Article

A Framework for Short- vs. Long-Term Risk Indicators for Outsourcing Potential for Enterprises Participating in Global Value Chains: Evidence from Western Balkan Countries

Jolta Kacani [1,*], Lindita Mukli [2] and Eglantina Hysa [3,*]

1   Department of Accounting, Faculty of Economy, University of Tirana, 1001 Tirana, Albania
2   Department of Mathematics, Aleksander Moisiu University, 2001 Durres, Albania
3   Department of Economics, Epoka University, 1032 Tirana, Albania
*   Correspondence: joltakacani@gmail.com (J.K.); ehysa@epoka.edu.al (E.H.); Tel.: +355-69-420-30-66 (J.K.)

Abstract: This paper aims to present a benchmarking framework for short- and long-term risk of enterprises in emerging markets that seek integration in global value chains. The benchmark instrument aims in particular to assess short- and long-term risk based on accounting data and estimations of key financial ratios for enterprises located in the Western Balkan region and operating in the materials, industrials, and customer-discretionary industries. In total, the paper considers 310 enterprises. Given the geographical proximity of the region, the benchmark instrument for short- and long-term risks serves to assess the outsourcing potential these enterprises have toward foreign enterprises dominating larger markets such as the European value chain. The framework is applicable to a large-scale annual data series collected on subindustry level in order to obtain a more granular analysis of a particular industry and its respective value chain. The benchmarking instrument indicates that those subindustries performing better both at short- and long-term risk display a higher outsourcing potential and more opportunities for integration in global value chains.

Keywords: financial ratios; financial risk; accounting data; outsourcing potential; global value chains

1. Introduction

The COVID-19 pandemic disrupted global value chains and increased risks in production networks spread in several volatile markets (Manta et al. 2021). More resilient and agile production networks can be achieved through better risk management strategies occurring at the enterprise level, especially by achieving a balance between short- and long-term risks. In times when enterprises leading global value chains are rethinking placement of operations sites, new outsourcing opportunities arise for enterprises located in the countries of the Western Balkan region (Albania, Bosnia Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia) (Yang et al. 2016). Outsourcing opportunities arise especially from European enterprises that, due to the lengthy delivery times and ever-increasing transporting costs, are relocating production segments to geographically closer regions, such as the Western Balkan one. Identification of potential outsourcing partners undergoes a thorough evaluation that includes, among others, the financial performance of enterprises. Similar to underlying research from McKinsey, Organization for Economic Co-operation and Development (OECD), United Nations Conference on Trade and Development (UNCTAD) (Horvathova et al. 2021), this paper considers the financial performance as a key determinant for outsourcing in global value chains, with particular focus on the trade-off between the short- and long-term financial risks (Brochet et al. 2015; OECD 2020; Lund et al. 2020; and Kasasbeh 2021).

In the literature, benchmarking is considered as one of the most widely used instruments for measuring enterprise performance, given the insights that can be generated from accounting and financial indicators (Ruiz and Sirvent 2019). The analysis is based

on a benchmarking framework concerning short- and long-term risk. Another usefulness of benchmarking comes from the fact that the required information is easily accessible and publicly available as enterprises are required to periodically publish their financial statements, for at least once a year (Hatami-Marbini 2019). As such, enterprises have the opportunity to build reference points with virtually any other enterprise worldwide, in a relatively short period of time, and without major investment (Fridson and Alvarez 2022).

In financial analysis, short-term risk relates to how liquid an enterprise is in responding to short-term obligations, while long-term risk refers to how solvent an enterprise is to pay back its long-term debt or payables (Karim et al. 2021). The existing literature contains reports that significantly analyze the short- and long-term risk based on financial ratios of various industries in developing countries such as those in the European Union (OECD); United States, including studies undertaken by Harvard Business School; and in Asia (UNCTAD). However, similar research of industries and enterprises in the Western Balkan countries is still in its early stages. Owing to lack of detailed analysis for the Western Balkan countries, the main contribution of this paper is to bring additional insights on the financial performance of enterprises in this region given the increasing interest of European enterprises in the region for outsourcing production activities (Brochet et al. 2015).

In line with similar research undertaken by McKinsey, OECD and UNCTAD that evaluate inter- and intra-industry financial performance in 23 industry sectors based on financial ratios, this paper considers in total six financial ratios in three main industries, materials, industrials, and customer discretionary for a total of 310 enterprises (UNCTAD 2020; OECD 2020). The financial ratios considered for short-term risk include (i) current ratio, (ii) acid ratio, and (iii) short-term debt coverage ratio. On the other hand, financial ratios related to long-term risk are: (i) debt-to-equity ratio, (ii) debt ratio, and (iii) debt service coverage ratio (Alnori 2020; Tran et al. 2020). Benchmarking of these ratios shows that this instrument can be a very beneficial source of information for evaluating the financial health of enterprises when considering them as potential outsourcing partners in production networks of global value chains (Lund et al. 2020).

Given that the main industries in the Western Balkans are industries such as manufacturing, production, delivery, and transportation (Vasa and Angeloska 2020; Vasa et al. 2017), the findings of this study are primarily based on these industries. Industries that are mainly categorized as service provision are subject to another research project. In addition, enterprises related to the financial industry are not included in the study due to a large number of mergers and acquisitions occurring in the financial sector with many banks that were present in the region before the pandemic are no longer in the market. Additionally, one of the major Austrian banks currently operating in all six Western Balkan countries is in the process of selling its operations to another bank. Under such conditions, this study tries to address the following research question:

RQ1. *How does financial performance of enterprises regarding short- and long-term risk in the Western Balkans affect their outsourcing potential and integration in global value chains?*

This research question is crucial to be investigated given that foreign enterprises such as European enterprises often need to make investment choices and target developing countries such as the Western Balkans to explore new investment opportunities. Appropriate choices can help European enterprises create appropriate expansion frameworks to identify new sustainable destination for the right investments.

To respond to the research question, this paper is organized as follows: the first section introduces the importance of the study, the second section presents an overview of the literature, and the third section explains the data and methodology applied in the study. The final sections of the paper discuss the main findings of the paper followed by results and conclusions of the study.

