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Fashion companies in Poland. The influence of COVID-19 on liquidity assessment

Abstract
This article demonstrates the changes that have occurred in the fashion sector during COVID-19. It outlines the complexity of assessing the liquidity level of retail trade companies. Moreover, it gives an overview of the key information included in the financial statements of fashion companies and highlights key points crucial to determining the liquidity risk of these companies. The article also presents the results of two models; these were estimated using the Arellano–Bover / Blundell–Bond linear dynamic panel-data estimator. Results present the real impact of COVID-19 on the liquidity of Polish fashion and retail trade companies (measured by cash holdings or cash ratio) during the analysed period of time. The analysed data cover the 11 quarters from Q1 2019 to Q3 2021 and were obtained from the quarterly financial statements of the 108 public companies listed on the Warsaw Stock Exchange and NewConnect (Poland). The findings show that the fashion sector has lower liquidity than the broader retail trade sector. However, fashion companies during COVID-19 obtained higher cash ratios than retail trade companies. This article is a research-supported summary of the most important aspects of assessing the liquidity of fashion companies in light of the changes that have occurred in the industry due to the COVID-19 crisis.

Keywords
liquidity risk | fashion sector | financial statements | fashion vs. retail trade sector | the impact of COVID-19 on liquidity

JEL Codes
C33, G32, G33

1. Introduction

This article consists of three sections. The first section describes the information crucial to liquidity. It points out the determinants of liquidity and the most important factors shaping it. It also provides an explanation of the relationship between liquidity and the business model of a company. Moreover, it indicates that liquidity will be analysed differently depending on the sector in which the company operates. The second section deals with the characteristics of the fashion industry, which is a part of the larger retail trade sector. It describes the size and importance of the fashion industry in the Polish economy and indicates trends; it shows the characteristics of the fashion companies. It also presents the changes that occurred in the fashion industry under the COVID-19 pandemic. Moreover, it identifies and explains from a liquidity perspective the most important elements of financial statements (especially those helpful to understanding the company's liquidity affected by the COVID-19 crisis). This information allows for a reliable assessment of the company's condition. The third section is empirical, in which two dynamic panel models are estimated: the Arellano–Bover / Blundell–Bond linear dynamic panel-data estimation, with two-step estimation and no constants. The analysed data cover the 11 quarters from Q1 2019 to Q3 2021 and were obtained from the quarterly financial statements of the 108 public companies listed on the Warsaw Stock Exchange and NewConnect (21 companies operating in the fashion sector). The presented models made it possible to verify the hypothesis regarding the decrease in liquidity of companies in the retail trade and fashion sectors during the COVID-19 crisis. The liquidity was defined as a ratio of available cash and cash equivalents to total assets and as the ratio of cash and cash equivalents to trade payables. The empirical study also permits us to answer the question of which of the sectors (retail trade or fashion) was affected more strongly by the COVID-19 crisis. Moreover, the study provides evidence that the fashion sector is characterised by a higher level of cash than the retail trade sector as a whole.

2. Liquidity, solvency, and profitability

The liquidity of an economic entity is its ability to repay its current – that is, short-term, payable within 12 months – financial liabilities. This is an apt definition, but not exhaustive of all aspects of liquidity. The degree of liquidity is determined by what proportion of assets can be exchanged relatively quickly and without losses for the cash required by the entity (Hayes, 2021). Additionally, the literature draws attention not only to the repayment aspect of maturing liabilities but also to the ability to purchase all the goods and services needed by the entity at any given time to meet its current production and consumption needs (Wojciechowska, 2001, p. 14).

The financial liquidity of an economic entity should be considered from the broadest possible perspective. This allows for determining the actual financial condition of an economic entity, which gives the entity a basis for active management of its liquidity. A comprehensive process of looking at liquidity is crucial in the context of developing and maintaining the competitive position of an enterprise. Moreover, in the long term, it also determines the solvency of such an entity. This is very important because insolvency leads directly to bankruptcy. Insolvency (as opposed to illiquidity) is considered over a long period of time and refers to a permanent loss of the ability to settle liabilities (these liabilities exceed the value of the entity's assets). A solvent company is capable of achieving financial surpluses in the long term, necessary for reinvestment in growth (Mioduchowska-Jaroszewska, 2005, p. 25). Even Polish law defines the solvency of a business entity. The conditions necessary to officially put an insolvent company into bankruptcy are stated in article 11 of the Act of 28 February 2003 – Bankruptcy Law. Sometimes the concepts of liquidity and solvency are used interchangeably, but it should be borne in mind that solvency is a broader concept.

The concept of liquidity should not be confused with profitability. Profitability is an indicator showing the efficiency of a given investment or activity. It is calculated according to a very simple scheme: dividing profit by the volume whose efficiency we want to measure. In the context of the company as a whole, the most commonly calculated key performance indicators are: return on equity (ROE), return on assets (ROA), and return on sales (ROS).

3. Liquidity characteristics

Each economic entity can be characterised by one of three variants of the situation: a normal level of liquidity, its deficiency, or its excess. The occurrence of any of these cases is associated with the fact that the enterprise begins to exhibit certain characteristics or lack of them, the so-called liquidity characteristics (Tokarski, Tokarski & Mosionek-Szweda, 2017, pp. 38-39).

In the case of liquidity, the opposite of an adequate level of liquidity will be its absence. Table 1 presents features typically beneficial or not to the enterprise. A summary of these characteristics and their effects is presented in Table 1.

Table 1. Comparison of the characteristics of a company with sufficient and insufficient liquidity levels

Characteristics	Sufficient level of liquidity	Insufficient liquidity level
Credibility	Full credibility, no reputational risk.	High risk of losing credibility or losing it altogether with further negative consequences.
The cost of financing	Market cost, or even reduced cost due to advantageous negotiated contractual terms with long-term financing partners or preferential credit terms.	Increased due to higher credit risk and the withdrawal of lenders from existing contracts or lack of further support.
Relationship with suppliers	High flexibility in financing, continuous use of discounts, submitted invoice payment terms (trade credit).	Lack of flexibility, applying for deferment of repayment dates by the entrepreneur in the face of demands for immediate repayment, lack of additional price reductions and discounts.
Deadline and amount of expenditure incurred	Cash reserves coincide in size and timing with liability payment dates.	No favourable relationship between the amount and timing of liabilities and the level of cash reserves.

Source: Own elaboration.

