupation since they do not have investment appraisal skills like NPV and IRR.

(2) Funding from external sources

Many ways to source funds from external resources were mentioned during conversations, like bonds, deep discount bonds, convertible bonds and long-term bank loans (Kiyama and Rios-Aguilar, 2017).

De Wet and Du Toit (2007) mentioned that gearing as the volume of debt finance a firm employs related to its equity and debt finance points to relatively moderate risk towards the debt owner, as it is an interest instrument and could be ensured. The debt cost to the firm is consequently moderate. The higher the level of debt, the more significant the financial risk to the shareholder of the firm, so the higher their expected return. Consequently, costlier gearing causes to raise the equity cost. The interviewers supported the literature by the following:

> It is valuable to each accountant to be a professional financial manager to know how he can find the sources of funds for the company; especially the external funds. There are many types of funds available for any firm; some of them are internal and others are external, but the vital thing for the financial decision is the gearing. If you are a professional financial manager, you have to keep the WACC in optimal value.

The researcher, using hermeneutic analysis with meeting proceeds, found that gearing and capital structure have a vital impact on profitability. Four theories explain this impact. The quoted sentences were identical to the literature. Therefore, both were combined to avoid redundant wording.

Traditional view: Under the traditional view, the ideal capital combination leads to minimising the average cost of capital. The cost of debt remains fixed up to a particular percentage of gearing. Passing this scale leads to a higher debt cost. The financial risk increase if gearing raises this relationship causes the equity cost to increase (Berry *et al.*, 1993).

Modigliani and Miller (MM): The firm operating level and its profits only specify the market value of the firm in the position of no tax. The risk is attached to these profits, so there is no relation to the gearing. In the case of tax, a high level of gearing decreases the cost of capital since the interest is taxable. (Brusov *et al.*, 2011).

Market imperfections: In a high level of gearing, the company is unable to perform its interest obligation, leading to bankruptcy (Sanstad and Howarth, 1994).

Pecking order theory: Firms favour retained earnings as the optimal source of finance and then straight debt, convertible debt, preference shares and equity shares (De Jong *et al.*, 2011).

To discuss the second key question:

4.2 How do working capital management models improve profitability?

The participators mentioned that working capital management deals with the root of the operation and the daily transactions that include cash, receivables, trade payables and inventory.

Therefore, the study discussed the models of every single item of working capital.

(3) Cash

Da Costa Moraes *et al.* (2015) and Righetto *et al.* (2016) mentioned that the Baumol model and the Miller–Orr model are critical to run the cash in the optimal value to keep the liquidity and earn a profit.

Both models were discussed. The author realised, by the connection between the literature and the participants' contribution, that the Miller–Orr model is more useful to increase profitability (Da Costa Moraes *et al.*, 2015; Righetto *et al.*, 2016; Wang *et al.*, 2016; Gonen *et al.*, 2016; Krumrey *et al.*, 2017). *"When comparing the Baumol model and the Miller–Orr model, the second one is still more useful for liquidity and profitability"*.

(4) Inventory

Previous studies mentioned the impact of inventory management on profitability and showed that models are being used to improve inventory management.

Economic order quantity:

Jawad *et al.* (2015) and Aguswahyudi *et al.* (2018) mentioned the role of the economic order quantity (EOQ) model in advancing the profitability. The participants clarified this role as:

> The professional stock administration can be divided into three sections: (EOQ), discounts for bulk purchases, it could be more economical to purchase inventories in significant order quantities to achieve discounts, buffer inventories to reduce the stock-out risk.

> (EOQ) is the ordering amount for an inventory item which reduces the costs of stocking and damage.

Just-in-time system:

Nahum-Shani *et al.* (2017) explained the just-in-time as a system for avoiding the necessity to stock any materials as inventory by receiving goods from suppliers at the latest reasonable period. One participant showed the importance of this system *"to diminish their inventories of raw materials to the lowest acceptable level, production firms employ the just-in-time system."*

(5) Accounts receivable

Braun *et al.* (2018) supported that a higher balance of bad debt improves sales size. Given that, when the progress of the sales passes the total addition to the cost of fixed expenses and bad debts and discounts, the policy of mitigating credit requirements is profitable.

The meetings discussed this matter.

