

Cognitive Precision and Expressiveness in Stock Market Communication: A Contrastive Perspective

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ABSTRACT

Nowadays, economic issues make up a significant part of everyday communication. Daily business news on television and in digital sources, constant contacts with financial institutions – to name a few – only emphasize the omnipresence of the economy in our lives and at the same time confirm that we are inescapably involved in economic processes. The subject matter of the paper is a specific area of business communication, namely stock market communication. Drawing on Conceptual Metaphor Theory (CMT) by Lakoff and Johnson (2003) and the model of schematicity hierarchies of metaphorical concepts by Kövecses (2019), as well as Littlemore's (2015) and Brdar's (2019) findings on the functions and regularity of metonymic patterns, we aim to investigate the nature and functions of metonymies and metaphors found to be reflected in stock market communication. Another objective is to present precision and expressiveness in stock market communication achieved through the use of figurative (metaphorical and metonymic) means. In particular, we conducted a qualitative analysis of selected metonymic and metaphorical expressions in three different languages (English, German and Polish) extracted from stock market reports and commentaries. The choice of the contrastive perspective results from Weinrich's (1976) assumption that languages belonging to the western cultural community should share patterns of conceptualizations. The findings of the analysis conducted seem to show that image schemata and domain levels overlap to a great extent in the three languages under analysis, and cultural variation and differences – if present – occur at the more specific level of frames and/or mental spaces.

Keywords: conceptual metaphor; metonymy; stock market communication; qualitative analysis; contrastive perspective

INTRODUCTION

Spinnen (2008, p. 10) argues that the language of business in the early twenty-first century has such a great influence on everyday language as only the languages of religion or politics had in the past. In fact, the language of economics has come to dominate almost all walks of life. More and more people invest money in shares or funds, regularly read websites that provide stock market information, financial and business news, and monitor stock prices daily. Thus, the knowledge of

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the developments that determine and give impetus to the financial markets is no longer reserved exclusively for a narrow esoteric circle of specialists, nor is it shrouded in an aura of mystery.[°]

This paper deals with a specific fraction of the area of business communication, namely stock market communication, which is far from being a homogeneous area of analysis. The main purpose of stock market communication is to ensure transparency in the capital markets, in particular, to gain the confidence of potential investors, and to strengthen investors' loyalty to the company, which should ultimately lead to them purchasing shares. This is usually achieved through transparent business policies, as well as by providing comprehensive and reliable information about the market, the company, its products and services, its business processes, risks and opportunities (cf. <https://wirtschaftslexikon.gabler.de/definition/boersenkommunikation-30614/version254191>; accessed on 3.11.2020).

In the case of stock market communication, the following communication levels can be distinguished:

1. the institutional communication level, which covers all forms of communication between companies listed on the stock exchange and the economic, financial and stock market media, private and institutional investors and shareholders, financial institutions, stockbrokers, analysts, rating agencies, etc. The overall purpose is to provide market- and company-relevant information. Significant parts of communication at this level are regulated by law (for example, in Germany by the Stock Corporation Act, Securities Trading Act, and Stock Exchange Act),
2. the non-institutional communication level, including:
 - a. the official communication level, which includes providing stock market-relevant information in stock exchange and market reports, analyses, commentaries, mainly through opinion-forming financial, business and stock market media (financial and business press, electronic data dissemination systems, independent providers of business news);
 - b. the unofficial communication level, which concerns the exchange of mainly personal opinions, experiences, presumptions (including elements of advertising statements) among all parties interested in stock market trading (such as securities traders, shareholders, investors) in Internet newsgroups, forums, blogs, and such like (cf. Nycz, 2017, p. 100; Nycz, 2013, p. 105).

Taking the above classification of communication levels into consideration, the ongoing analysis is to operate at the non-institutional official communication level as the data samples were extracted from market reports, analyses, and commentaries found on specialized websites (for a detailed list, see the section below), which are aimed at both business and finance specialists, as well as ambitious individuals interested in the intricacies of the stock market.