Excess liquidity, on the other hand, is a situation that cannot be clearly defined as good or bad, as it has both advantages and disadvantages. Maintaining excess liquidity can be either a deliberate financial strategy or the result of a lack of cash management skills. For this particular reason, these situations should be assessed holistically from the point of view of both the plans and the adopted management method of the economic entity, the market situation, and the specifics of the industry in which the entity operates. The advantages of an above-average level of liquidity include stability and balance of payments, the low financial risk of the business, and the possibility of negotiating more favourable contracts due to the high flexibility of financing. As for the disadvantages, these include the opportunity cost of freezing cash (cash does not work for subsequent profit), lower efficiency of capital held, as well as low leverage, which has a direct impact on the profitability of assets (the higher the liquidity, the lower the expected profitability) (Tokarski et al., 2017, p. 40).

4. Liquidity determinants

The characteristics described in the previous section are the result of factors that influence liquidity by shaping its nature and level. Knowing the determinants of liquidity and their effects on the economic entity allows us to understand not only the importance of the way in which risk is managed, but also the way in which corporate strategies function. It enables the financial manager to make conscious decisions regarding the selection of the most cost-effective solution.

The literature on the subject distinguishes between macroeconomic and microeconomic factors. Additionally, it identifies a subgroup of sectoral factors, which are characteristic only of a specific sector or branch of the economy, but just like the other macroeconomic factors, are not dependent on the enterprise itself (Wojciechowska, 2001, pp. 21-24). Macroeconomic factors influencing the liquidity of enterprises are represented by features and dependencies characterising the market environment in which a given economic entity operates.

Industry-specific factors affecting corporate liquidity will include industry-specific characteristics affecting all companies operating in a particular sector. Microeconomic factors depend on the internal aspects of the company's operations, which the company can actively influence with its decisions. The skilful management's adaptation to these factors allows an enterprise to maximise profit without losing the ability to settle its obligations on time. We can distinguish among internal factors related to the operational, investment, and financial activities of an enterprise.

The characteristics and determinants of liquidity described in Table 2 clearly indicate that it is very important for a company to measure and retain an adequate amount of free cash. It is the best guarantor of liquidity.

5. Liquidity management approach vs. business model

It is important to note that, in addition to its size, an entity' business model has an impact on liquidity and the way the liquidity is managed in particular. The business model is defined in several ways. The concept proposed by M. E. Porter assumes that it is a kind of loose plan, positioning the company in the value chain and describing how it generates profits (in short, which elements of the value chain are key in the process of generating costs and revenues) (Porter, 2006, pp. 60-61). In turn, A. Osterwalder and Y. Pigneuer defined a business model as a series of premises through which a company creates value and generates profits from its activities (Osterwalder & Pigneuer, 2012, pp. 18-21).

In this article, we will only distinguish between the most basic business models, but before that, it is necessary to analyse the factors that allow a business model to be defined. Table 3 presents a list of the key factors influencing the construction of the business model, together with an assessment of the impact that these factors may have on the liquidity of the entity.

It is clear from the analysis presented in Table 3 that, in terms of liquidity, the volume of sales revenue, as well as capital expenditure (including replacement outlays), are the key items. In simplified terms, it can be assumed that liquidity mainly depends on the regularity and volume of sales; that is, sales are always of paramount importance. Of course, other aspects such as planning and the appropriate timing of receivables are very important, but without the generation of consecutive sales, there can be no planning needed.

Table 2. Determinants of liquidity

Macroeconomic factors	Industry factors	Microeconomic factors
Government monetary policy: Affects interest rates in particular, i.e., the cost of capital, which determines the availability of debt financing. An expansionary monetary policy of lowering interest rates to stimulate the economy has a positive effect on the level of liquidity by reducing the cost of capital, in contrast to a restrictive monetary policy, which consists primarily of raising interest rates (Begg, Fischer & Dornbusch, 2003). **State fiscal policy**: A stabilised and transparent tax system in the state, both with regard to income taxes and those levied on sales revenue, has a beneficial effect on the liquidity of companies. A stable legal situation makes it possible to plan in advance and with great accuracy the entity's expenses related to the payment of compulsory benefits, using readily available historical data (Begg et al., 2003). **Economic climate** : Influences the demand and supply of offered products or services, and consequently – their price. The price of a commodity is very important from the point of view of a liquidity strategy. The entity calculates the required and achievable level of margin based on market data and is thus able to determine in advance the amount of estimated profit and capital surplus that it can realistically generate. As a general rule, most companies achieve better liquidity results during good economic times, when there is confidence in the market that results in effective cooperation with counterparties. **The characteristics and degree of development of the domestic market**: This is related to both the cost of labour and the amount of compulsory employee benefits, as well as the cost and the number of different opportunities to obtain both long-term and short-term financing. Lower costs and a wider range of financing options have a positive impact on the development of cash surplus.	**The degree of development of the industry and level of risk**: In emerging industries, especially those important for the development of the country, it is relatively easier to obtain financing or tax exemptions to reduce operating costs altogether, but the dynamic development of new sectors may involve a higher risk of operating and achieving the anticipated sales result due to rapidly emerging competition. However, it is the growing industries that are in a more favourable liquidity position than the developed industries, as they are characterised by increasing demand for the products and services offered. **Growth prospects and industry specifics**: Planned volumes and periods of increased and decreased cash flows are very important when managing cash surpluses and shortfalls in a company. This is a particularly important aspect in industries that are characterised by high seasonality of sales.	**The company's market position and pricing strategy:** A strong competitive position allows for more flexible adjustment of the payment terms of receivables. The size of the entity may allow it to benefit from economies of scale, which reduce production costs and increase the company's margins, having a positive impact on liquidity. The company's pricing strategy responds to market opportunities and the situation currently prevailing in the economy. **Inventory policy**: Determines the amount of capital permanently frozen in the enterprise. The more stocks the company holds, the less free cash is available for unforeseen expenses. The amount of inventory held is specific to the company and the management model adopted. **Implementation of investment projects:** Involves a temporary reduction in liquidity for the sake of obtaining future economic benefits. Prudent planning from the point of view of liquidity is particularly important in situations of long-term investment, where the capital expenditure (CAPEX) is high for the entire duration of the project. Then the entity should be particularly mindful of how it will cover future necessary expenses and whether this will jeopardise the company's smooth cash flow in the long term. **Change in debt**: Can be related to borrowing or repayment of credit. Many times, the use of overdraft lines of credit is an important part of liquidity management. Financing investments with debt capital is also generally associated with a lower cost than financing with equity alone. **The entity's exposure to international markets**: In entities operating in foreign markets, the entity's liquidity is also affected by exchange rate risk. In the absence of a responsible foreign exchange risk management policy, the amounts received from product sales may suddenly prove insufficient to cover liabilities. This makes liquidity planning more complex, but also essential for the stable operation of the entity.