2. Literature Review

In the literature, financial ratios are considered as key indicators to evaluate the financial health of enterprises operating in any industry. In particular, financial ratios provide good insights on short- and long-term risk exposure of enterprises. Investors regard financial ratios as robust tools to determine the operating financial conditions and the growth potential of an enterprise (Tran et al. 2020). Through financial ratios, investors are able to evaluate whether enterprises have the necessary financial resources to maintain their operations and to attain their development objectives. Financial ratios are used to measure not only the current health of enterprises but also the forthcoming financial prospects, including expansion or bankruptcy (Baule 2019). In addition, financial ratios are used to analyze the historical financial performance of an enterprise and how it compares with competitors in the same industry. According to Laitinen (2018), financial ratios are used for two main purposes. The first purpose relates to accountants and analysts that use financial ratios to forecast forthcoming financial variables such as returns, profits, and payment delays or defaults. The second purpose is to use financial ratios in order to make comparisons within or across industries known differently as benchmarking analysis (Arrfelt et al. 2018).

Several studies in the literature rely on financial ratios to evaluate the current financial health and future financial prospects of enterprises. Short-term indicators such as the current ratio or acid ratio together with long-term indicators such as the debt ratio are used to predict the ability to meet payment obligations of 52 enterprises in the chemicals industry listed in the Indonesian stock exchange (Nurhayati et al. 2017). Similarly, financial performance of enterprises operating in the industrial food industry and listed in the Amman stock exchange is evaluated through financial ratios. The study determined that fluctuations occurring in the long-term debt ratio are one of the main factors that affect investment decisions of potential investors (Durrah et al. 2016). A large study of 418 enterprises in the Vietnamese stock exchange uses short- and long-term financial ratios to assess the financial position of enterprises based on the mid-year accounting information obtained from interim financial reporting. The study concludes that in particular return of investment together with liquidity ratios help investors to understand the financing structure and growth prospects of enterprises (Tran et al. 2020).

To continue, financial ratios are used to measure the financial risk of over 120,000 Slovak enterprises and to construct a forecasting model for future expansion. Despite variations in the capital structure, size, organizational structure, etc., prediction models based on estimations of financial ratios enhance investors' knowledge on financially adverse situations that might question the ability of enterprises to meet their payment obligations (Valaskova et al. 2018). Another study on Slovak enterprises examines financial ratios by a mean-position comparative-base construct based on industry indicators of enterprises operating in Western Europe. In this study, industry estimations serve as reference points for investors and lending institutions to evaluate the creditworthiness of enterprises (Bartošová and Kráľ 2017). Comparably, financial ratios have been used to forecast bankruptcy of 50 Greek enterprises listed in the Athens stock exchange. The study highlights the role of financial ratios in detecting elements of financial short- and long-term risks in enterprises, categorizing them into healthy and unhealthy ones (Giannopoulos and Sigbjørnsen 2019). Additionally, enterprises in South Asia have been subject to financial ratio analysis in order to determine whether they will become bankrupt under volatile economic conditions. The study concludes that short- and long-term financial indicators are good predictors whether in the future enterprises will become insolvent (Karim et al. 2021). Another study explores the changes in the numerator and denominator of financial ratios for a sample of 9160 active and 81 bankrupt enterprises. The main objective of this study is to determine fluctuations and trends in profitability, liquidity, and long-term solvency of enterprises and understand how they affect investment decisions (Laitinen 2018).

In addition, financial ratios in existing literature are seen as solid indicators to measure the financial sustainability of enterprises. A study analyzing financial ratios of European

enterprises for a period of thirty years concludes that financially sustainable enterprises have lower long-term risk and are able to obtain above-average returns. These enterprises are attractive to investors; because of lower risk, they are able to gain returns that are at least equal to an alternative investment (Gleibner et al. 2022). Financial sustainability in 40 listed Jordanian enterprises indicates that short- and long-term debt ratios adversely affect the return on assets and return on equity (Kasasbeh 2021). Additionally, a study of nonfinancial enterprises listed in Saudi Arabia's stock exchange concludes that sustainable enterprises have in-place liquidity and cash management strategies and are able to mitigate long-term financial risk (Alnori 2020).

Moreover, the onset of the COVID-19 pandemic followed by severe global financial constraints increased the importance of financial ratios in determining whether enterprises are in good health and able to survive the harsh business conditions caused by the pandemic. Financial ratios related to short- and long-term risk of small and medium size enterprises in Nigeria are used to identify future prospects to increase their survival potential through access to alternative financing resources (Umadia and Kasztelnik 2020). The differences in the management of financial risk between family and nonfamily enterprises during the COVID-19 pandemic are also considered in the literature. A large study of 1090 family-owned enterprises and 557 nonfamily-owned enterprises concludes that family-owned enterprises give more importance to financial risks during global economic uncertainty (Santos et al. 2021). Financial recovery in the post-COVID-19 pandemic of the restaurant industry in the United States shows that the survival potential is higher in restaurants that are able to manage long-term risk, especially in preserving cash and delaying capital expenditures (Yost et al. 2021). Additionally, owing to the COVID-19 pandemic, United Kingdom is giving more attention to ease financial regulations that are likely to facilitate and improve the burden of long-term risk in small and medium enterprises

3. Data and Methodology

To respond to our research questions, this paper is based on the financial indicators for short- and long-term risk in 310 enterprises that currently perform their operational activity in the countries of the Western Balkan region. The financial data collected were extracted from annual statements submitted in the national registration/business centers. Annual financial statements were collected for the five-year period between 2016 and 2020. The main criteria for selection of enterprises to be included in the sample were to have an annual turnover of 10 million/Euros and that have been present in the market for at least 15 years. The selection criteria tried to identify enterprises that were able to survive the fragile business environment in the Western Balkan region resulting from a market economy established only in the early 1990s. Similar selection criteria are also present in the literature (Laitinen 2018). With reference to the selection criteria, Table 1 presents the main characteristics of selected enterprises. The majority of enterprises currently operate in Serbia, as it is the largest market in the region. The average annual turnover and the years of operation in the market are above the selection criteria.

Table 1. Main characteristics of enterprises in the Western Balkan region according to the selection criteria.

