SHAREHOLDER VALUE CREATION WITHIN THE SUPPLY CHAIN – WORKING CAPITAL PERSPECTIVE

Toušek, Z., Hinke, J., Gregor, B., Prokop, M., Streimikiene, D.[*]

Abstract: This paper deals with the generation of shareholder value in the financial supply chain from the perspective of working capital management and examines whether this value remains stable at the aggregate level of the national economy and whether there is an even distribution of shareholder value across sectors of the national economy. Final balanced dataset contains of 2.393 Czech firms with complete annual financial figures for period from 2011 to 2019 (21.538 firm-year observations). Significant evidence confirming increasing value of aggregated cash conversion cycle caused by volatile development of all working capital components over the time were found. Major shareholder value driver is changing constantly over the respective period of time, therefore also assumption about equal distribution of shareholder value among sectors has to be rejected.

Key words: cash conversion cycle, sectors of national economy, payables, profitability, receivables.

Introduction

Corporate effectiveness and efficiency can be measured in many different ways. One of the most important modern approaches is that of the most important stakeholder group, i. e. shareholders (Jing et al., 2020). Shareholder value is based on a whole

[*] **Zdeněk Toušek**, Ing. Ph.D., Czech University of Life Sciences, Faculty of Economics and Management, Department of Trade and Finance, Kamýcká 129, 165 00, Prague, Czech Republic; ✉ corresponding author: tousek@pef.czu.cz,
ORCID: 0000-0003-3855-8811
Jana Hinke, doc. Ing., Ph.D., Czech University of Life Sciences, Faculty of Economics and Management, Department of Trade and Finance, Kamýcká 129, 165 00, Prague, Czech Republic; ✉ e-mail: hinke@pef.czu.cz,
ORCID: 0000-0001-6767-1253
Martin Prokop, Ing., Czech University of Life Sciences, Faculty of Economics and Management, Department of Trade and Finance, Kamýcká 129, 165 00, Prague, Czech Republic; ✉ e-mail: marprokop@raz-dva.cz,
ORCID: 0000-0001-5252-8729
Barbora Gregor, Ing., Charles University in Prague, Faculty of Social Sciences, Institut of Economic Studies, Opletalova 38, 110 00, Staré město, Prague, Czech Republic;
✉ e-mail: malinska.barbora@gmail.com,
ORCID: 0000-0003-1556-3124
Dalia Streimikiene, Prof., Lithuanian Sports University, Sports and Innovation Institute, Sporto g. 6, 44221 Kaunas, Lithuania; ✉ email: dalia.streimikiene@lsu.lt,
ORCID: 0000-0002-3247-9912

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range of factors, including revenue growth, operating cost reduction, fixed capital efficiency, working capital efficiency and tax minimization (Miljkovic and Petrovic-Vuajcic, 2017; Tóth et al., 2021). With the continuous development of financial management, more and more attention has been paid to working capital. Its management can affect the firms´ added value (Liu and Lin, 2015). The active management of working capital results in the rapid release of funds, a consistently low and stable inventory and capital expenditure. However, working capital is influenced by many factors - the course of production, purchase, or sale processes. This is a consequence of making business relationships between partners easier, for example, by not requiring payment on delivery of goods. The individual components of working capital play their role - the inventory of goods and finished goods allow for deliveries at very short notice, receivables facilitate the payment system, and cash offsets fluctuations in sales or the time mismatch between receipts and expenditure. However, Kislingerova et al. (2007) articulate the reasons for holding working capital in their paper. They divide these reasons into safety ones (e.g., releasing stock in excess of the plan due to extraordinary orders or troubles when receiving goods to be kept in stock), operational ones (e.g., time and volume mismatch between incoming and outgoing stock or cash), and contractual ones (e.g., customers´ requirement to hold a minimum level of stock, extending the maturity of receivables or shortening the maturity of liabilities because of competition). The knowledge of the above reasons makes the authors ponder whether there is a difference in susceptibility among individual sectors of the national economy.

Literature Review

The research by Habib and Huang (2016) provides evidence that positive working capital yields negative profitability, while negative working capital positively influences profitability. In each method, the optimal level of working capital is derived as the partial derivative of the working capital rate (WCR) with respect to sales. This finding is corroborated by Satinato and Pratiwi (2019), who found in the sample of manufacturing firms that the higher excess of working capital leads to lower performance and risk, and that additional investment in working capital reduces the performance of entities with the positive excess of working capital. A similar approach was used in studies by Bacik et al. (2020) and Setyaningsih and Kelle (2021). Sardo and Serrasqueiro (2021) point out the specific position of small and medium-sized enterprises (Morozko et al., 2022). They conclude that SMEs manage their working capital conservatively to avoid defaults with creditors. They argue that SMEs exposed to the higher probability of bankruptcy invest more in working capital to avoid "the risk of default and financing imbalances".