Source: Own elaboration based on Tokarski et al., 2017, pp. 41-46.

Table 3. Impact of the business model defining factors on the liquidity of the company

The defining factor of the business model	Factor's explanation	Impact on liquidity
Value	Determines the value of the product generated for the customer.	The higher the value of the product to the customer, the greater the chance of higher sales, i.e., increased cash inflow.
Revenues	Defines the way the business will make money.	At this point, the possibility of granting trade credit and collecting receivables, as well as acceptable forms of payment – i.e., the company's underlying cash inflow schedule – should be determined, as these directly translate into a liquidity strategy.
Entry barrier	Identifies the initial expenditure required to start the business.	The amount of the initial contribution determines the amount of funds required to be invested, i.e., the amount of capital frozen at the outset, which can still be increased in the subsequent operation of the company, so a high barrier to entry will in principle limit the liquidity of the business entity.
Competition	Makes it possible to assess the threat from competing companies.	The higher the competition, the more likely it is that sales will be spread over more operators, i.e., access to outlets and thus to regular, larger supplies of cash will be restricted.
Competitive advantage	Identifies in which areas/ characteristics the company in question is better than its competitors, and what kind of value-added it brings to the market compared to its competitors.	When an entity significantly differentiates itself from its competitors with the solutions it offers, it finds it easier to win new customers and therefore has a greater likelihood of increasing sales revenue, and this should have a positive impact on liquidity.
Market strategy	This defines how to promote the company and how to choose the right marketing activities.	The amount of money spent on marketing and how and at what rate new customers are acquired is important in terms of both increasing sales revenue and generating promotional costs.
Structure/development of the organisation	Identifies the size, staffing structure, and fixed costs of maintaining the business.	The more extensive the organisational structure, the greater the maintenance costs it generates, as well as requiring a much more restrictive and automated cash flow planning process.
Management	Defines the adopted management model and the required competencies of the chief executive.	The management approach adopted by managers directly defines the approach to controlling liquidity. Keeping the best professionals in the market within the company will also generate fixed costs of a certain amount, which will need to be factored into the budget.

Source: Own elaboration.

It is why establishing the right business model is so crucial. Three basic business models should be distinguished; they appear in virtually every study that deals with this topic. These models include:

B2C (Business to Customer) model. This is a model in which business entities sell their products or services to individual customers. In such a model, either the possibility of deferred payment does not exist at all, or payment in instalments is allowed (in the case of higher-value goods or the purchase of licences on which a royalty is charged at certain intervals). In terms of liquidity, this is a fairly secure business model, with individual customers in the vast majority of cases repaying their obligations as they are aware of the much greater market power of the operator. Unforeseen losses may arise in the event of a defect in a batch of goods, the complaints necessary to be acknowledged or the obligatory compensation to be

paid. This model is characteristic of the retail industry and thus also of the fashion industry.

B2B (Business to Business) model. This is a model in which companies sell their products or services to other businesses. It often involves the use of trade credit granted to counterparties. According to the analysis already presented, it is this type of unpaid obligation that generates payment bottlenecks in the economy. In this model, as a rule, transactions amount to much larger sums than in B2C, hence it is a riskier model in terms of liquidity.

C2C (Customer to Customer) model. This model allows for the direct exchange of goods between customers via a dedicated medium. This is the principle of online portals, which charge a commission for intermediation. It is a secure model from the point of view of liquidity since any exchange of goods or services cannot take place without the payment of the required fee. Hence, any sales traffic, such as on a website, will generate revenue, while the costs of maintaining and reaching customers worldwide via the internet are the lowest possible.

6. Liquidity in the (retail) trade sector

The first and most characteristic example is the trading industry. This is where stock monitoring is most intuitive, hence it is the origin of trade credit. Within this industry, it is very important to control the counterparties and the exact restrictions in the way trade credits are granted. To function efficiently, trading companies should have collection plans and procedures in place in case of late payment. According to the survey, about 60% of Polish SMEs do not have such procedures in place (Masiukiewicz, 2018, p. 49). In addition, 72% of companies experience payment delays and yet, perhaps surprisingly, as many as 76% of entities do not use provisions in their contracts to protect against or in any way recompense (e.g., through contractual penalties) such payment delays (Masiukiewicz, 2018, p. 49). However, it must be remembered that within the trade sector, the characteristics of the entities are very different. For example, in the food industry, time will be a very important factor, as products have a specific short shelf life. Suppliers of finishing materials for houses and flats will be dependent on the condition of the entire construction sector and a positive situation in the housing market; moreover, they will experience a change in the dynamics of consumption with a considerable delay (as the process of finishing a construction project takes from one to several years). In the apparel industry, on the other hand, production will follow seasonal cycles, and a misplaced collection will result in a drastic drop in revenue in a particular half-year or quarter.

7. Literature review

7.1. The fashion sector under the COVID-19 pressure worldwide

The retail industry has experienced huge financial and liquidity problems due to the impact of COVID-19 on the economy. It is noteworthy that not only the fashion sector but also the travel sector was suddenly almost prevented from functioning. This resulted in a large outflow of customers and thus a great decrease in sales revenues. This caused liquidity problems and a real risk of bankruptcy for many companies (Wieczorek-Kosmala, 2022, p. 5). Surprisingly, the largest multinational fashion companies noticed that it was possible to grab the attention of young, travel-deprived people and redirect their interest to clothes shopping (Rago, 2020/2021, p. 45).

The fashion industry itself, despite facing various challenges over the past years including supply chain management, corporate social responsibility, ecology, and digitalisation (Rudnicka & Koszewska, 2020), gave no clear signals that core processes such as production or sales could change dramatically (Brydges, Retamal & Hanlon, 2020, p. 299). Only COVID-19 caused immediate significant changes. Business models in the industry were completely overhauled. The whole supply chain (demand, supply, and production) has fallen apart (Majumdar, Saw & Sinha, 2020, p. 151).

When the possible bankruptcies of fashion companies were being discussed in Europe, it was Asia (which is the main supplier of garments to European shops) where the market faced the lack of social security for garment factory workers. According to Clothing Manufacturers Association of India (CMAI) almost 10 million jobs will be lost in the Indian textile industry and 20% of 1,500 clothing manufacturing plants are estimated to permanently shut down their business due to lockdown consequences (Majumdar, Saw & Sinha, 2020, p. 151). These closed factories and interruptions in the supply chain will not be

rebuilt overnight. It takes time to resume production processes, which makes the fashion industry's recovery from the problems caused by COVID-19 even harder.