> Providing credit possesses a cost; the amount of the interest imposed on an overdraft to finance the credit time; additionally, the not collected cash misses the interest of the bank deposit. Improvement in profit of increased sales following from granting credit could balance this loss.

One of the methods mentioned to keep the accounts receivable as a profitable behaviour is a credit rating system.

Credit score:

Ajanaku and Ekundayo (2017) and Richard and Kabala (2019) mentioned that points are granted according to client efficiency components, the credit amount relay on their credit score.

The interviews contributed that *"the institution may establish a credit rating scheme for different customers based on personal client characteristics (such as whether the client is the owner of a state, the customer, age and profession)."*

Factoring:

The second method is factoring; it was coded from the transcript of many interviews.

Factoring is an agreement to possess debts gathered by a factoring firm, which prepays a balance of the money it is due to settle (Van der Vliet *et al.*, 2015).

The benefits of factoring for a business customer include the following: (1) Receiving early payment for most of its receivables; (2) Inventory can be maintained at an optimal level because sufficient cash is held to pay for the inventories it needs; (3) It provides sufficient internal funds rather than costly external funds and (4) The firm does not obtain the costs of operating its own sales ledger office and can apply the expertise of debtor control that the factor has (Grüter and Wuttke, 2017). A significant difficulty is that customers will be doing instalments straight to the factor that predicts providing an adverse image of the firm's approach to customer relationships (Zhang and Bao, 2018).

(6) Trade accounts payable

The quoted sentences are from financial managers' meetings about the management of trade accounts payable and what it involves.

> Attempting to receive a satisfying credit of suppliers. Endeavouring to enlarge credit times of cash deficit. Keeping relations with frequent and significant suppliers.

Accordingly, the researcher comprehended from the interviews that these models of working capital management are effective since almost the entire sample apply them.

The third key question during the meetings was:

4.3 How do working capital management policies affect the profitability?

Several quoted sentences identified out describing both policies and their effects on the profitability. The article recognised the manuscript and concluded the interpretation supported by a literature review.

(7) Working capital investment policy

Organisations must ascertain the significant risks linked to working capital and hence whether to adopt a conservative, aggressive or moderate method to investing in working capital.

The conservative working capital investment policy aims to decrease the risk of operation failure by maintaining high levels of working capital.

The aggressive working capital investment strategy aims to overcome this financing cost and improve profitability. That could be by using the method of lowering inventories, advancing recovering credit time of customers and lingering instalments to suppliers.

The moderate working capital investment policy is a common way amidst the aggressive and conservative methods.

(8) Working capital financing policy

Working capital financing policies are divided into conservative, aggressive and moderate approaches to financing working capital. It is classified according to the size of working capital financing from short-term assets and long-term assets (Mohamad and Saad, 2010; Wasiuzzaman and Arumugam, 2013; Kwenda and Holden, 2014).

Almost all the participators expressed the opinion *"the relation between the selected policy and the profitability is 'high-risk, high-return'"*. That means that aggressive policies increase profitability. This opinion is supported by (Pais and Gama, 2015; Baños-Caballero *et al.*, 2016; Gonçalves *et al.*, 2018; Chand *et al.*, 2019).

On the other hand, opinions expressed based on practical experiences prefer the moderate policies, *"moderate policies meet the targets of higher profitability, that come by avoiding risk losses."* This opinion could be supported by studies by Sharma and Kumar (2011) and Abuzayed (2012) showing a positive relationship between an increasing cash conversion cycle (CCC) and increased profitability, since the increase in the CCC means moves to moderate and conservative policies.

5. Conclusion

The results of the conversations support the literature review of the article. There is consistency between what the participants contributed and the previous studies interpreted. This consistency provides results that the relation between accounting and finance is vital. It can be described as a complementary relationship.

The financial manager starts as an accountant. By getting experience, he can make critical accounting decisions. When he gains corporate finance knowledge and skill, he starts providing financial management decisions. Ultimately, by the continuous improvement in finance management and the experience, he achieves the position of the chief financial manager.

On the other hand, the relationship between working capital management and profitability is similar to the relationship between finance and accounting in many aspects. For example, the accountant needs to be familiar with financial models which provide practical methods to handle working capital elements like cash and inventory.

Additionally, many strategies can help them to manage the accounts receivable to avoid more interest that arises from the cash matching and to decrease the bad debt expense. All of the methods mentioned contribute to avoiding expenses to gain the maximum profit.