One can also find evidence that working capital management and supply chain finance are important ways to reduce costs in the supply chain (Jankowiak, 2021). Small suppliers may not have sufficient working capital to finance their operations and to supply their customers efficiently. Strong members can negotiate more favorable financing rates, more favorable payment terms and shorter delivery

periods than weaker members, which Protopappa-Sieke and Seifert (2017) or Skipworth et al. (2015) base their research on. Besides, the stronger companies with reliable financial positions attract more valuable employees, particularly due to more attractive EVPs (Samoliuk et al., 2021) or (Egerová et al., 2021); this dependence became important for building a successful employer brand and obtaining further financial advantages for companies (Bite and Konczos-Szombathelyi, 2020) or (Samoliuk et al., 2022). The authors´ results show significant benefits when supply chain members share working capital and that working capital management proves to be a major medium to short-term driving force in the supply chain (Hahn and Kuhn, 2011). These peculiarities are successfully used in developing the planning processes in enterprises (Akimova et al., 2020).

Liu and Qiu (2014), Fatimatuzzahra et al. (2018), and others agree that the smaller the working capital firms need, the shorter the cash conversion cycle (CCC) is. This is a widely used metric to measure the effectiveness of corporate governance and the internal need for external financing (Valaskova et al., 2021) or (Wang, 2019). This cycle can generally be shortened either by reducing the inventory turnover time (i.e., by reducing supply, production, and shipping times), by reducing the debt collection time (e.g., by involving customers in paying invoices earlier by providing discounts for early payments), or by extending the grace period provided that this extension does not increase the firm´s costs and does not harm its relationships with suppliers (Mun and Jang, 2015). In addition to the duration of individual turnovers, the level of working capital depends on the volume of sales, receivables, and inventories (Kyshtymova et al., 2018). As the firm expands, all three grow spontaneously. It often happens that the firm´s growth is so rapid that it threatens its very existence (Synek, 2008). The length of the cash conversion cycle for small and medium-sized enterprises differs from that of medium-sized and large enterprises. In their research, Dalci et al. (2019) conclude that small as well as mid-sized firms should reduce the length of the cash conversion cycle to increase profitability unlike large firms. Other authors also point to the differences between firms in various industries. For example, Linh and Mohanlingam (2018) conducted their research in agriculture and food industry dealing with perishable goods where time is vital for inventory management as well as collection and payment cycle because these factors subsequently influence the profitability of a firm (Lukyanova et al., 2022). On the other hand, Garcia and Uribe (2018) examine the issue of the cash conversion cycle for automotive and information technology firms which require a high level of investment. Thus, the results of these (and many other) studies suggest that the problems associated with the cash conversion cycle differ across firms in different industries and of different sizes, but they agree on the thesis that managing the cash conversion cycle and controlling for effects on operating margins lead to higher stock prices and profitability. Conversely, inefficient management pushes firms towards longer-term debt financing (Kumar et al., 2022).

However, CCC is not an important metric only at the level of individual firms. Its effective setting has become the goal of supply chain optimization models (Zhang et

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al., 2017). Lin and Lin (2021) have found out that aggregate CCC is a strong positive predictor of aggregate stock market returns, outperforming many of the well-known return predictors documented in the literature to date. Most of the literature on working capital management and the cash conversion cycle is based on the American experience (Nobanee et al., 2011). The authors are not aware of any research that has been conducted on Czech or Central European companies.

In general, there is no doubt that supply chain excellence ultimately leads to ability to increase shareholder value as stated by Pohlen and Coleman (2005). But remaining question is by implementing which supply chain strategies and investments to create the most shareholder value. Is there a choice to increase our shareholder value by optimizing the entire supply chain network or by only considering our internal processes at the expense of other supply chain members. Similar to Losbichler et al. (2008), we attempt to utilize economic value-added concept viewing value driven supply chain management as a powerful tool effecting all drivers of financial performance growth, profitability and capital utilization. To create shareholder value, it is critical to identify its creation potential within the supply chain. By utilizing economic value-added concept four major value drivers can be defined revenues growth, cost efficiency, fixed assets utilization and working capital management Lambert and Burduroglu (2000).

Attention will further paid to working capital management as in Losbichler et al. (2008) study. Working capital or more precisely management of its components is one of the four areas (remaining are revenues, operating costs and fixed assets) that are affecting Economic Value Added consequently shareholder value generation on firm's level (Lambert and Burduroglu, 2000).

As mentioned by Hofmann and Kotzab (2010) working capital can be studied from both time as well as monetary perspective. In the latter case it typically refers to the net working capital investment as proposed by Ross et al. (2005). Working capital management targets minimizing the capital tied up in the firm's performance by optimizing current assets and current liabilities.

Based on the findings from the sources mentioned above, the authors set out to verify the following hypotheses in this paper:

H1: The aggregated cash conversion cycle remains unchanged, thus shareholder value stays stable over the respective period of time.

H2: There is equal distribution of shareholder value (measured by CCC) within selected industrial supply chain network (composed of participating sectors of national economy).