Country	Number of Enterprises	Average Yearly Turnover (Million/EUR)	Average Years in the Market
Albania	60	11.2	17
Bosnia Herzegovina	45	10.6	16
Kosovo	35	10.2	16
Montenegro	40	11.1	15
North Macedonia	50	10.8	17
Serbia	80	11.7	17

Enterprises in the sample are categorized into industries and subindustries in order to obtain a more granular analysis for a specific industry. Their activity is identified based on the activity description of enterprises written in the official registration forms. Owing to the distribution of enterprises and sometimes overlapping activities, the final categorization of the operational activity is based on the global industry classification standard (GICS) concerning the three main categorizations materials, industrials, and customer discretionary (Table 2) (Shewell and Migiro 2016).

Table 2. Categorization of enterprises based on GICS.

No.	Industry	Subindustry	Number of Enterprises Subindustry Level	Total Number of Enterprises
1	Materials	Industrial machinery, supplies, and components	19	73
		Metals, chemicals, and mining	21	
		Paper and plastic packaging products and materials	18	
		Manufacturing paper and forest products	15	
2	Industrials	Human resource and employment services	25	89
		Data processing and outsourced services	29	
		Transportation infrastructure	22	
		Ground transportation (cargo and passenger)	13	
3	Customer discretionary	Internet and direct marketing retail	32	148
		Hypermarkets and supercenters	29	
		Food and staples retailing	42	
		Customer durables, apparel, and leisure products	45	

Source: Global Industry Classification Standard (2022)

Categorization of the enterprise is not based on standards used by national institutions as they differ across the Western Balkan region; avoiding this eliminates any additional limitations in selection of enterprises. National standards do not accommodate the needs for classification of enterprises operating in multiple industry fields, e.g., an enterprise involved in the construction of a power plant and also operating as an electricity producer; enterprises operating in multiple fields of customer business such as production of food products, distribution, and wholesale (Kiselakova et al. 2018). In the sample, most enterprises fall into the customer discretionary category. Customer durables, apparel, and leisure products is the subcategory with the highest number of enterprises, while ground transportation (cargo and passenger) has the lowest number.

Benchmarking refers to the procedure of measuring the performance of an enterprise to an estimated standard or reference point. Referring to the American Productivity and Quality Center (APQC 1993), the concept of benchmarking relates to a methodological and continuous measurement of operational processes of an entity, in relation to the same processes of established market leaders both locally, regionally, and globally, in order to retrieve valuable information which would help the enterprise to improve its performance (Aparicio et al. 2014). In essence, benchmarking can be simplified into "learning from the best", and it has been a successful instrument for surviving and flourishing after major economic crisis and for better integration into global value chains.

Several methods are used for calculating industry benchmarks based on financial ratios that measure short- and long-term risks in enterprises. The two main methods are "the average of ratios" and "the ratio of averages". Similar methodologies have been applied in studies undertaken by the World Bank and OECD, and also reported in Kasasbeh (2021). Initially, for every enterprise, each financial ratio listed in Table 3 is calculated for a period of five years. The formula applied for each financial ratio is presented in Table 3 (Brigham and Houston 2016).

Table 3. Calculation of financial ratios related to short- and long-term risks.

Component	Financial Ratio	Formula
Short-term risk	Current ratio	Current assets/current liabilities
	Acid ratio	(Current assets–inventories)/current liabilities
	Cash ratio	Cash and cash equivalents/current liabilities
Long-term risk	Debt-to-equity ratio	Total liabilities/shareholder's equity
	Debt ratio	Total liabilities/total assets
	Debt coverage ratio	Operating income/total debt service

Both methods have their limitations; however, based on the information gathered, we decided to use "the ratio of averages" as a better approximation for the relatively small number of enterprises included in the sample and to determine the percentile in which enterprises in the sample belong to (refer to Equation (1)). This way, outliers do not affect the result much. In addition, to mitigate the bias toward relatively extensive categorization of enterprises at the industry level, the results are also presented in subindustry segments (Vasilic 2014).

The other method, ratio of averages, follows a different path to aggregation. It consists in the aggregate of ratio components calculated to individual ratios. This method takes into account the weights of the denominator, resulting in a weighted average. However, it also has its limitations, the most important being a bias on enterprises with a relative high weight compared to other enterprises operating in the same industry (Sultan 2014).

$$(t) = \frac{\sum_i^t A_i(t)}{\sum_i^t B_i(t)} = \frac{E[A_i(t)]}{E[B_i(t)]} \tag{1}$$

The ratio is represented by *r*, *t* represents the industry, *A* and *B* represent ratio components. Following the categorization of enterprises, their outsourcing potential is determined on benchmarking criteria presented in Table 3 (Lukacova et al. 2020). Similar criteria are also applied in the studies undertaken by McKinsey (Lund et al. 2020) and UNCTAD (2020).

In this paper, the main objective of benchmarking is to identify within the sample the industry, subindustry, and enterprises with the best short- and long-term risk financial indicators and with the highest potential for outsourcing their activity into different segments of global value chains (Bartošová and Kráľ 2017). As such, enterprises in the sample are categorized into (i) low potential for outsourcing, (ii) middle outsourcing potential, and (iii) high outsourcing potential (Brochet et al. 2015). Regarding the interpretation of financial ratio values, the criteria used to make this categorization reflect the principles of financial statement analysis. For example, as presented in Table 4, when an enterprise has a debt ratio with a value greater than one, it means that its liabilities are greater than its assets. When this happens, an enterprise has a high possibility of becoming insolvent and has little potential to attract any investor that would inherit the high amounts of debt (Fridson and Alvarez 2022).

Table 4. Short- and long-term risk benchmarking indicators for classification of enterprises.