The working capital investment and financing policies have the most significant impact on profitability. These policies are related to risk and return theory since the conservative policy reduces both the risk and return and the aggressive one has the opposite impact.

The article recommends accountants to be in professional stage and increase the profitability of the company to grab both accounting and finance information and skills.

Despite the positive interview aspect, the challenges that were encountered with the meeting comprised the severe limitation of the study. When setting up the meetings with the participants, most of the sample apologised in the first attempt, and later many efforts the acceptance to conduct the meeting has been awarded. This situation has complicated the research timetable and forced the researcher to extend the research time plan to keep the methodology flow. Some meetings were time-restricted. Therefore, gaining information to suggest other research paths was not in a perfect manner.

However, the author suggests some topics for future research, for example, conducting research to provide more models to manage the working capital elements. Moreover, measuring the consequences of linking accounting with strategic management, governance and control management in education and practical experience should be done.

References

Abuzayed, B. (2012), "Working capital management and firms' performance in emerging markets: the case of Jordan", *International Journal of Managerial Finance*, Vol. 8 No. 2, pp. 155-179, doi: 10.1108/17439131211216620.

Aguswahyudi, F.D., Cokrodewo, A. and Sin, L.G. (2018), "Analysis of the effectiveness of probabilistic economic order quantity (EOQ) method using model (q,r) in medication industry (case study: apotek griya medika malang)", *Journal of International Conference Proceedings*, Vol. 1 No. 1, pp. 12-19.

Ajanaku, E.A. and Ekundayo, O.A. (2017), "Working capital management and organization performance: the relationship between working capital management and account receivable", *Journal of Management and Corporate Governance*, Vol. 9 No. 2, pp. 59-84.

Anwar, J. (2018), "The effect of working capital management on profitability in manufacturing company listed in Indonesia stock exchange", *The Accounting Journal of Binaniaga*, Vol. 3 No. 1, pp. 1-14, doi: 10.33062/ajb.v3i1.173.

Baños-Caballero, S., García-Teruel, P.J. and Martínez-Solano, P. (2016), "Financing of working capital requirement, financial flexibility and SME performance", *Journal of Business Economics and Management*, Vol. 17 No. 6, pp. 1189-1204.

Berry, A.J., Faulkner, S., Hughes, M. and Jarvis, R. (1993), “Financial information, the banker and the small business”, *The British Accounting Review*, Vol. 25 No. 2, pp. 131-150.

Braun, M., Briones, I. and Islas, G. (2018), “Interlocking directorates, access to credit, and business performance in Chile during early industrialization”, *Journal of Business Research*, Vol. 105, pp. 381-288, doi: 10.1016/j.jbusres.2017.12.052.

Brief, R.P. and Peasnell, K.V. (2013), *Clean Surplus: A Link between Accounting and Finance*, Routledge, Moscow.

Brusov, P., Filatova, T., Orehova, N., Brusov, P. and Brusova, N. (2011), “From modigliani–miller to general theory of capital cost and capital structure of the company”, *Research Journal of Economics, Business and ICT*, Vol. 2, pp. 16-21.

Cakici, N., Chatterjee, S. and Tang, Y. (2017), “Alternative profitability measures and cross section of expected stock returns: international evidence”, Working Paper, SSRN 2969687, Springer, New York, NY, doi: 10.2139/ssrn.2969687.

Chand, A., Akram, S., Akram, H., Murad, A. and Kareem, L. (2019), “The impact of working capital management on firm profitability: a comparison between seasonal and non-seasonal businesses”, *Research Journal of Finance and Accounting*, Vol. 10 No. 15, pp. 8-12.

Cleary, P. and Quinn, M. (2016), “Intellectual capital and business performance: an exploratory study of the impact of cloud-based accounting and finance infrastructure”, *Journal of Intellectual Capital*, Vol. 17 No. 2, pp. 255-278.

Da Costa Moraes, M.B., Nagano, M.S. and Sobreiro, V.A. (2015), Stochastic Cash Flow Management Models: A Literature Review Since the 1980s, Decision Models in Engineering and Management, Springer, pp. 11-28, doi: 10.1007/978-3-319-11949-6_2.

Daunfeldt, S.O. and Hartwig, F. (2014), “What determines the use of capital budgeting methods?: evidence from Swedish listed companies”, *Journal of Finance and Economics*, Vol. 2 No. 4, pp. 101-112.