The present study deals with different aspects of metonymic and metaphorical mappings in stock market communication, and is anchored within the theoretical framework of cognitive semantics in general, and the extended conceptual metaphor theory proposed by Kövecses (2015, 2017, 2019, 2020) combined with the views of Littlemore (2015) and Brdar (2019) on metonymy in particular. Following the findings of previous studies on conceptual metaphor and metonymy (Weinrich, 1976; Lakoff & Johnson, 2003; Lakoff, 1987; Johnson, 1987; Fauconnier, 1985;

[°] Interestingly, finances and economy have become a focus of numerous literary works, one of them being that by Jelinek (2015), which deals with the issues of financial crisis and money management by banks and trusts. But what Jelinek (2015) is most fascinated with is the dematerialization and "virtualization" of both money and the contemporary financial market, the latter of which has a tremendous impact on our predominantly material, non-virtual reality.

Kövecses, 2000; Radden & Kövecses, 1999), it is assumed in this paper that metonymy and metaphor are not just elements of language, but also mechanisms of human thought and action. They are conceptual phenomena in which our experience of the world and culture are reflected, and which play a central role in structuring and organizing of what we perceive, as well as in understanding complex ideas in simple terms (cf. Bāk, 2019, pp. 32-38). Therefore, what is sometimes referred to as the standard definition of conceptual metaphor, as defined in CMT formulated by Lakoff and Johnson (2003), is reformulated more technically in Kövecses (2020) along the following lines: “A conceptual metaphor is a systematic set of correspondences between two domains of experience” (Kövecses, 2020, p. 2). Most often, it is the source domain that is more concrete and tangible than the target domain. For example, in the TIME IS MONEY metaphor, a highly abstract concept of time (target domain) is easier to understand and talk about when we treat it as more concrete, at least in not such distant past, notion of money (source domain), both of which we can spend, waste, or save. This conceptualisation pattern seems to come somewhat naturally to language users as, according to Kövecses (2020, p. 5), “a less tangible and thus less easily accessible target concept is conceptualized as and from the perspective of a more tangible and thus a more easily accessible source concept.” A somewhat novel cognitive linguistic framework regarding studying metaphors in CMT is proposed by Kövecses (2017, p. 321) in the form of “multi-level view of conceptual metaphor”, whereby conceptual metaphors are seen as “simultaneously involving conceptual structures, or units, on a variety of different levels of schematicity” (Kövecses 2017, p. 322). These levels, going from the most schematic (and least specific) to the least schematic (and most specific) include: 1) the level of image schemas; 2) the level of domains; 3) the level of frames; 4) the level of mental spaces. It needs to be stressed that these “various levels of schematicity form a continuous hierarchy [and] do not have rigid boundaries but are graded as regards their schematicity” (Kövecses, 2017, p. 323). Based on Kövecses’s (2017, 2019) findings, we will try to show how levels of schematicity operate when it comes to metaphors found in stock market communication.

As for metonymy, it is – as Littlemore (2015, p.4) puts it – “a figure of language and thought in which one entity is used to refer to, or in cognitive linguistic terms ‘provide access to’, another entity to which it is somehow related”. It is worth noting that the distinction between metaphor and metonymy is not always easy to delineate and has been a debatable issue among cognitive linguists. However, for the purpose of this study, let us follow Littlemore (2015, p. 5), who elucidates that “[...] unlike metaphor, which usually involves some sort of comparison between two unrelated entities, metonymy is a cognitive and linguistic process whereby one thing is used to refer to something else, to which it is closely related in some way.” Littlemore (2015) also proves that metonymy can play a whole array of functions in human communication, from referential, through illocutionary and highlighting, to relationship-building functions. In addition to all this, as Brdar (2019, p. 67) points out, “metonymies, unlike metaphors, often tend to be regular in the sense that they can apply to a whole set of lexical items sharing a property that forms the bases for the extension in question. This regularity can be observed in everyday language, but also in more specialized registers [...]” In terms of stock market communication, as a specialized register, we shall analyse the instances of metonymy and look at the functions they perform, as well as the level of regularity that can be observed within this specialized register across the three languages under consideration.