However, it is also important to note that most jobs will no longer be able to be recreated. Many companies have decided to move their production to local suppliers (Majumdar, Saw & Sinha, 2020, p. 151; Brydges, Heinze & Retamal, 2020, p. 210). This has allowed them to manage distribution more efficiently and minimize transport costs. During the crisis, companies decided to sell their backlog of goods in shops in a "ship from store" model, treating their shops as warehouses (Rago, 2020/2021, p. 39). This enabled them to offload legacy logistical processes, overwhelmed by online sales, and to manage the backlog of goods on the shelves.

The complete closure of shops led to a shift towards online sales channels (which was a revolution in the industry). Moreover, the manufacturers themselves decided to engage in charity work and launched support programs for their employees (Brydges & Hanlon, 2020, p. 195). The crisis forced the shift of the priorities to the investments in digital development and supply chain improvement (Rago, 2020/2021, p. 35). This agrees with the order of prioritizing spending by companies experiencing financial constraints as presented in the literature: "*firstly, firms direct internal funds to investments in fixed assets, and only then do they allocate the funds that remain after financing these investments to intangible assets, bank deposits, shares or bonds*" (Nehrebecka & Białek-Jaworska, 2016a, p. 122).

It is necessary to highlight that liquidity risk influences the level of cash holding (cash reserves) defined as a cash-to-total-assets ratio. Accordioning to the literature, the level of cash holding in enterprise increases mainly when the company faces higher risk (due to unstable cash flow from operating activity) as well as when inventories and capital spending decrease (Białek-Jaworska, 2017b). Cash holding allows companies to invest in project development or to react to the negative shock effects, especially under limited availability of external financing (Białek-Jaworska, 2017a, p. 89). It is proven that cash holding mitigates the risk of insolvency under the (negative) cash flow volatility (Kling, 2018). Moreover, expected low or negative cash flow from operating activity results in higher cash holding levels in the company (Lins, Servaes & Tufano, 2010).

The liquidity risk in the fashion sector during COVID-19 was undoubtedly high. Significant revenue declines were recorded by both luxury brands and major international fast-fashion companies. Despite double-digit increases in online sales, these have not matched the levels achieved from in-store sales in previous periods (Rago, 2020/2021, p. 44). Manufacturers have had to change their business models, targeting local customers, especially young people, who are the most active internet users.

Improving customer experience in online transactions has become crucial, and this trend is likely to persist. It has been shown that since COVID-19, that although consumers still consider clothing shopping to be important, it is no longer a priority for them. Factors such as advertising, promotions, and health safety have proven to be important in the shopping process, redefining the shopping experience for many existing customers (Ong et al., 2021). The sector recognizes that currently, particularly among the younger generation, the fashion industry is expected to deliver not only economic value but also sociocultural value. Despite this, research still confirms that clothing must be, first, aesthetically pleasing and practical. Especially in Poland, "*many consumers would not purchase a sustainable or 'green' product if it did not provide enough intrinsic-psychic, intrinsic-physical and extrinsic benefits to satisfy their needs and aspirations*" (Rahman & Koszewska, 2020, p. 227).

8. The fashion sector in Poland and its characteristics

8.1. Size of the sector

The fashion sector consists of three segments: the manufacture of clothing, the manufacture of textiles, and the manufacture of leather and leather products. In 2018, 21,838 entities operated in this sector in Poland as a whole, respectively: 60.3% in garment manufacturing, 27.1% in textile manufacturing, and 12.6% in leather goods manufacturing. Small entities employing up to 49 employees predominated, and in 2018 they accounted for as much as 80% of all enterprises in the sector. Interestingly, about 73% of the market share in the sector is held by Polish family businesses. The sector generated revenues of PLN 70.2 billion in 2019 (of which 53% was clothing and 21% footwear) (PwC, 2020, p. 6). It is estimated that Polish fashion companies have a roughly 70:30 ratio of doing business

domestically versus abroad. Before the outbreak of the COVID-19 pandemic, revenues in the industry from the e-commerce sector (online shopping) accounted for only 10% of total sales (PwC, 2020, p. 8). Across Europe, more than half of the space in shopping malls is rented by fashion companies. In Poland, as many as 81% of consumers declare that fashion shopping is the most important factor driving them to visit a shopping centre (PwC, 2020, p. 4). Comparing this to the Retail Institute's data, which shows that in 2018 shopping malls served more than 370 million customers in Poland, means that the closure of shopping malls during the COVID-19 pandemic was a revolution that completely changed the situation in the entire sector (Retail Institute, 2019). It should be noted that prior to the COVID-19 crisis, Poles spent around 7% of their annual expenditure on fashion purchases, which is higher than the average Polish citizen's expenditure on health (PwC, 2020, p. 4). The fashion sector is one of those industries that was very seriously affected by the COVID-19 pandemic. Therefore, in this article the following hypothesis will be verified:

> **Hypothesis 1:** Liquidity decreased during the COVID-19 crisis.
>
> **Hypothesis 2:** The fashion sector is characterised by a lower liquidity level than the retail trade sector.
>
> **Hypothesis 3:** The liquidity level in the fashion sector was lower than in the retail trade sector during the COVID-19 crisis.

9. Industry characteristics and their impact on the liquidity of fashion companies

The fashion sector has its own characteristics, which are important for managers, analysts, and many other market participants. First of all, it should be noted that the success of Polish companies in this sector is based, among other things, on extensive cooperation with many other entities, such as fabric and thread manufacturers, sewing plants (production of the main products for sale), furniture companies and assembly teams (construction and furnishing of showrooms), graphic designers, photographers, and marketing specialists (both the design of collections and their subsequent promotion), IT companies (management of shops, supply chain, warehouse, online sales), suppliers and transport companies (distribution and distribution of goods) (PwC, 2020, p. 6). This means that the situation in the fashion industry will affect several other entities, so possible problems such as lack of liquidity or insolvency will be significant for a large part of the Polish economy.

Trends related to globalisation, consumption, and high market competition also remain important issues when analysing fashion companies. Namely, there are two opposing approaches to defining the strategy of clothing shops (their sales strategy). So-called fast fashion and slow fashion are both available. The former appeared in Poland at the end of the twentieth century and filled the market with cheap, easily accessible, seasonally changing collections of clothes and accessories. The traditional division into spring/summer and autumn/winter collections within this strategy has blurred. The fast fashion strategy prioritises high sales volume and low prices. The collections can be changed in the shop every few weeks, giving consumers the impression that the new models will quickly be replaced by newer ones, so they need to be bought immediately, and the affordable prices make the decision easier. In addition, this strategy creates the need to own more things through frequent changes in trends and styles and low-quality fabrics. In this way, consumers have become accustomed to cheap, perishable models that can be replaced relatively quickly. A competitive response to the fast fashion trend is the slow fashion trend, which is based on the concept of environmental care (the production of cheap and frequently-discarded clothes is presented as environmentally unfriendly) and minimalism. As part of the slow fashion strategy, customers are offered more expensive clothes, of higher quality, that are created from recycled or environmentally friendly materials. This trend is a response to society's interest in the idea of responsible and conscious consumption (Włodarczyk, Małczęć & Pala, 2020, pp. 105-106).