Farris and Hutchison (2003) consider the cash conversion cycle time as an important metric for supply chain management. As further noted by Losbichler et al. (2006) cash conversion cycle metric can be used for benchmarking purposes within a company, as well as among several companies. Additionally, the cash conversion cycle time serve as a basic management concept which draws the company's attention to collaborative supply chain management.

Research Data and Methodology

Following study is founded on individual financial statements (audited where available/applicable) sample of the Czech firms pursuing their business activities over the period from 2011 to 2019. Data were predominately collected from the Commercial register and internal resources of Česká spořitelna, a.s. Financial statements of foreign parent companies and consolidated and group financial statements were removed to avoid potential double counting. Data sample is covering almost whole national economy, i.e. aggregation done on double-digit NACE code level starting from A01 - Crop and animal production, hunting and related service activities and ending with L68 - Real estate activities (NACE stands for Nomenclature statistique des Activités économiques dans la Communauté Européenne). Contrary to Lind et al. (2012), no cut off points on turnover or any other variable were applied. Thus, data sample is incorporating both small (including Small Medium Enterprises) and large as well as publicly traded and private companies. Final balanced dataset contains of 2.393 firms with complete annual financial figures for period from 2011 to 2019, thus consisting of 21.538 firm-year observations.

It may occur that selected firms are active in more than one sector of national economy, in other words bearing more than one NACE code. Therefore, we imposed following simplified assumption – each firm belongs to predefined sector based on its prevailing production. Further adjustments were adopted to ensure underlying financial data consistency across all firms. Potential intragroup operations were omitted, i.e., only tradable account receivables and account payables (due pay and overdue within one year) representing day's value were considered. Raw material, work in progress and finished goods are jointly counted as inventory. Since advanced payments (received and paid) do not represent significant items on firms' balance sheets (for majority sectors), they are not accounted part of core working capital calculation.

Cash conversion cycle as the indicator of how long cash is tied up between procurement and sales introduced by Wang (2019) is used as a time-based metrics. Like Lind et al. (2012) or Losbicher et al. (2006) cash conversion cycle metric is used as key driver of financial performance, consisting of cycle times of inventories, account receivables and account payables representing day's value and is defined as

$$CCC = DOHINV + DOHAR - DOHAP \tag{1}$$

Where DOHINV(*) refers to days inventory outstanding:
$$DOHINV = \frac{Inventory}{\text{Turnover}} * 365 \tag{2}$$

DOHAR (*) refers to days account receivables outstanding:
$$DOHAR = \frac{Accounts\ receivable}{\text{Turnover}} * 365 \tag{3}$$

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and DOHAP (***** Please note that calculation simplification - cost of goods replacement by turnover was done intentionally to support external comparability among companies and/or sectors) refers to days account payables outstanding:

$$DOHAP = \frac{Accounts\ payable}{Turnover} * 365 \qquad (4)$$

To determine whether selected industry's cash conversion cycle time improvement was beneficial or detrimental for the rest of supply chain, it is necessary to analyse supply relationships. Which is relatively difficult since many companies are operating in multiple supply chains rather than in single one. Therefore, different supply chains were linked by industries, which typically supply each other. In other words, companies are substituted by sector and form on more aggregated level industrial supply chain network. This can be achieved under these two assumptions: i) supply relationships are exclusive e.g., Pharma producers are exclusively supplying only Retail Pharma shops and ii) there are no competing supply chains (no competition among supply chains) i.e., exclusive manufacturing of goods and services in each supply chain.

Research Results and Discussion

Aggregated level of national economy
At first, we focused on "big" picture by exanimating development of national economy as a whole, thus all firms' data are gathered and cash conversion cycle and its parts were calculated on aggregated level for each year to reveal potential changes in shareholder value development on the national level.