Component	Financial Ratio	Low Outsourcing Potential	Middle Outsourcing Potential	High Outsourcing Potential
Short-term risk	Current ratio	<1	From 1–2	>2
	Acid ratio	<0.5	From 0.5–1	>1
	Short-term debt coverage	<1	From 1–2	>2
Long-term risk	Debt-to-equity ratio	>2	From 1–2	<1
	Debt ratio	>1	From 0.5–1	<0.5
	Interest coverage ratio	<1	From 1–2	>2

The outsourcing potential for each enterprise within a specific subindustry/industry is determined on the category with the highest number of financial ratio results (Table 5). For example, if for enterprise A, three of the six estimated financial ratios fall into the middle outsourcing potential, two financial ratios fall within the high outsourcing potential, and the remaining one is within the low outsourcing potential, then the enterprise is categorized as a middle performer. In the case of enterprise D, when an even number of financial ratios falls within each category presented, then the decision is based on the values of ratios that have the highest values among the six (Sutia et al. 2020).

Table 5. Example on deciding the final outsourcing potential for enterprises based on financial ratio value.

	Low Outsourcing Potential (No. of Financial Ratios)	Middle Outsourcing Potential (No. of Financial Ratios)	High Outsourcing Potential (No. of Financial Ratios)	Final Individual Categorization of Enterprises
Enterprises A	1	3	2	Middle
Enterprises B	3	2	1	Low
Enterprise C	1	2	3	High
Enterprise D	2	2	2	Ratios with the highest value among the six

After estimating financial ratios for each enterprise, the ratio of averages formula was then implemented to estimate benchmarking results for the subindustry/industry level and judge whether each enterprise performs below or above estimated industry level. This comparison allows for a better judgment where each enterprise is positioned. For example, two enterprises individually can be categorized with middle outsourcing potential. However, one of the two enterprises can have four financial ratios that are above the subindustry/industry estimated benchmark values, while the other enterprise can have only two ratios above benchmarking values. In this case, the enterprise with the highest number of financial ratios above estimated industry levels has a dominant middle outsourcing potential (Wood and McConney 2018).

4. Results

The majority of enterprises in the sample demonstrated generally a medium to low outsourcing potential. Overall, in the sample, 67% of enterprises operate below estimated subindustry and industry levels for short-term risks and 71% of enterprises with regard to long-term risk. Industry sectors mostly affected by short-term risk are the materials and industrials (Table 6). In the materials industry, subcategories having the highest degree of short-term risk and lower outsourcing potential are those in metal, mining, and chemicals with 73% of enterprises. These economic sectors are characterized mainly by lengthy operational cycles and high inventories and possession of a small amount of current assets. In the industrial industry, the higher degree of short-term risk is in the construction and engineering subsector with 81% of enterprises given the lengthy delivery times of a specific project, high amounts of borrowings to complete a project, and the high number of contractual engagements that cause potential delays. The customer discretionary industry displays a lower level of short-term risk, as it relates mostly to customer goods where goods are quickly converted into sales. Results related to short-term risk presented in Table 6 address the research question as they identify which industries are more attractive to foreign enterprises for outsourcing services. In addition, the results indicate that despite the tight selection criteria of enterprises included in the sample, only a few demonstrate a healthy financial performance having a higher potential for integration in global value chains. Similar short-term risks results are in line with research undertaken on management studies related to the management of short term risks in the abovementioned industries (Stefko et al. 2021).

Table 6. Short-term risk results of enterprises included in the sample.

Short-Term Risk	Indicator	Materials	Industrials	Customer Discretionary
Current ratio	Average	0.87	1.35	1.67
	Standard Deviation	0.59	0.83	0.72
	Low outsourcing potential (%)	72%	68%	57%
	Middle outsourcing potential (%)	19%	21%	26%
	High outsourcing potential (%)	9%	11%	16%
Acid ratio	Average	0.47	0.39	0.52
	Standard Deviation	0.18	0.14	0.21
	Low outsourcing potential (%)	69%	72%	61%
	Middle outsourcing potential (%)	22%	20%	26%
	High outsourcing potential (%)	9%	8%	13%
Cash ratio	Average	0.81	0.71	0.76
	Standard Deviation	0.36	0.24	0.29
	Low outsourcing potential (%)	76%	81%	73%
	Middle outsourcing potential (%)	13%	13%	18%
	High outsourcing potential (%)	11%	6%	9%

More specifically, short-term obligations coming from business cycle activity seem to not be adequately covered from short-term liquidity. There is a noticeable difference in short-term stability among financial health categories not only in terms of cash flow management, but also in the coverage of short-term debt through short-term assets. In the analysis of the financing structure of the operational activity, there is a positive relation between equity share and financial health rating: the lower the rating, the lower equity shares. Similarly, short-term debt reveals additional financial risks that may come with financing more assets through short-term liabilities. Industries that use risky strategies to manage short-term operations and expansion through debt are less likely to attract foreign enterprises, become involved in global value chain, and, most importantly, try to achieve sustainable financing structures (Wettstein and Suggs 2016).

Financial and supply chain threats are linked tightly with high risk performers. They tend to finance their business more through short term liabilities. The most exposed subindustry is customer durables, apparel, and leisure products, which are characterized by short-term supply chains with seasonal changes in customer demand and inventory. Borrowings, even though on lower shares than equity, comprise a larger overall volume relative to other groups of rating. Financing assets mainly through short-term debt indicates higher ties in the supply chain through payables and far stretched days' payables outstanding to cover for cash (Yang et al. 2016). A lengthy short-term payment cycle identified from values of financial ratios clearly indicates that an enterprise is most likely to suffer from long-term risk exposure.

In addition, similar trends occur in long-term risk results (Table 7). In the sample, 68% of enterprises in the sample operate at relatively low solvency rates. Even though the long-term debt has a lower share in financing of enterprises (i.e., at 44% of total debt), the financial risk resulting from short-term coverage coupled with low solvency rates may quickly transform into difficulties in servicing long-term debt.

Since most long-term debt is made of loans from the financial sector, the mechanism can quickly produce an effect on the sector, resulting in a high level of nonperforming loans (Horvathova et al. 2021). The subindustries that show the highest level of long-term risks include those in the materials industry, including both materials and engineering with 82% of enterprises, metals and mining with 71% of enterprises, and household durables with 51% of enterprises. The industrial machinery, supplies, and components subindustry sector depends on large amounts of long-term borrowing to finance lengthy development projects such as public works, including road construction, water supply plants, and electricity transmission lines, or construction of large projects that face numerous risks until full completion. The subindustry household durables with 64% of enterprises having high

long-term risk is interconnected with the financial performance of the industrial machinery, supplies, and components subindustry, as the majority of customer sales happens when construction projects are completed (Ruiz and Sirvent 2019).