It is worth emphasising that, regardless of the sales, distribution, and replacement strategy adopted by a company for a particular collection, both the supply chain and the time that must elapse from the design of the collection to its actual production and presentation in the shop are just as important. It is very common practice to plan the process in a way that allows the manufactured goods to be repaid from subsequent sales. When a company decides to have two main collections in a season and one of them turns out to be unsuccessful and does not appeal to consumers, this automatically results in a loss of sales and can

translate into difficulties in settling commercial obligations. An example of such a situation may be the significant drop in sales of the RESERVED brand owned by LPP S.A. in the spring-summer season in 2016 (the brand's collection at that time was not popular with customers, and RESERVED is the leading brand, responsible for almost half of the entire group's revenue, so the weaker results were reflected in price drops of LPP S.A. shares listed on the Warsaw Stock Exchange) (Rudke, 2016). In addition, when the supply chain is long and requires a longer time to transport products, most often from Asian countries to showrooms (outsourcing of production is a standard procedure in the fashion industry), a quick and effective reaction of the company to a failed collection is difficult (it is impossible to replace models in shops overnight). Continuing with the cited example, LPP S.A.'s experience with the 2016 collection prompted the company to produce the most key products in Poland – in Łódź, so that, if necessary, some of the unsellable models could be replaced with new ones relatively quickly and easily, without having to wait for containers to be transported from Asia.

Another characteristic of the Polish fashion industry is that by 2020, only 10% of sales were made through online channels. What is additionally important, in the e-commerce segment, the leading role is played by mobile applications such as Vinted (sale of second-hand clothes by application users) and Zalando (clothing and footwear shop with a portfolio of many different brands). The leaders are not at all the most popular clothing manufacturers, known from their stores in shopping malls. In addition, when moving sales in the industry to the online channel, the company must reckon with a higher number of returns – the fashion industry, along with the electronics industry, is characterised by the highest rates of returns on purchased goods. Data from merce.com shows that this amounts to approximately 5% of all sales. Moreover, customers usually do not return all the products they ordered, but only a part (e.g., 2 out of 4 articles of clothing bought in one order) (Klich, 2021). The risk of a significant number of post-purchase returns creates difficulties in forecasting sales and managing the liquidity of individual fashion companies.

In the analysis of the financial situation of companies in the fashion industry all the characteristics typical of entities from the retail industry are important: maintaining a large number of goods in stock (and the need to sell them out in the event of lower-than-assumed sales), the use of so-called reverse factoring, that is, accelerated financing of liabilities rather than receivables of the company (there may be differences in interpretation here – whether the qualification of this type of activity is a trade liability or a financial liability, and this may affect debt ratios and further credit limits and the evaluation of the entity's liquidity – on the basis of typical liquidity ratios). In addition, companies in the sector often lease or rent space or own property (such as warehouses). All of these cost categories may have specific implications depending on how they are presented in financial statements, for the liquidity analysis of the respective business entity.

10. Changes triggered by the COVID-19 crisis on the Polish market

The fashion sector is one of those industries that were very seriously affected by the COVID-19 pandemic. Particularly acute was the complete closure of shopping malls, which made it impossible to sell in a key channel. This resulted in decisions by many brands to terminate some of their leases (LPP S.A. terminated 29% of its leased space in Poland as early as spring 2020, but not all companies reacted as quickly. CCC S.A. decided to open all its shops in the country in May 2020, and Monnari only announced in February 2021 the termination of approximately 13% of its leased space in shopping centres [Money.pl, 2020]). In the case of foreign brands, companies have even decided to withdraw from Poland altogether (e.g., Camaieu, a clothing brand, and Salamander, a footwear brand).

Severe constraints that revolutionised the way of doing business in the fashion industry overnight and made the trends towards digitalisation an immediate priority led to significant changes. These include (Klich, 2021):

Significant increases in online sales. Inevitably, most brands have scored up to triple-digit increases in online sales, but despite this, for the most part, sales values have not even come close to those achieved in stationary shops. In addition, the demand for fashion products itself has fallen dramatically through the lack of meetings, conferences, and even the possibility of going to work or school every day.

The development of customer communication via digital and omnichannel channels. Social

media promotion, and appropriate, consistent branding across all social media channels, has gained in popularity. The omnichannel trend is about providing the customer with the ability to purchase products across multiple sales channels at the same time, providing a better customer experience than if they only used one of them. During the pandemic, this has become an industry priority.

The introduction of fashion tech solutions. Virtual fitting rooms and video chat services are some examples. Technology and innovation became a priority during the pandemic. Thanks to modern virtualisation methods, the customer's contact with the product is made to resemble live contact. It has become necessary to allow the customer to interact with the product appropriately, and while not all brands are ready and technologically prepared for this, the market has recognised that this type of transformation is necessary and will continue.

Improving the warehousing of goods, the supply chain, and the return system for purchased goods. Many companies were faced with the need to store goods for longer than usual and therefore to control their stock in more detail. In addition, when a significant proportion of sales started to take place online, it became necessary to improve the logistics of picking, packing, and sending packages to customers. Due to the high number of returns, shops had to reckon with this in both sales forecasts and the restocking of returned parcels. The future in logistics and warehousing is the RFID system, implemented even before the pandemic at LPP S.A., which allows each item to be tracked using a special individual code.

11. Nuances in the financial statements of fashion companies

When analysing the financial statements of fashion companies, especially after the COVID-19 pandemic, it is necessary to be aware of important aspects which can distort the true picture of liquidity in an assessed company. The financial data presented in the financial statements depend on the accounting principles adopted. The classic liquidity, profitability, and debt ratios, used to compare the financial condition of the companies, cannot be treated equivalently. Financial analysts cannot ignore the individual approach of each entity to accounting policy. Possible changes in, for example, accounting standards also cannot be overlooked, to ensure the year-on-year comparability of the analysed data. The above-mentioned details are very important to reliably assess the financial standing of the company.

Most large Polish companies, especially those listed on the Warsaw Stock Exchange, report their financials according to International Financial Reporting Standards (IFRS). However, companies that prepare their reports according to national regulations should also be assessed in a similar way. It is particularly important to carefully examine the explanatory notes to the financial statement.