As depicted in Figure 1, the results of this study show evidence that cash conversion cycle (CCC) has slightly increased between 2011 and 2019 by 8 days ending with median value 39.5 days. The increase was predominantly driven by reduction of days account payables outstanding (-11.3 days), extension of days inventory outstanding (+4.5 days) and simultaneously decline of days account receivables outstanding (-7.8 days). Also, overall increasing trend of cash conversion cycle shall be noted over respective period, which is in contradiction with Lobischler et al. (2008) observation. These authors showed decreasing trend of cash conversion cycle of European firms from 56 days to 53.9 days between 1995-2004 accompanied by reduction of all working capital components (Authors utilized Amadeus TOP 250 database with sample of app. 7 Thousand firms from all over the Europe during the 1995-2004 period). On the other hand, calculated absolute values of cash conversion cycle in the Czech Republic are shorter (by app. 44% in 2011 and by 27% in 2018) than overall European figures. Obtained result are suggesting convergence trajectory of the Czech economy towards European level.
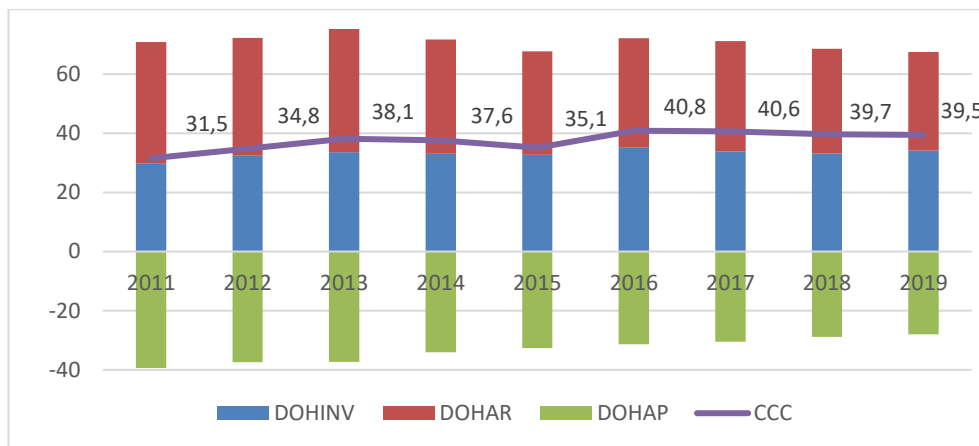
Figure 1: CCC between 2011-2019 (median values),
Source: Own processing, 2022

From cash conversion cycle components point of view, all three components have experienced relatively dynamic development on aggregated level. Namely days account payables outstanding (DOHAP) and days account receivable outstanding (DOHAR) were reduced by 28.8% and 19% respectively over the observed period of time. Contrary to it days inventory outstanding (DOHINV) were extended by 15.1% over the observed period. These figures are partly in contradiction to Lobischler et al. (2008) both in magnitude (double digit change compare to single digit change in the case of European firms) and direction (European firms experienced reduction of all three components) and suggesting slow convergence toward EU standard values. The unresolved question is what the reasons behind these differences are. However, simple comparison maybe slightly misleading since Lobischler et al. (2008) results are representing European aggregating data (across all European countries). We believe Czech figures shall be rather confronted with its major European export counterparts (companies from these states are probably participating in the same supply chain network) such as Germany (Germany is the most important exporting partner counting for app. 32% of all national exports).

Single sector approach/decomposition

To gain better understanding, aggregated data were decomposed on sectoral levels. Individual 52 sectors corresponding to double digit NACE code level were predefined and estimated. Further calculations revealed that majority of sectors have positive cash conversion cycle values. Only three, namely E39 - Remediation activities and other waste management services, H51 - Air transport and I56 - Food and beverage service activities sectors achieved negative values (in 2019). At the same time, majority of sectors experienced the extension of cash conversion cycle and only twelfth of them reduction between 2011-2019.

From cash conversion cycle components point of view the most dynamic appeared days account payables outstanding (DOHAP), where almost all sectors (namely 49)

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experienced shortening (in different magnitude) and only 3 sector namely E36 - Water collection, treatment and supply, E39 - Remediation activities and other waste management services and H51 - Air transport achieved prolongation of their payment period in respective period. In the case of days account receivables outstanding (DOHAR) situation is similar majority of sectors (namely 43) faced reduction and only nine sectors were able to extend their payment conditions. Similarly, for days inventory outstanding (DOHINV) 33 sectors were confronted with prolongation and only 19 of them achieved shortening period. This eventually means that unfavorable historical development of all cash conversion cycle components for majority of sectors led to extensions of their cash conversion cycles themselves resulting in additional pressure on working capital investment.

It is obvious that different sectors may experience dissimilar development by facing unique challenges leading to alternative adjustment of cash conversion cycle components. Therefore, further attention will be paid to the sector clustering from achieved cash conversion cycle change point of view.

Table 1. TOP 5 CCC improvers (own processing, 2022)

NACE	No.	Description	Year	CCC	DOHINV	DOHAR	DOHAP
C19	9	Manufacture of coke and refined petroleum products	2011	83.87	84.33	40.78	41.24
			2019	62.40	32.64	36.95	7.20
			Δ (%)	-25.6%	-61.3%	-9.4%	-82.6%
H52	117	Warehousing and support activities for transportation	2011	25.95	0.69	54.05	40.05
			2019	14.39	0.12	41.11	33.62
			Δ (%)	-44.6%	-82.7%	-23.9%	-16.1%
C21	18	Manufacture of basic pharmaceutical products and pharmaceutical preparations	2011	93.69	65.28	61.31	32.90
			2019	82.17	47.58	44.47	9.87
			Δ (%)	-12.3%	-27.1%	-27.5%	-70.0%
F42	423	Civil engineering	2011	55.05	55.05	84.57	63.23
			2019	43.93	15.45	62.32	37.55
			Δ (%)	-20.2%	-71.9%	-26.3%	-40.6%
J58	18	Publishing activities	2011	49.83	5.88	52.89	8.93
			2019	40.07	3.96	41.90	5.79
			Δ (%)	-19.6%	-32.7%	-20.8%	-35.2%

In Table 1. are depicted the best performing sectors from cash conversion cycle reduction (in days) perspective. Manufacturing of coke and refined petroleum products (C19) have experienced the biggest reduction in its cash conversion cycle

namely by 21.5 days, Warehousing and support activities for transportation (H52) by 11.6 days, Manufacture of basic pharmaceutical products (C21) by 11.5 days, Civil engineering (F42) by 11.1 days and Publishing activities (J58) by 9.2 days. Based on the observation of cash conversion cycle components development, it seems that reduction is primarily driven by significant days inventory outstanding (DOHINV) shortening, partial decrease of days account receivables outstanding (DOHAR) and on the other hand also simultaneous significant shortening of days account payables outstanding (DOHAP).