Table 7. Long-term risk results for enterprises included in the sample.

Long-Term Risk	Indicator	Materials	Industrials	Customer Discretionary
Debt-to-equity ratio	Average	2.1	1.89	1.75
	Standard Deviation	0.56	0.47	0.34
	Low outsourcing potential (%)	78%	63%	67%
	Middle outsourcing potential (%)	21%	26%	32%
	High outsourcing potential (%)	0.09	0.11	0.16
Debt ratio	Average	1.3	1.1	0.97
	Standard Deviation	0.31	0.26	0.21
	Low outsourcing potential (%)	81%	79%	71%
	Middle outsourcing potential (%)	13%	12%	18%
	High outsourcing potential (%)	6%	9%	11%
Interest coverage ratio	Average	0.64	0.78	0.81
	Standard Deviation	0.23	0.28	0.33
	Low outsourcing potential (%)	85%	81%	74%
	Middle outsourcing potential (%)	10%	12%	15%
	High outsourcing potential (%)	5%	7%	11%

Similar to previews analysis, enterprises displaying short- and long-term risks operate on large volumes of borrowing with a share of 45%. The low amounts of operating cash flows bring difficulties in meeting short-term debt requirements that may quickly affect long-term debt repayments. As a chain reaction, this would affect other enterprises in the supply chain to which these groups of enterprises owe payables, thus negatively affecting integration in global value chain and future expansion opportunities (Sultan 2014). Additionally, similar studies by OECD indicate that industries face long-term risks as enterprises operate within ties among them, thus spreading a disruption in the value chain or difficulties in the management and planning cash flow disbursements (OECD 2020).

Overall, analysis in the sample indicates that enterprises operate in an environment of tight ties with each other. This is manifested in the high share of payables and receivables, especially those stemming from their respective supply chain. Such interdependence exposes the whole industry sector to quick financial risk transmission mechanisms. This domino effect may at the same time place upward risk pressure affecting the majority of industries. Obviously, such effects are further multiplied as the financial sector in the Western Balkan region demonstrates a high level of nonperforming loans and banks as the main borrowing institutions in the region apply tighter lending activity, thus further restricting the liquidity available in the market. Lower levels of liquidity in the market negatively affect both short- and long-term risk, making enterprises more volatile and narrowing the number of enterprises that can have a high degree of outsourcing potential (Hatami-Marbini 2019).

To continue, industry distributions of short- and long-term risk have variations. Each industry shows different trends from their enterprises; this is also due to variations on financial management among enterprises. Aggregate industry values show broader industry results; meanwhile, the rating for outsource potential is more enterprise-specific and reveals better industry risks related to market players' interrelations (Barbuta-Misu et al. 2019). Results indicate that, despite industries overall may face several difficulties with short- and long-term risk, individual enterprises can outperform the industry, thus having a much higher potential for outsourcing potential and better partnership with European enterprises (Sutia et al. 2020).

5. Discussion

Enterprises vary on the share of short-term assets and short-term liabilities, composed of receivables and payables, which in turn affect current ratio significance by putting more risk on the supply chain and spreading its effects widely in the industry, causing fluctuations in financial operations and narrowing prospects for expansion and exposure to global value chains. However, limitations arise as estimation of the current ratio does not include in the analysis the operational activity of enterprises, but it is based on only values received from balance sheets (Vasilic 2014). Another indicator considered for short-term risks with particular attention on meeting creditors obligations is the acid ratio that measures the ability of an enterprise to pay off short-term liabilities with quick assets. This ratio also relates that inventory moves slowly and thus cannot readily be converted into cash. Based on benchmarking results, customer discretionary has the best financial ratio indicators as the industry in itself operates on a short inventory cycle and on a large number of quick assets making it easier to make payments (Wood and McConney 2018). The benchmarking instrument indicates that only few industry and subindustry players are able to manage short-term risk, thus limiting potential partners available in the Western Balkan region. Additionally, this financial ratio does not take into consideration the activity of enterprises but it is based only on balance sheet entries. An indicator that would combine both elements from a number of financial statements including data from the balance sheet and cash flow statement would provide more in-depth insights on short-term risk industry trends and overall attractiveness of the region to participate in global value chains.

In addition, the short-term debt coverage ratio that takes into account operational cash flow directly impacts the operational activity of enterprises and reveals short-term financing needs. The liquidity indicators reveal tight relations of the enterprise in the supply chain, showing that enterprises have important shares of receivables from customers as well as payables to suppliers. As such, it is important to have stable cash influxes to cover payments and drive new investments, thus making the short-term debt coverage ratio an indicator of financial stability (Kiselakova et al. 2018). Referring to similar results in the literature, only a limited number of enterprises in the sample are not exposed to tough liquidity constraints, making them able to quickly adapt to fast-paced operations demanded for participation in global value chains (Kacani 2020).

Regarding long-run, overall enterprises tend to have low shares of long-term debt; however, total debt-to-equity ratio tends to be relatively high in the majority of enterprises, indicating strong presence of long-term risks in the major economic sectors in the Western Balkan region. A high debt-to-equity ratio usually means that a company has been aggressive in financing growth with debt rather than foregoing ownership, indicating a fluctuating behavior in generating returns and little attraction for outsourcing potential (Stefko et al. 2021). On the other hand, the debt ratio indicates the percentage of assets that are being financed with debt. Numerous well-above industry benchmark values for this particular financial ratio reflect an upward trend in long-term insolvency in the private sector within the Western Balkan region. This upward trend also determines whether financial institutions will extend additional loans to enterprises in the industry (Chiu et al. 2021). Finally, the interest coverage ratio is used to determine how well a company can pay the interest on its outstanding debts and to determine the riskiness of lending capital to the enterprise. The faster enterprises are able to repay liabilities, the healthier they are regarded as potential outsourcing partners in the global value chain activities (Shewell and Migiro 2016).