For the assessment of the liquidity situation of companies in the fashion industry, the following information is relevant:

1. The going concern assumption, usually taken for granted until 2020. However, as a result of the deep crisis and the changes after 2020, this assumption will not be an obvious case for every company. Therefore, analysts should start by checking on what basis this assumption has been made. It is worth checking whether the going concern assumption is evidenced by sales forecasts, contracts already concluded, available emergency financing (e.g., banks, government support) or, for example, recapitalisation (done or possible) from the parent entity. This is the first step in determining the overall condition of the analysed company (Matusewicz, 2021a).
2. The entire report prepared in accordance with IFRS will include a separate section dedicated to liquidity risk, which will present data such as:
    a) A description of the company's approach to liquidity management, policies, rules, and key limits.
    b) Data on liabilities and their age, which will indicate when they should be repaid.
    c) Information on liabilities not paid in a timely manner, their size and scale, as well as losses, that were recognised to date.
    d) Data on sureties granted (if any): to whom and in what amount they were granted, the risk of becoming due in the near future, and how they will be repaid.
    e) Classification of trade payables covered by reverse factoring. Reverse factoring is one

of the more important mechanisms in the retail trade sector, including, in particular, the fashion industry, as it is becoming more widely used. A key issue regarding reverse factoring is whether the payables balances relating to invoices transferred to the factor should be shown on the balance sheet as part of trade payables, or perhaps as financing payables, or separately from other payables items. A decision on this issue will have far-reaching consequences, as it affects both the structure of the liability side of the balance sheet and the structure of the cash flow statement (the repayment of trade payables is an operating flow, while the financing payables is a financing flow). According to the IFRS Interpretations Committee, the classification of liabilities subject to reverse factoring is a significant judgement, which is made by assessing the extent to which the inclusion of liability in reverse factoring changes its original nature. This can be done, for example, by comparing the maturities of the liabilities covered by reverse factoring and the company's other liabilities, or by analysing the nature of the collateral in the factoring agreement. Importantly, companies reporting under national accounting standards can also use the above guidance to resolve the recognition of reverse factoring (Matusewicz, 2021b).

3. Impairment of assets. In the fashion industry these will be mainly store-related assets or goodwill, but they may also include capitalised development costs, the right to use assets under a lease agreement, or tangible fixed assets (factories, offices, machinery, equipment). In accordance with applicable international standards, it is required to assess the existence of indications of impairment of assets at each balance sheet date and, if such indications exist, it is necessary to perform an impairment test based most often on the projected cash flows with the cash-generating unit. The performance of the test itself and the selection of appropriate assumptions is difficult and, in each entity, may be performed in a manner that will be difficult to compare with other companies in the industry (Matusewicz, 2021b).

4. Methods of valuing assets both at cost and at fair value, valuation of trade receivables and inventories. Inventories are the main asset of fashion companies. Under both national and international valuation standards, it is possible to carry inventories at a lower cost or net realisable value. Net realisable value is the estimated selling price reduced by the estimated costs of preparation for sale and the costs necessary to actually sell the asset. In the fashion industry, many of the products lying in warehouses or on the shelves of closed galleries had to be discounted several times and sold below the originally assumed price levels. In addition, the closure of some shops and the replacement of unsold collections increased logistics and storage costs. All this led to a situation in which fashion companies had to write down the value of their inventories, much more than in previous years (Matusewicz, 2021a).

5. Lease agreements and their renegotiation, and changes to lease agreements. Fashion companies took advantage of the possibility of suspending rental payments for storage space in the shopping malls based on the government's so-called anti-crisis shield solution. They could also renegotiate their contracts. In the case of leases, IFRS 16 applies, *"according to which, as a general rule, the present value of the lease liability should be determined as at the modification date (e.g., the date on which the parties agreed on the modifications to the contract) by discounting the future payments under the modified contract with the discount rate updated as of the modification date. The measurement adjustment to the liability is most often recognised secondarily as an adjustment to the right-of-use asset"* (Matusewicz, 2021b), (however there are exceptions). The interpretation of this regulation effective from 2019 onwards has been problematic in many cases. That is why simplifications have been officially introduced (but only in specific cases concerning the reduction of the COVID-19 pandemic rent for a specific period). The simplification does not eliminate all doubts – there are cases in which both the lessee and the lessor may recognise changes in the lease differently – such as in the case of a mere renegotiation, a reduction in rent with the remaining terms unchanged, '*the effect of this reduction may be recognised either as income in the income statement or as a reduction in assets (which will, in turn, result in a lower depreciation expense in subsequent years)*' (Matusewicz, 2021a). In contrast, the recognition of leases will be different for companies that apply Polish regulations. According to these, leases of shop space are most often classified under operating leases, and National

Accounting Standard 5, 'Leases, tenancies and leases,' states that any changes to a lease agreement are recognised as the conclusion of a new lease agreement. This means that the effect of these changes is recognised on a straight-line basis over the remaining lease period (Matusewicz, 2021b).

6. Information on subsidies or soft loans, among others, those granted in 2020 under the PFR shield. '*Wage subsidies under IFRS can be recognised either as income or as a reduction of expense.*' (Matusewicz, 2021a).

12. Liquidity in the fashion sector during COVID-19 crisis – an empirical study

In order to verify the impact of the COVID-19 pandemic on fashion companies in Poland, two dynamic panel models were estimated.

13. Data and variables

The database analysed via the presented research is based on quarterly financial statements of Polish listed companies (listed on the Warsaw Stock Exchange and NewConnect) available in the Orbis database. The data cover the 11 quarters from Q1 2019 to Q3 2021. Companies from the fashion sector were classified similarly to the Warsaw Stock Exchange classification (21 companies both on the WSE and NewConnect). The companies classified as those from the retail trade sector are listed on the WSE too. The sample consists of 87 companies analysed by model no. 1 and 72 companies analysed by model no. 2.

Table 4 presents the definitions of the variables used in the model.

Table 5 presents the characteristics of the above-mentioned independent variables.

Model No. 1

The dependent variable is expressed as the ratio of available cash and cash equivalents to total assets in the company (similar to cash holding or cash reserves).

Model No. 1: equation:

$$cash\_TA_{i,t} = \beta_1 covid_{i,t} + \beta_2 fashion_{i,t} + \beta_3 did_{i,t} + \beta_4 size_{i,t} + \beta_5 profit_{i,t} + \beta_6 mktbk_{i,t} + \beta_7 growth_{i,t} + \beta_8 capex_{i,t} + \beta_9 totaldebt\_TA_{i,t} + \beta_{10} industry_{i,t} + \beta_{11} quartal_{i,t} + \vartheta_i + \varepsilon_{it}$$

Where: β_i - parameter, i - observation number, t – subsequent quartal, ϑ_i – panel-level effects, ε_{it} - independent and identically distributed effects

The model was estimated as the Arellano–Bover / Blundell–Bond linear dynamic panel-data estimation, with two steps estimation and no constants.