De Jong, A., Verbeek, M. and Verwijmeren, P. (2011), “Firms’ debt–equity decisions when the static tradeoff theory and the pecking order theory disagree”, *Journal of Banking and Finance*, Vol. 35 No. 5, pp. 1303-1314.

De Wet, J. and Du Toit, E. (2007), “Return on equity: a popular, but flawed measure of corporate financial performance”, *South African Journal of Business Management*, Vol. 38 No. 1, pp. 59-69.

Droms, W.G. and Wright, J.O. (2010), *Finance and Accounting for Nonfinancial Managers: All the Basics You Need to Know*, Basic Books.

Fields, E. (2016), *The Essentials of Finance and Accounting for Nonfinancial Managers*, Amacom.

Gardiner, P.D. and Stewart, K. (2000), “Revisiting the golden triangle of cost, time and quality: the role of NPV in project control, success and failure”, *International Journal of Project Management*, Vol. 18 No. 4, pp. 251-256.

Gonen, L.D., Weber, M., Tavor, T. and Spiegel, U. (2016), “A modified Baumol approach — optimal withdrawal and holding of cash liquid assets”, *Review of European Studies*, Vol. 8 No. 2, pp. 8-21, doi: 10.5539/res.v8n2p8.

Gonçalves, T., Gaio, C. and Robles, F. (2018), “The impact of working capital management on firm profitability in different economic cycles: evidence from the United Kingdom”, *Economics and Business Letters*, Vol. 7 No. 2, pp. 70-75.

Grüter, R. and Wuttke, D.A. (2017), “Option matters: valuing reverse factoring”, *International Journal of Production Research*, Vol. 55 No. 22, pp. 6608-6623.

Hung, J.H. and Liu, Y.C. (2005), “An empirical comparison of the capitalized cost and equivalent annual cost methods for evaluating mutually exclusive projects”, *International Journal of Management*, Vol. 22 No. 2, pp. 242-248.

Jawad, H., Jaber, M.Y. and Bonney, M. (2015), “The economic order quantity model revisited: an extended exergy accounting approach”, *Journal of Cleaner Production*, Vol. 105, pp. 64-73.

Kiyama, J.M. and Rios-Aguilar, C. (2017), "The future of funds of knowledge in higher education", *Funds of Knowledge in Higher Education: Honoring Students' Cultural Experiences and Resources as Strengths*, Routledge, p. 68.

Krumrey, L., Moeini, M. and Wendt, O. (2017), "A cash-flow-based optimization model for corporate cash management: a Monte-Carlo simulation approach", *International Conference on Computer Science, Applied Mathematics and Applications*, Springer, pp. 34-46, doi: 10.1007/978-3-319-61911-8_4.

Kwenda, F. and Holden, M. (2014), "Determinants of working capital investment in South Africa: evidence from selected JSE-listed firms", *Journal of Economics and Behavioral Studies*, Vol. 6 No. 7, pp. 569-580.

Lazaridis, I. and Tryfonidis, D. (2006), "Relationship between working capital management and profitability of listed companies in the Athens stock exchange", *Journal of Financial Management and Analysis*, Vol. 19 No. 1, pp. 26-35.

Mohamad, N.E.A.B. and Saad, N.B.M. (2010), "Working capital management: the effect of market valuation and profitability in Malaysia", *International Journal of Business and Management*, Vol. 5 No. 11, p. 140.

Muhammad, H., Rehman, A.U. and Waqas, M. (2016), "The relationship between working capital management and profitability: a case study of tobacco industry of Pakistan", *The Journal of Asian Finance, Economics and Business (JAFEB)*, Vol. 3 No. 2, pp. 13-20.

Nahum-Shani, I., Smith, S.N., Spring, B.J., Collins, L.M., Witkiewitz, K., Tewari, A. and Murphy, S.A. (2017), "Just-in-time adaptive interventions (JITAIs) in mobile health: key components and design principles for ongoing health behavior support", *Annals of Behavioral Medicine*, Vol. 52 No. 6, pp. 446-462.

Padachi, K. (2006), "Trends in working capital management and its impact on firms' performance: an analysis of mauritian small manufacturing firms", *International Review of Business Research Papers*, Vol. 2 No. 2, pp. 45-58.