Table 2. TOP 5 CCC downgrades (own processing, 2022)

NACE	No.	Description	Year	CCC	DOHINV	DOHAR	DOHAP
C32	99	Other manufacturing	2011	80.75	85.60	42.74	36.12
			2019	124.08	102.34	27.47	22.39
			Δ (%)	53.7%	19.6%	-35.7%	-38.0%
J60	18	Programming and broadcasting activities	2011	10.88	7.36	36.35	32.83
			2019	43.73	2.13	66.57	24.97
			Δ (%)	302.0%	-71.1%	83.1%	-24.0%
C15	18	Manufacture of leather and related products	2011	12.39	25.37	21.27	34.24
			2019	43.29	19.77	35.89	12.37
			Δ (%)	249.3%	-22.1%	68.7%	-63.9%
C26	81	Manufacture of computer, electronic and optical products	2011	65.88	67.43	41.00	41.75
			2019	96.05	60.07	47.18	25.43
			Δ (%)	45.8%	-10.9%	15.1%	-39.1%
J62	99	Computer programming, consultancy and related activities	2011	26.89	3.97	71.33	53.08
			2019	56.98	27.44	63.17	34.80
			Δ (%)	111.9%	590.9%	-11.4%	-34.4%

Table 2 is summarizing the worst performing sectors from cash conversion cycle reduction or rather extension point of view during 2011-2018. Other manufacturing (C32) extended its cash conversion cycle by 43.3 days, Programming and broadcasting activities (J60) by 32.9 days, Manufacture of leather and related products (C15) by 30.9 days, Manufacture of computer, electronic and optical products (C26) by 30.2 days and Computer programming, consultancy (J62) by 30 days. Like TOP5 sectors main changes are mainly related to days account payables outstanding (DOHAP) accompanied by with relatively big changes in days account receivables outstanding (DOHAR).

Selected industrial supply chain network

To decide who is benefiting and/or loosing from these changes it is necessary to define and analyze relevant industrial supply chain networks and mutual relationships among all counterparts. This task is very difficult since most of the firms operate in multiple supply chains rather than single one as noted by Lobischler et al. (2008). In this text we follow assumptions proposed by these authors, i.e. relationships are exclusive and no competition among supply chains exists.
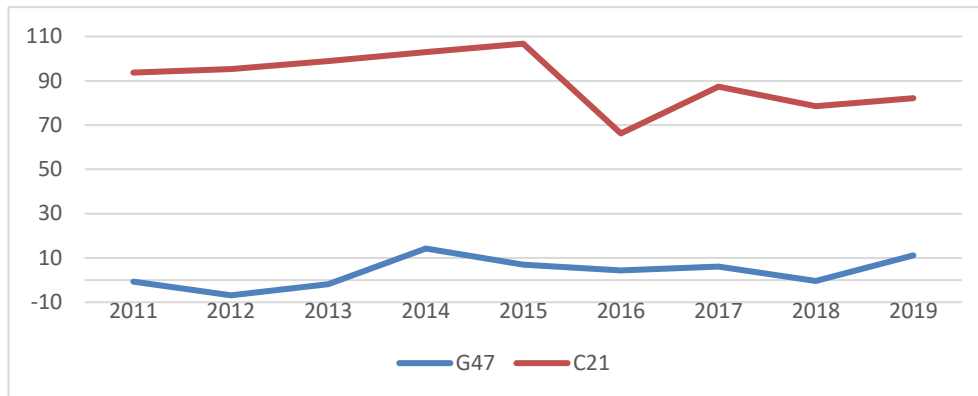
Figure 2: Pharma CCC between 2011-2019 (median values)
Source: Own processing, 2022