Model No. 2

The dependent variable is expressed as the ratio of cash and cash equivalents to trade payables, after winsorisation of extreme observations at the 95th percentile, due to excessive kurtosis.

Model No. 2 - equation:

$$cash\_ratio_{i,t} = \beta_1 covid_{i,t} + \beta_2 fashion_{i,t} + \beta_3 did_{i,t} + \beta_4 size_{i,t} + \beta_5 profit_{i,t} + \beta_6 mktbk_{i,t} + \beta_7 growth_{i,t} + \beta_8 capex_{i,t} + \beta_9 totaldebt\_TA_{i,t} + \beta_{10} inf\_growth_{i,t} + \beta_{11} growthrate_{i,t} + \beta_{12} maxcredit_{i,t} + \beta_{13} situation\_capital_{i,t} + \beta_{14} risk\_sector_{i,t} + \beta_{15} industry_{i,t} + \beta_{16} quartal_{i,t} + \vartheta_i + \varepsilon_{it}$$

Where: β_i - parameter, i - observation number, t – subsequent quartal, ϑ_i – panel-level effects, ε_{it} - independent and identically distributed effects

The model was estimated as the Arellano–Bover / Blundell–Bond linear dynamic panel-data estimation, with two steps estimation and no constants.

Results are presented in Table 6.

14. Results

The results presented in Table 6 concerning the *covid* variable show that cash holding (cash to total assets) increased during COVID-19, while cash ratio (cash to current liabilities ratio) decreased in this period of time. This is because the companies postponed the payments of their trade liabilities longer than usual (being aware of the lower sales volumes), and this

Table 4. Variables definitions

Variable	Definition
cash_TA	The dependent variable expressed as the ratio of available cash and cash equivalents to total assets in the company (similar to cash holding or cash reserves).
cash_ratio	The dependent variable expressed as the ratio of cash and cash equivalents to trade payables, after winsorisation of extreme observations at the 95th percentile, due to excessive kurtosis
covid	The binary variable takes the value zero from the first quarter of 2019 to the first quarter of 2020 (before the COVID-19 pandemic) and the value of one from the second quarter of 2020 to the end of the observation period (when the effects of the pandemic were already visible in companies' financial statements).
fashion	The binary variable indicates whether the company belongs to the fashion industry (according to the rules adopted by the Warsaw Stock Exchange).
did	Interaction of *covid* and *fashion* variables.
size	The size of a company's assets is presented as the natural logarithm of its total assets.
profit	The variable shows the ratio of operating profit before depreciation and amortisation (EBITDA) to total company assets.
mktbk	The variable determines the ratio of the market value to the book value of the company, so it tells whether the company is developing (growing) and at the same time informs about the confidence level of investors in the given company.
growth	The change in total assets, measured as the difference between ln(1+totalassets) from period t and ln(1+totalassets) a of period t-1, where t means quarter.
capex	The variable indicates the ratio of the company's capital expenditure to the company's total assets.
totaldebt_TA	The variable indicates ratio of total debt to total assets.
inf_growth	The variable measuring the inflation expectation, based on analyses of the National Bank of Poland. It measures the percentage of enterprises that are convinced that prices will rise faster than current inflation over the next 12 months.
growthrate	GDP quarter-on-quarter growth rate
maxcredit	The maximum amount of a loan/line of credit, an indicator calculated on the basis of commercial banks' responses to the question to what extent the terms and conditions for granting loans or lines of credit to businesses have been changed in the past three months. A positive indicator indicates a tightening of this criterion. It is the difference between the sum of the asset-weighted percentage structures of the responses "much eased with a weight of 100%" and "slightly eased with a weight of 50%" and the sum of the asset-weighted percentage structures of the responses "much tightened with a weight of 100% " and "slightly tightened with a weight of 50%", multiplied by (-1).
situation_capital	The reason for credit policy change: current or expected capital position of the bank, percentage of commercial banks' responses to the question whether they have changed their credit policy, that is, the criteria or conditions for granting loans/credit lines to businesses, in the last three months and how the mentioned factor has contributed to the change. A positive indicator shows that a factor has contributed more to an easing than to a tightening of credit policy. The difference between the answers counted as above.
risk_sector	The impact of the industry risk contribution to the change in credit policy within the last three months. A negative indicator means that a factor contributed more to the tightening than to the easing of credit policy. The difference between the answers counted as above.
industry	Identifies the dominant industry in which the company operates, in accordance with the Polish classification of PKD codes.
quartal	Identifies the quarter under review during the analysis period.

Source: Own Elaboration, variables *maxcredit, situation_capital* and *risk_sector* were based on reports conducted via National Bank of Poland (see references section).

Table 5. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
covid	8,679	0.5455	0.4980	0	1
fashion	8,679	0.0266	0.1610	0	1
did	8,679	0.0145	0.1196	0	1
size	8,679	13.8866	7.9387	0	40.9197
profit	6,688	0.0164	0.1345	-0.66	0.55
mktbk	6,688	1.8313	2.9573	-0.9079	12
growth	7,89	-1.3996	5.9861	-40.9197	23.3957
capex	6,688	0.0147	0.0281	0	0.173
totaldebt_TA	6,688	0.5355	0.3369	0	44682,00
inf_growth	8,679	0.4832	0.0489	0.417	0.572
growthrate	8,679	0.0069	0.0372	-0.092	0.076
maxcredit	8,679	-0.1187	0.1875	-0.5651	0.1596
situation_capital	8,679	-0.0577	0.0963	-0.257	0.1244
risk_sector	8,679	-0.2214	0.1851	-0.7089	-0.046
industry	8,679	7.8973	4.2902	1	18
quartal	8,679	6	3.1625	1	11

Source: Own Elaboration.

process has affected the cash ratio. Nevertheless, the cash holding kept during the uncertain time of the COVID-19 pandemic increased. This trend to raise the cash holding during uncertain times/recession is a usual managers' behaviour described in the literature (Nehrebecka & Białek-Jaworska, 2016b). Hypothesis 1 is verified positively only by model no. 2. In model no. 1 the next variable *fashion* indicates that the cash holding of the fashion companies is lower than those in the retail sector. A similar trend is observed in model no. 2: here also the cash ratio in the fashion industry is lower than in the retail sector. It means that hypothesis 2 is verified by both models. Moreover, model no. 2 indicates that the cash ratio during the COVID-19 period in the fashion industry was higher than in the retail trade companies. The result is exactly the opposite to the assumptions presented by hypothesis 3, as well as the dependence proved by positive verification of hypothesis 2. The not significant variable *did* in model no. 1 suggests that the level of total assets may be more important to judge during the crisis. Asset level defines a potential possibility: to exchange them for money. On the other hand, at the same time the cash level may be artificially higher (due to additional credit lines or potential government support). Hypothesis 3 is verified negatively only by model no. 2.