Pais, M.A. and Gama, P.M. (2015), "Working capital management and SMEs profitability: Portuguese evidence", *International Journal of Managerial Finance*, Vol. 11 No. 3, pp. 341-358.

Richard, E. and Kabala, B. (2019), "Account receivable management practices of SMEs in Tanzania: a qualitative approach", *Business and Management Review*, Vol. 22 No. 2, pp. 51-66.

Righetto, G.M., Morabito, R. and Alem, D. (2016), "A robust optimization approach for cash flow management in stationery companies", *Computers and Industrial Engineering*, Vol. 99, pp. 137-152, doi: 10.1016/j.cie.2016.07.010.

Sanstad, A.H. and Howarth, R.B. (1994), "'Normal' markets, market imperfections and energy efficiency", *Energy Policy*, Vol. 22 No. 10, pp. 811-818, doi: 10.1016/0301-4215(94)90139-2.

Sharma, A.K. and Kumar, S. (2011), "Effect of working capital management on firm profitability: empirical evidence from India", *Global Business Review*, Vol. 12 No. 1, pp. 159-173, doi: 10.1177/097215091001200110.

Singh, H.P., Kumar, S. and Colombage, S. (2017), "Working capital management and firm profitability: a meta-analysis", *Qualitative Research in Financial Markets*, Vol. 9 No. 1, pp. 34-47, doi: 10.1108/QRFM-06-2016-0018.

Van der Vliet, K., Reindorp, M.J. and Fransoo, J.C. (2015), "The price of reverse factoring: financing rates vs. payment delays", *European Journal of Operational Research*, Vol. 242 No. 3, pp. 842-853, doi: 10.1016/j.ejor.2014.10.052.

Vintilă, G. and Nenu, E.A. (2016), "Liquidity and profitability analysis on the Romanian listed companies", *Journal of Eastern Europe Research in Business and Economics*, Vol. 2016, Art. ID, 161707, doi: 10.5171/2016.161707.

Wang, Z., Xu, G., Zhao, P. and Lu, Z. (2016), "The optimal cash holding models for stochastic cash management of continuous time", *Journal of Industrial and Management Optimization*, Vol. 14 No. 1, pp. 1-17, doi: 10.3934/jimo.2017034.

Wasiuzzaman, S. and Arumugam, V.C. (2013), "Determinants of working capital investment: a study of Malaysian public listed firms", *Australasian Accounting, Business and Finance Journal*, Vol. 7 No. 2, pp. 63-83.

Zhang, G.M. and Bao, Y. (2018), *Decision Analysis of Conditional Risk Method Based on Accounts Receivable Financing Mode*, CCNT 2018 DEStech Publications, pp. 632-636, doi: 10.12783/dtcse/CCNT2018/24769.

Further reading

Bolton, P. and Freixas, X. (2000), "Equity, bonds, and bank debt: capital structure and financial market equilibrium under asymmetric information", *Journal of Political Economy*, Vol. 108 No. 2, pp. 324-351.

Goncharov, I., Mahlich, J. and Yurtoglu, B.B. (2018), "Accounting profitability and the political process: the case of R&D accounting in the pharmaceutical industry", Working Paper, AF2014/15WP05, Lancaster University Management School, SSRN 2531467, doi: 10.2139/ssrn.2531467.

Grundy, B.D. and Verwijmeren, P. (2016), "Disappearing call delay and dividend-protected convertible bonds", *The Journal of Finance*, Vol. 71 No. 1, pp. 195-224.

Martynova, N. and Perotti, E. (2018), "Convertible bonds and bank risk-taking", *Journal of Financial Intermediation*, Vol. 35 Part B, pp. 61-80, doi: 10.1016/j.jfi.2018.01.002.

Moldovan, P.C., Van den Broeck, T., Sylvester, R., Marconi, L., Bellmunt, J., Van den Bergh, R.C., Bolla, M., *et al.* (2017), "What is the negative predictive value of multiparametric magnetic resonance imaging in excluding prostate cancer at biopsy? A systematic review and meta-analysis from the European association of urology prostate cancer guidelines panel", *European Urology*, Vol. 72 No. 2, pp. 250-266, doi: 10.1016/j.eururo.2017.02.026.

Corresponding author
Amer Morshed can be contacted at: amer.morshed@phd.uni-sopron.hu

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