Based on the findings of the benchmarking instrument on short- and long-term risks, enterprises currently operating in three main industries in the Western Balkan region have demonstrated a medium to weak outsourcing potential toward European enterprises. These enterprises have the opportunity to improve their outsourcing potential if they keep strong margins and asset turnover, and in this way decrease leverage without sacrificing profitability. As the values of financial ratios used to understand liquidity management are below benchmarking levels, it clearly indicates that the majority of enterprises have in-place

poor cash management strategies, revealing short-term threats that might have implications in the long-term operability due to low solvency and high leverage (Horvathova et al. 2021).

Most enterprises in the Western Balkan region still finance assets mainly through short-term risk exposure coupled with a high concentration of borrowing and low liquidity ability. High levels of borrowing indicate ties that these enterprise have within supply chain through mutual debt in the form of payables and receivables that might spread financial threats, especially associated with those enterprises that have high risks (Karim et al. 2021). On the other hand, enterprises that operate based upon large contracts or billing generation do not have a strong financial operational structure and call for a more complex analysis and availability of more accounting data on their financial management (Sutia et al. 2020). From industry approach based on the available data subsectors with the highest outsourcing potential are those in the retail and customers goods. Outsourcing potential is higher in these sectors as it is easier for European enterprises to delegate low value-added services such as packaging, cutting, and assembly to emerging markets such as those operating in the Western Balkan countries (Kacani 2020). Compared to the metals, chemicals, and mining or transportation infrastructure sectors, subindustries in retail and customers goods are also characterized by a lower degree of long-term investments and risks, making them more attractive for outsourcing and inclusion in global value chains. Industries requiring long-term investments financed mainly through loans and credits show a lower outsourcing potential, given the high risks associated with them (Wood and McConney 2018). Similar findings have been obtained by major international organizations, emphasizing the increasing long-term risks experienced in construction, mining, and chemical industries due to the COVID-19 pandemic (Yost et al. 2021).

6. Conclusions

This paper introduced a short- and long-term risk benchmarking framework to evaluate the outsourcing potential for enterprises operating in the materials, industrials, and customer discretionary economic sectors in the Western Balkan countries. As the operational activity of enterprises in the Western Balkans is still in its early stages, this paper generates new insights on the outsourcing potential-based accounting data and financial ratio analysis (Gleibner et al. 2022). Given the results of the study, in which most enterprises are characterized by low to medium outsourcing potential, policy makers and financial institutions can jointly implement several policies to further increase this potential. Such policies can include soft loans to finance long-term investments without causing liquidity shortage in the market (Lukacova et al. 2020). In additional, several co-financing grand schemes for short- and long-term investments can ease the burden of enterprises and lower their credit level, thus reducing payment delays and any disruption in the supply chain. Similar policies are previously implemented in the latest joiners of the European Union, making it a successful formula to mitigate risks experienced by enterprises in emerging economies (Lund et al. 2020).

Enterprises and policymakers need to take additional steps to mitigate risks and foster a stimulating business environment driven by quick cash exchanges in the supply chains and a stimulating growth driven entrepreneurship climate. Further research is needed to draft such strategies based on current and historical accounting data that require transparency in reporting and disclosure (Tran et al. 2020). Further improvement of reporting accounting and financial data through standardized and complete information will be crucial to extend future studies on establishing casual relationships between financial ratios, outsourcing potential, and sustainable participation in global value chains (Morina et al. 2020; UNCTAD 2020).

Furthermore, as an adequate response of companies and organizations of various types to complex challenges is integrated as a defining element of business strategies, a principle of responsible management called social responsibility is established (Popescu et al. 2022), which is carried out by most companies in the EU (Hysa et al. 2020; Khan et al. 2021; Matei 2013; Panait et al. 2019, 2021, 2022a; Voica and Stancu 2021). These companies have

to discover balanced treatment between the fulfillment of their own financial objectives and the social obligation contributed by these entities to the sustainable development of the economy in which they operate. Additionally, the functioning of all companies in the realities of the present times, characterized by volatility, uncertainty, complexity, and ambiguity (VUCA), requires significant efforts and resources on their part, so that, by collecting an important and comprehensive volume of data, there is the possibility of generating reliable forecasts (Manta et al. 2022; Panait et al. 2022b; Popescu et al. 2022).

Finally, there are some limitations in this research especially related to the information. Financial statements, where the main data are obtained, are purely for taxation purposes, thus neglecting insights on business and financial processes occurring within a particular enterprise or industry (Brochet et al. 2015). Informality also serves as a limitation on analysis based on public financial statements. Financial statements are public; therefore, to some extent these statements hide the actual activity of enterprises, affecting estimations in the degree of short- and long-term risks, in outsourcing potential for enterprises, and in the integration of global value chains (Ruiz and Sirvent 2019). Despite limitations in this study and the need for further elaboration in the areas described, this study demonstrates that short- and long-term risk prospects of enterprises in the Western Bank region possess outsourcing potential that through adequate policy implementation can increase participation in global value chains.

References

Alnori, Faisal. 2020. Cash holdings: Do they boost or hurt firms' performance? Evidence from listed non-financial firms in Saudi Arabia. *International Journal of Islamic and Middle Eastern Finance and Management* 13: 919–34. [CrossRef]

American Productivity & Quality Center—APQC. 1993. *The Benchmarking Management Guide*. Cambridge: Productivity Press, p. 260.

Aparicio, Juan, Jose J. Lopez-Espin, Raul Martinez-Moreno, and Jesus T. Pastor. 2014. Benchmarking in data envelopment analysis: An approach based on genetic algorithms and parallel programming. *Advances in Operations Research* 2014: 431749. [CrossRef]

Arrfelt, Mathias, Michael Mannor, Jennifer D. Nahrgang, and Amanda L. Christensen. 2018. All risk-taking is not the same: Examining the competing effects of firm risk-taking with meta-analysis. *Review of Managerial Science* 12: 621–60. [CrossRef]

Barbuta-Misu, Nicoleta, Mara Madaleno, and Vasile Ilie. 2019. Analysis of risk factors affecting firms' financial performance—Support for managerial decision-making. *Sustainability* 11: 4838. [CrossRef]

Bartošová, Viera, and Pavol Kráľ. 2017. Methodological framework of financial analysis results objectification in Slovak Republic. *Journal of Modern Accounting and Auditing* 13: 394–400. [CrossRef]

Baule, Rainer. 2019. The cost of debt capital revisited. *Business Research* 12: 721–53. [CrossRef]

Brigham, Eugene F., and Joel F. Houston. 2016. *Fundamentals of Financial Management*, 14th ed. Boston: Cengage Learning.