Following these simplifications leading sectors of industrial supply chain network that were able to reduce their cash conversion cycle more than their counterparts can be detected. For example, as depicted in Figure 2 in Pharma supply chain Retail pharma shops (G47) experienced cash conversion cycle extension by almost 12 days (-0.7 days in 2011 versus 11.2 days in 2019), although it is the closest industry within the Pharma supply chain to the final customer. But its cash conversion cycle remains significantly lower (almost by eight times) compare to Pharma producers (C21) encountering cash conversion cycle by 11.5 days (93.7 days in 2011 versus 82.2 days in 2019).
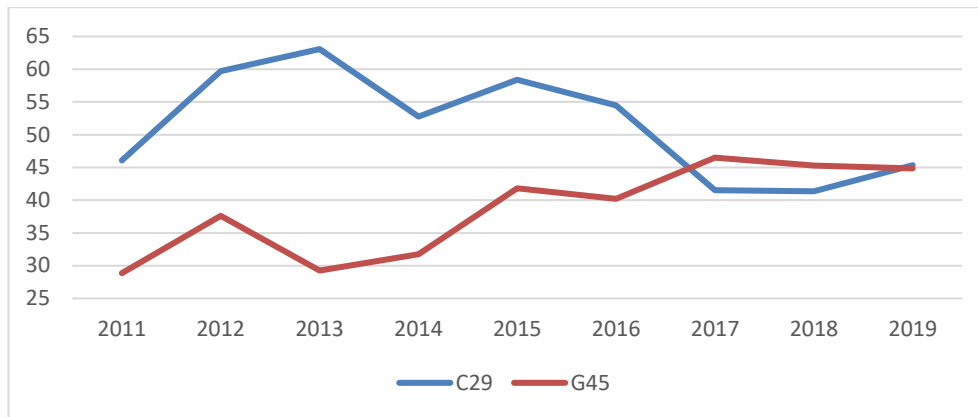
Figure 3: Automotive CCC between 2011-2019 (median values)
Source: Own processing, 2022

Another example from Automotive supply chain as depicted in Figure 3, where Manufacturer of motor vehicles (C29) have relatively stable development of its cash conversion cycle that has slightly reduced by -0.7 days and is oscillating around 46 days. Contrary to it Wholesalers and retailer of motor vehicles (G45) have extended its cash conversion cycle by significant 16 days (28-9 days in 2011 compare to 44.9 days in 2019) and achieved similar values as Manufacturer of motor vehicles (C29), although it is sector closest to the final customer.

It seems that there is no simple and clear conclusion what the driving forces of these differences are. Whether there are supply chain echelons reducing their cash conversion cycle at the expense of other sectors by implementing self-serving firm/sector-centric initiatives to the detriment of their up and/or down supply chain counterparts as noted by Rafuse (1996) as a result of asymmetric dependencies. These questions shall be further elaborated, e.g., from industrial supply chain network perspectives to optimize shareholder value creation through whole supply chain.

Conclusion

The intention of this paper was to bring initial insight view in shareholder value generation in financial supply chain from working capital management perspective based on the underlying evidence from the Czech Republic.

Based on the estimated figures hypothesis 1 regarding stable value of cash conversion cycle on aggregated level must be rejected. There is significant evidence confirming increasing value of aggregated cash conversion cycle caused by volatile development of all working capital components over the time. Which is in contradiction to Lobischler et al. (2008) both in magnitude and direction suggesting convergence of the Czech firms towards EU standards.

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As can be seen from the text above major shareholder value driver (cash conversion cycle) significantly varies within the selected industrial supply chain networks and is also changing constantly over the respective period of time (2011-2018), therefore also hypothesis 2 about equal distribution of shareholder value among sectors has to be rejected.

Any recommendations amin at improvement of current unfavorable position of Czech companies shall be based on further analysis from network perspective of supply chain cash conversion cycle as suggested by Losbichler and Rothboeck (2006) or Hofmann and Kotzab (2010), or whether as proposed by Protopappa-Sieke and Seifert (2017) collaborative cash conversion cycle management and sharing WACC (Weighted Average Cost of Capital) with trading partners within supply chain could lead to increase of profitability thus shareholder value incremental growth.

Based on these findings particular proposals such as stricter trade law enforcement (max 30 days due day for trade credit) etc. could be introduced and implemented.

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References

Akimova, L., Akimov, O., Maksymenko, T., Hbur, Z. and Orlova, V. (2020). Adaptive management of entrepreneurship model as a component of enterprise resource planning. *Academy of Entrepreneurship Journal*, *26*(3), 1-8.

Bacik, R., Fedorko, R., Gavurova, B., Ivankova, V. and Rigelsky, M. (2020). Differences in financial performance between various categories of hotels in the Visegrad Group countries. *Journal of International Studies*, *13*(2), 279-290.

Bite, P., Konczos-Szombathelyi, M. (2020). Employer branding concept for small- and medium-sized family firms. *Journal of International Studies*, *13*(3), 143- 160.

Dalci, I., Tanova, C., Ozyapici, H. and Bein, M.A. (2019). The moderating impact of firm size on the relationship between working capital management and profitability. *Prague Economic Papers*, *28*(3), 296-312.

Egerová, D., Kutlák, J. and Eger, L. (2021). Millennial job seekers' expectations: How do companies respond? *Economics and Sociology*, *14*(1), 46-60.

Farris, M. T., Hutchison, P. D. (2003). Measuring cash-to-cash performance. *The International Journal of Logistics Management*, *14*(2), 83-92.