The variable *size* indicates that smaller businesses have a higher level of cash holding and a lower level of cash ratio than large companies. The variable *profit*, which is only significant in model no. 2, proves that profitable companies have higher cash ratios. It is important to mention that the outcome of variable *mktbk* confirms that investors value more highly the companies characterised by a higher level of immediately available cash and higher liquidity resulting from the cash ratio. The next effect presented by the subsequent variable shows that companies with higher growth opportunities are characterised by higher free cash holding and higher liquidity. Additionally, it is confirmed that the higher

Table 6. Results of the dynamic panel models on liquidity in the fashion sector

	model 1 cash_TA Coeff. (Std. Err.)	model 2 cash_ratio Coeff. (Std. Err.)
Lagged dependent variable	0.0905 ***	0.0969 ***
	(0.0229)	(0.0022)
covid	0.0128 ***	-0.7195 ***
	(0.0047)	(0.0673)
fashion	-0.2843 **	-18.4016 ***
	(0.1250)	(1.5096)
did	0.0070	1.0736 ***
	(0.0060)	(0.1640)
size	-0.0134 **	1.3738 ***
	(0.0069)	(0.0788)
profit	-0.0050	1.3628 ***
	(0.0081)	(0.0632)
mktbk	0.0069 ***	0.5421 ***
	(0.0015)	(0.0101)
growth	0.0231 ***	2.6130 ***
	(0.0045)	(0.0648)
capex	-0.1537 ***	-6.8916 ***
	(0.0415)	(0.6435)
totaldebt_TA	-0.1788 ***	-7.7793 ***
	(0.0207)	(0.2128)
inf_growth		-1.2522 ***
		(0.3721)
growthrate		-0.3886
		(0.6217)
maxcredit		0.6720 ***
		(0.0626)
situation_ capital		1.2641 ***
		(0.1040)
risk_sector		-1.0935 ***
		(0.1940)
industry	0.0829 ***	-1.4661 ***
	(0.0158)	(0.1877)
quartal	0.0002	-0.0522 ***
	(0.0010)	(0.0122)
number of observations	885	684
number of companies	108	93
Wald test	646.80	154607.69
p-value	0.0000	0.0000
Sargan test	51.6697	60.2655
p-value	0.2964	0.0636
Arellano-Bond test		
AR(1)	-2.7961	-1.6693
p-value	0.0052	0.0951
AR(2)	0.7980	-1.1499
p-value	0.4248	0.2502

Source: Own Elaboration. Standard errors in parentheses. Significance levels as follow: *** p<0.01, ** p < 0.05, *p<0.1.

the investments (CAPEX) are, and the higher is the entity's debt to fixed assets ratio, the lower are the cash holding and cash ratio. The additional variables presented by model no. 2 indicate that companies characterised by higher inflation expectations will have a lower cash ratio. In addition, the tightening of the requirements for the maximum credit limits and the deterioration of banks' capital position during the COVID-19 pandemic positively affect the cash ratio of the companies. Finally, the increase of industry risk, which further means tightening changes in the banks' credit policies, is negatively reflected in the companies' cash ratio.

15. Summary

The findings presented in this article demonstrate that assessing the level of liquidity of companies in

the fashion industry requires understanding and careful analysis of their business models and adopted accounting policies. It is crucial to be aware that the industry's characteristics often determine how financial information is presented (reverse factoring, impairment of assets, assets valuation method, and lease agreements under IFRS 16). Knowledge about the technical nuances of the financial statements allows a reliable assessment of the entity's liquidity level. Due to a major collapse caused by the COVID-19 pandemic the market has changed significantly. Many unplanned remedies were introduced by the companies. In this situation, when the possibility of continuing business activity is particularly threatened, it becomes doubly important to know how to read the financial statements and how to reliably assess the liquidity condition of entities in the fashion industry. It is especially important to be aware of the fact that the existence of fashion companies is very important for the Polish economy. This article also verified the three hypotheses concerning the liquidity condition of the fashion and retail trade sector: 1. Liquidity decreased during the COVID-19 crisis; 2. the fashion sector is characterised by a lower liquidity level than the retail trade sector; 3. the liquidity level in the fashion sector was lower than in the retail trade sector during the COVID-19 crisis. The estimated models, via Arellano–Bover / Blundell–Bond linear dynamic panel-data estimator, prove that COVID-19 had a negative impact on the cash ratio, and at the same time had a positive impact on the cash-to-total-assets ratio (cash holding). The liquidity level in the fashion sector was lower than in the retail trade sector, regardless of the ratio taken as a dependent variable. Conducted research proves (counterintuitively) that the liquidity measured by the cash ratio was higher during COVID-19 in fashion than in the retail trade sector. This dependance turned out to be exactly the opposite of the general rule verified by hypothesis 2, and to the assumption made in hypothesis 3 (which therefore had to be rejected). It means that model no. 1 verified positively only the second hypothesis and model no. 2 verified positively hypotheses 1 and 2, whereas the second model rejected hypothesis 3.

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Additional notes

Reverse factoring. Companies in the retail industry often use so-called reverse factoring. Under reverse factoring, a company presents an invoice received from its supplier to the factor (usually a bank) for payment. The factor makes payment to the supplier on the due date of the invoice or earlier (with a discount) and the company makes payment to the factor after a certain period of time. The nominal amount paid by the bank to the supplier is lower than the amount paid to the bank by the company, because either the bank pays to the supplier earlier the amount of the invoice reduced by the discount, or the company pays to the factor the amount of the invoice plus the interest accrued for the financing period.

IFRS 16 - Leasing. From 1 January 2019, under the new standard IFRS 16, lessees must recognise almost all leases on the balance sheet. Under the previously applicable IAS 17, leased assets were recognised off-balance sheet as operating leases or on the balance sheet as finance leases. As a result of the implementation of IFRS 16, the balance sheet total increases, the leverage ratio deteriorates, and the efficiency ratios decline, as both the nature of lease payments and the pattern of their recognition changes. The reason is that the recognition of the right to use the leased asset and the lease liability requires the inclusion of depreciation, most often using the straight-line method, and interest expense, as a component of finance costs. This results in an increase in EBIT and, in particular, EBITDA.