Brochet, Francois, Maria Loumioti, and George Serafeim. 2015. Speaking of the short-term: Disclosure horizon and managerial myopia. *Review of Accounting Studies* 20: 1122–63. Available online: https://link.springer.com/article/10.1007/s11142-015-9329-8 (accessed on 1 June 2022). [CrossRef]

Chiu, Iris H.-Y., Andreas Kokkinis, and Andrea Miglionico. 2021. Addressing the challenges of post-pandemic debt management in the consumer and SME sectors: A proposal for the roles of UK financial regulators. *Journal of Banking Regulation*, 1–19. [CrossRef]

Durrah, Omar, Abdul Aziz Abdul Rahman, Syed Ahsan Jamil, and Nour Aldeen Ghafeer. 2016. Exploring the relationship between liquidity ratios and indicators of financial performance: An analytical study on food industrial companies listed in Amman Bursa. *International Journal of Economics and Financial Issues* 6: 435–41.

Fridson, Martin S., and Fernando Alvarez. 2022. *Financial Statement Analysis: A Practitioner's Guide*, 5th ed. Hoboken: John Wiley & Sons Inc., p. 448.

Gleibner, Werner, Thomas Günther, and Christian Walkshäusl. 2022. Financial sustainability: Measurement and empirical evidence. *Journal of Business Economics* 92: 467–516. [CrossRef]

Giannopoulos, George, and Sindre Sigbjørnsen. 2019. Prediction of bankruptcy using financial ratios in the Greek market. *Theoretical Economics Letters* 9: 1114–28. [CrossRef]

Global Industry Classification Standard. 2022. S&P Dow Jones Indices and MSCI Announce Revisions to the Global Industry Classification Standard (GICS®) Structure in 2023. Available online: https://www.msci.com/documents/1296102/29559863/GICS_Press_Release_31_March_2022.pdf/f0ac4118-d6c3-4456-3c7b-2b0174099e4e?t=1648760411652 (accessed on 1 June 2022).

Hatami-Marbini, Adel. 2019. Benchmarking with network dea in a fuzzy environment. *Rairo Operations Research* 53: 687–703. [CrossRef]

Horvathova, Jarmila, Martina Mokrisova, and Maria Brablikova. 2021. Benchmarking—A way of finding risk factors in business performance. *Journal of Risk and Financial Management* 14: 221. [CrossRef]

Hysa, Eglantina, Alba Kruja, Naqeeb Ur Rehman, and Rafael Laurenti. 2020. Circular economy innovation and environmental sustainability impact on economic growth: An integrated model for sustainable development. *Sustainability* 12: 4831. [CrossRef]

Kacani, Jolta. 2020. *A Data-Centric Approach to Breaking the FDI Trap Through Integration in Global Value Chains*. Cham: Springer International, p. 299.

Karim, Rezaul Md, Samia Afrin Shetu, and Sultana Razia. 2021. COVID-19, liquidity and financial health: Empirical evidence from South Asian economy. *Asian Journal of Economics and Banking* 5: 307–23. [CrossRef]

Kasasbeh, Feras Izzat. 2021. Impact of financing decisions ratios on firm accounting-based performance: Evidence from Jordan listed companies. *Future Business Journal* 7: 15. [CrossRef]

Khan, Syed Abdul Rehman, Zhang Yu, Mirela Panait, Laeeq Razzak Janjua, and Adeel Shah, eds. 2021. *Global Corporate Social Responsibility Initiatives for Reluctant Businesses*. Hershey: IGI Global.

Kiselakova, Dana, Beata Sofrankova, Veronica Cabinova, and Janka Soltesova. 2018. Analysis of enterprise performance and competitiveness to streamline managerial decisions. *Polish Journal of Management Studies* 17: 101–11. [CrossRef]

Laitinen, Erkki K. 2018. Financial reporting: Long-term change of financial ratios. *American Journal of Industrial and Business Management* 8: 1893–927. [CrossRef]

Lukacova, Marta, Jaroslav Korecko, Sylvia Jencova, and Maria Juskova. 2020. Analysis of selected indicators of tax competition and tax harmonization in the EU. *Entrepreneurship and Sustainability Issues* 8: 123–37. [CrossRef]

Lund, Susan, James Manyika, Jonathan Woetzel, Edward Barriball, Mekala Krishnan, Knut Alicke, Michael Birshan, Katy George, Sven Smit, Daniel Swan, and et al. 2020. *Risk, Resilience, and Rebalancing in Global Value Chains*. Washington, DC: McKinsey Global Institute, pp. 1–112. Available online: https://www.mckinsey.com/mgi/overview (accessed on 1 June 2022).

Manta, Otilia, Eglantina Hysa, and Alba Kruja. 2021. Finances and National Economy: Frugal Economy as a Forced Approach of the COVID Pandemic. *Sustainability* 13: 6470. [CrossRef]

Manta, Otilia, Mirela Panait, Hysa Eglantina, Elena Rusu, and Maria Cojocaru. 2022. Public procurement, a tool for achieving the goals of sustainable development. *Amfiteatru Economic* 61: 861–76. [CrossRef]

Matei, Mihai. 2013. *Responsabilitatea socială a corporaţiilor şi instituţiilor şi dezvoltarea durabilă a României*. Bucharest: Expert Publishing House.

Morina, Fatbardha, Eglantina Hysa, Ugur Ergün, Mirela Panait, and Marian Catalin Voica. 2020. The effect of exchange rate volatility on economic growth: Case of the CEE countries. *Journal of Risk and Financial Management* 13: 177. [CrossRef]

Nurhayati, Nurhayati, Anna Mufidah, and Asna Nur Kholidah. 2017. The determinants of financial distress of basic industry and chemical companies listed in Indonesia Stock Exchange. *Review of Management and Entrepreneurship* 1: 19–26.