Fatimatuzzahra, M., Kusumastuti, R. and Sakapurnama, E. (2018). The Determinant of Working Capital Management Case of Manufacturing Companies Listed in Indonesia Stock Exchange Period 2010-2014. *Advanced Science Letters*, *24*(5). 3270-3273.

Garcia, M.L.S., Uribe, J.L. (2018). Cash flow for SMEs: A proposal for the automotive and IT sectors in Mexico. *Revista Finanzas Y Politica Economica*, *10*(2), 287-308.

Habib, A., Huang, X. (2016). Determining the optimal working capital to enhance firms' profitability. *Human Systems Management*, *35*(4), 279-289.

Hahn, G. J., Kuhn, H. (2011). Optimising a value-based performance indicator in mid-term sales and operations planning. *Journal of the Operational Research Society*, *62*(3), 515-525.

Hofmann, E., Kotzab, H. (2010). A Supply Chain-Oriented Approach of Working Capital Management. *Journal of Business Logistics*, *31*(2), 305-330.

Jankowiak, A.H. (2021). Strengthening the Role of Local Clusters in Current Global Value Chains. *Transformations in Business and Economics*, *20*(53B), 954-968.

Jing, X.X., Zhang, X. and Hong, T.S. (2020). Regulation on Stock Selling Behavior of Large Shareholders and Share Price Stability: A Natural Experiment in China's Security Markets. *Transformations in Business and Economics*, *19*(1), 229-247.

Kislingerová, E., et al. (2007). Manažerské finance [Managerial finance]. C. H. Beck.

Kumar, K., Sivasankaran, N., Chakrabarti, P., Kanagaraj, A. and Ramachandran, G. (2022). How Does Efficient Working Capital Management Impact a Firm's Fundamentals? Evidence from India. *Global Business Review*.

Kyshtymova, E.A., Lytneva, N. A., Parushina, N.V. and Petrova, Y.M. (2018). Management Influence of Working Capital on Equity Capital Formation of Agricultural Organizations. Proceedings of International Conference on Research Paradigms Transformation in Social Sciences, *Book SeriesEuropean Proceedings of Social and Behavioural Sciences*, *50*, 732-741.

Lambert, D.M., Burduroglu, R. (2000). Measuring and Selling the Value of Logistics. *The International Journal of Logistics Management*, *11*(1), 1-18.

Lin, Q., Lin, X. (2021). Cash conversion cycle and aggregate stock returns. *Journal of Financial Market*, *52*, 100560.

Lind, L., Pirttila, M., Viskari, S., Schupp, F. and Karri, T. (2012). Working capital management in the automotive industry: Financial value chain analysis. *Journal of Purchasing and Supply Management*, *18*(2), 92-100.

Linh, N.T.P., Mohanlingam, S. (2018). The Effects of Cash Conversion Cycle on Profitability: An Insight into the Agriculture and Food Industries in Thailand. *Asian Journal of Business and Accounting*, *11*(1), 97-119.

Liu, D.Y., Qiu, H. (2014). An Analysis on Working Capital Performance Based on Supply Chain-In the Case of Sany Heavy Industry Co., Ltd. *Proceedings of 2014 International Symposium on International Marketing Science and Information Technology*, Beijing, CHINA, pp. 288-294, Beijing Wuzi University.

Liu,Y., Lin, Z. (2015). Working Capital Management Performance Evaluation of ABC Company. *Proceeding of 2015 5th International Conference on Education and Sports Education (ESE 2015)*, Book Series Lecture Notes in Management Science, 45, 217-221.

Losbichler, H., Mahmoodi, F. and Rothboeck, M. (2008). Creating Greater Shareholder Value from Supply Chain Initiatives. Supply Chain Forum: *International Journal*, *9*(1), 82-91.

Losbichler, H., Rothboeck, M. (2006). Creating Shareholder Value through Value-driven Supply Chain Management. Wolfgang Kersten and Thorsten Blecker (eds.), Managing Risks in Supply Chains.

Lukyanova, M., Kovshov, V., Zalilova, Z., Faizov, N. (2022). Modeling the Expansion of Agricultural Markets. *Montenegrin Journal of Economics*, *18*(2), 127-141.

Miljkovic, M., Petrovic-Vujacic, J. (2017). Impact of Logistics Management and Supply Chain Strategy on Shareholder Value. *Proceedings of the 3rd Logistics International Conference*, pp. 32-37. Belgrade, Serbia.

Morozko, N., Morozko, N., Didenko, V. (2022). Applying on of the theory of fuzzy logic in the financial management of small companies. *Montenegrin Journal of Economics*, *18*(4), 49-60.

Mun, S.G., Jang, S. (2015). Working capital, cash holding, and profitability of restaurant firms. *International Journal of Hospitality Management*, *48*, 1-11.

Nobanee, H., Abdullatif, M. and AlHaijar, M. (2011). Cash conversion cycle and firm's performance of Japanese firms. *Asian Review of Accounting*, *19*(2), 147-156.