Organization of Economic Co-Operation and Development. 2020. Trade Policy Implications of Global Value Chains. OECD Trade Policy Brief. Available online: https://issuu.com/oecd.publishing/docs/trade_policy_implications_of_global (accessed on 1 June 2022).

Panait, Mirela Clementina, Marian Catalin Voica, Eglantina Hysa, Alfonso Siano, and Maria Palazzo. 2022a. The Bucharest Stock Exchange: A Starting Point in Structuring a Valuable CSR Index. *Journal of Risk and Financial Management* 15: 94. [CrossRef]

Panait, Mirela, Lukman Raimi, Eglantina Hysa, and Abiodun S. Isiaka. 2022b. CSR Programs of Financial Institutions: Development-Oriented Issues or Just Greenwashing? In *Creativity Models for Innovation in Management and Engineering*. Hershey: IGI Global, pp. 110–37.

Panait, Mirela, Razvan Ionescu, Irina Gabriela Radulescu, and Husam Rjoub. 2021. The corporate social responsibility on capital market: Myth or reality? In *Financial Management and Risk Analysis Strategies for Business Sustainability*. Hershey: IGI Global, pp. 219–53.

Panait, Mirela, Marian Catalin Voica, and Irina Gabriela Radulescu. 2019. Approaches regarding environmental Kuznets curve in the European Union from the perspective of sustainable development. *Applied Ecology and Environmental Research* 17: 6801–20. [CrossRef]

Popescu, Cătălin, Eglantina Hysa, and Mirela Panait. 2022. Perspectives of Responsible Management in Today's VUCA World. In *Agile Management and VUCA-RR: Opportunities and Threats in Industry 4.0 towards Society 5.0*. Bradford: Emerald Publishing Limited, pp. 57–71.

Ruiz, Jose L., and Inmaculada Sirvent. 2019. Performance evaluation through DEA benchmarking adjusted to goals. *Omega* 87: 150–57. [CrossRef]

Santos, Eulalia, Vasco Tavares, Fernando Oliveira Tavares, and Vanessa Ratten. 2021. How is risk different in family and non-family businesses?—A comparative statistical analysis during the COVID-19 pandemic. *Journal of Family Business Management*. in press. [CrossRef]

Shewell, Patricia, and Stephen Migiro. 2016. Data envelopment analysis in performance measurement: A critical analysis of the literature. *Problems and Perspectives in Management* 14: 705–13. [CrossRef]

Sultan, Ayed Shaker. 2014. Financial statements analysis-measurement of performance and profitability: Applied study of Baghdad soft-drink industry. *Research Journal of Finance and Accounting* 5: 2222–847.

Sutia, Sabar, Refren Riadi, Mochammad Fahlevi, Muhammad Istan, Sutresna Juhara, Rudy Pramono, Agus Purwanto, John Tampil Purba, and Juliana Ashiong Parhehean Munthe. 2020. Benefit of benchmarking methods in several industries: A systematic literature review. *Systematic Reviews in Pharmacy* 11: 508–18.

Stefko, Robert, Petra Vasanicova, Sylvia Jencova, and Aneta Pachura. 2021. Management and economic sustainability of the Slovak industrial companies with medium energy intensity. *Energies* 14: 267. [CrossRef]

Tran, Quoc Thinh, Ngoc Khanh Dung Nguyen, and Pham Que Anh To. 2020. Financial Ratios Affecting Disclosure Level in Interim Report of Vietnamese Listed Enterprises. *The Journal of Asian Finance, Economics and Business* 7: 43–50. [CrossRef]

Umadia, Kingsley, Sr., and Karina Kasztelnik. 2020. The financial innovative business strategies of small to medium scale enterprises in developing country and influence for the global economy performance. *SocioEconomic Challenges* 4: 20–32. [CrossRef]

United Nations Conference on Trade and Development. 2020. Transforming trade and development in a fractured, post-pandemic world. United Nations Conference on Trade and Development. UNCTAD/OSG/2020/2. Available online: https://unctad.org/webflyer/transforming-trade-and-development-fractured-post-pandemic-world (accessed on 1 June 2022).

Valaskova, Katarina, Tomas Kliestik, Lucia Svabova, and Peter Adamko. 2018. Financial risk measurement and prediction modelling for sustainable development of business entities using regression Analysis. *Sustainability* 10: 2144. [CrossRef]

Vasa, László, and Aleksandra Angeloska. 2020. Foreign direct investment in the Republic of Serbia: Correlation between foreign direct investments and the selected economic variables. *Journal of International Studies* 13: 170–83. [CrossRef] [PubMed]

Vasa, Laszlo, Aleksandra Angeloska, and Nikola M. Trendov. 2017. Comparative analysis of circular agriculture development in selected Western Balkan countries based on sustainable performance indicators. *Economic annals-XXI* 168: 44–47. [CrossRef]

Vasilic, Marina. 2014. Financial benchmarking the example of confectionery industry companies. *Economics of Agriculture* 61: 1037–51. [CrossRef]

Voica, Marian Cátálin, and Adrian Stancu. 2021. Corporate social responsibility reporting: Background, evolution and sustainability promoter. *Sustainable Management for Managers and Engineers*, 109–55. [CrossRef]

Wettstein, Dominic, and Suzanne L. Suggs. 2016. Is it social marketing? The benchmarks meet the social marketing indicator. *Journal of Social Marketing* 6: 2–17. [CrossRef]

Wood, Anthony, and Shanise McConney. 2018. The impact of risk factors on the financial performance of the commercial banking sector in Barbados. *Journal of Governance and Regulation* 7: 76–93. [CrossRef]

Yang, Han-Hsiang Wang, Wei-Chih Wang, and Shin-Min Ma. 2016. Using data envelopment analysis to support best-value contractor selection. *Journal of Civil Engineering and Management* 22: 199–209. [CrossRef]

Yost, Elizabeth, Murat Kizildag, and Jorge Ridderstaat. 2021. Financial recovery strategies for restaurants during COVID-19: Evidence from the US restaurant industry. *Journal of Hospitality and Tourism Management* 47: 408–12. [CrossRef]