Pohlen, T. L., Coleman, B. J. (2005). Evaluating internal operations and supply chain performance using EVA and ABC. *SAM Advanced Management Journal*, *70*(2), 45.

Protopappa-Sieke, M., Seifert, R.W. (2017). Benefits of working capital sharing in supply chains. *Journal of the Operational Research Society*, *68*(5), 521-532.

Rafuse, M. E. (1996). Working Capital Management. An Urgent Need to Refocus. *Management Decision*, *34*(2), 59-63.

Samoliuk, N., Bilan, Y. and Mishchuk, H. (2021). Vocational training costs and economic benefits: exploring the interactions. *Journal of Business Economics and Management*, *22*(6), 1476-1491.

Samoliuk, N., Bilan, Y., Mishchuk, H. and Mishchuk, V. (2022). Employer brand: key values influencing the intention to join a company. *Management and Marketing. Challenges for the Knowledge Society*, *17*(1), 61-72.

Sardo, F., Serrasqueiro, Z. (2021). Determinants of working capital: empirical evidence on manufacturing SMEs. *Journal of Economic Studies*, *49*(3), 506-521.

Setianto, R.H., Pratiwi, A. (2019). Working Capital Management in Indonesia: An Analysis on Overinvestment and Underinvestment Firms. *Gadjah Mada International Journal of Business*, *21*(1), 1-18.

Setyaningsih, S., Kelle, P. (2021). Barrier factors of supply chain management implementation in small and medium-sized enterprises: Evidence from Hungary and Indonesia. *Economics and Sociology*, *14*(4), 73-88.

Skipworth, H., Godsell, J., Wong, C. Y., Saghiri, S. and Julien, D. (2015). Supply chain alignment for improved business performance: an empirical study. *Supply Chain Management – an International Journal*, *20*(5), 511-533.

Synek, M. (2008). The most comprehensive book on Corporate Economics. *Politická ekonomie*, *56*(4), 568-574.

Tóth, R., Zéman, Z., Túróczi, I., Kása, R., Popp, J. and Oláh, J. (2021). The system of relationships between sustainable corporate governance and corporate financial literacy. *Polish Journal of Management Studies*, *23*(1), 418-435.

Valaskova, K., Androniceanu, A. M., Zvarikova, K. and Olah, J. (2021). Bonds Between Earnings Management and Corporate Financial Stability in the Context of the Competitive Ability of Enterprises. *Journal of Competitiveness*, *13*(4), 167-184.

Wang, B.L. (2019). The cash conversion cycle spread. *Journal of Financial Economics*, *133*(2), 472-497.

Zhang, Y.K, Liu, S.F. and Zhang, X.J. (2017). An Optimized Supply Chain Network Model Based on Modified Genetic Algorithm. *Chinese Journal of Electronics*, *26*(3), 468-476.

TWORZENIE WARTOŚCI DLA AKCJONARIUSZY W RAMACH ŁAŃCUCHADOSTAW – PERSPEKTYWA KAPITAŁU OBROTOWEGO

Streszczenie; Artykuł dotyczy generowania wartości dla akcjonariuszy w finansowym łańcuchu dostaw z perspektywy zarządzania kapitałem obrotowym i bada, czy wartość ta pozostaje stabilna na poziomie zagregowanym gospodarki narodowej oraz czy istnieje równomierny rozkład wartości dla akcjonariuszy w poszczególnych sektorach gospodarki narodowej. Ostateczny zrównoważony zbiór danych zawiera 2.393 czeskich firm z kompletnymi rocznymi danymi finansowymi za okres od 2011 do 2019 (21.538 obserwacji). Znaleziono istotne dowody potwierdzające rosnącą wartość zagregowanego cyklu konwersji gotówki spowodowaną zmiennym kształtowaniem się wszystkich składników kapitału obrotowego w czasie. Główny czynnik generujący wartość dla akcjonariuszy zmienia się w sposób ciągły w danym okresie, dlatego też należy odrzucić założenie o równym rozkładzie wartości dla akcjonariuszy pomiędzy sektorami.

Słowa kluczowe: cykl konwersji gotówki, sektory gospodarki narodowej, zobowiązania, rentowność, należności.

供应链内的股东价值创造——营运资本的角度

摘要：本文从营运资本管理的角度探讨了金融供应链中股东价值的产生，并考察了该价值在国民经济总体水平上是否保持稳定，以及股东价值在各部门之间的分配是否均匀国民经济的。最终平衡数据集包含 2.393 **家捷克公司，它**们具有 2011 **年至** 2019 **年期**间的完整年度财务数据（21.538 **家公司年**观察数据）。发现了重要证据，证实所有营运资金组成部分随时间的波动发展导致总现金转换周期的价值增加。主要股东价值驱动因素在各自的时间段内不断变化，因此也必须拒绝股东价值在各部门之间平均分配的假设

关键词：现金周转周期，国民经济部门，应付账款，盈利能力，应收账款