DATA AND METHODOLOGY

In this paper, conceptual patterns found in three different languages (English, German and Polish) are discussed in some detail. Since these languages belong to the same western cultural community, they are expected to share the same (cultural) “image fields” (*Bildfelder*), as suggested by Weinrich (1976, p. 287) in his pioneering studies on the conceptual nature of metaphor. According to this concept, concrete image fields are hardly ever a general property of mankind, nor are they an exclusive property of an individual language (mother tongue). They belong to the linguistic perception of the world in certain cultural communities and are immediately recognizable within them, constituting a specific image field tradition (cf. *ibid.*). Hence, there is a congruence of image fields between individual western languages, and the western world is an “image field community” (*Bildfeldgemeinschaft*) (*ibid.*). As aptly noted by Lakoff and Johnson (2003, p. 274), conceptualizations might be both universal and culture specific.

Here, the aim is to examine whether Weinrich's thesis on the image field community is confirmed with respect to the conceptualization patterns in English, German, and Polish stock exchange communication and whether the congruence of the image fields between the three western languages and cultures leads to similar conceptualizations. Also, following the findings of Kövecses (2019) the schematicity hierarchies of conceptual patterns were involved in the observation on the level of universality in metaphorical mappings in the three languages.

The corpus of data gathered for the analysis comprises online stock exchange and market reports, and commentaries from the following financial, business and stock market media: *ft.com*, *bloomberg.com*, *marketwatch.com*, (English), *finanznachrichten.de*, *boerse-frankfurt.de* (German) and *parkiet.com*, *bankier.pl* (Polish). The methodology employed includes manual extraction of relevant samples from the online sources in the period between January 2018 and May 2021. The corpus for each language counts approximately 18,000 words and is original in terms of its linguistic creation. After manually extracting examples of metaphors and metonymies we conducted a qualitative analysis in the light of the cognitive linguistic framework. The starting point is the nature of metonymic patterns, then the source domains found in the three languages, and last but not least schematicity hierarchies.

CONCEPTUALIZATION PATTERNS

METONYMIC MAPPINGS

Even a cursory glance at stock market reports, be they Polish, English, or German, provides clear evidence of an abundance of specialist terms, such as *index*, *stock*, *share*, *dividend*, *yield*, *bid*, *trade*, *futures contract*, and such like. It is worth mentioning that elements of general language are incorporated in stock market communication, but with specialist senses. Hence, in English the specialist term *stocks* is largely synonymous with the term *shares*:

- (1) *Stocks* almost wiped out their gains as technology *shares* turned lower, offsetting optimism over solid corporate earnings and economic reports. *Treasuries* climbed.
<https://www.bloomberg.com/markets/fixed-income> (accessed on 07.05.2021)

Similarly, the German term *Aktie(n)* (Eng. ‘stock(s)’) is used interchangeably in stock market communication with such linguistic units as *Titel*, *Werte*, *Papiere* (Eng. ‘stocks/shares’):

- (2) *An der Dax-Spitze gewannen die **Aktien** des Sportartikelherstellers Adidas rund zwei Prozent. Am Index-Ende fielen die **Papiere** des Versorgers RWE um mehr als ein Prozent. [...] Zu den schwächsten **Werten** im SDax gehörten die Anteilsscheine von Ceconomy, die um 6,6 Prozent einknickten.*
[trans. At the top of the Dax, the **shares** in the sporting goods manufacturer Adidas gained around two per cent. At the end of the index, the **shares** in the supplier RWE fell by more than one per cent. [...] The **shares** in Ceconomy, which slumped by 6.6 per cent, were among the weakest stocks in the SDax.]
<https://www.finanznachrichten.de/nachrichten-2021-02/51967486-aktien-frankfurt-dax-co-nach-rekorden-zu-wochenbeginn-wieder-im-minus-016.htm> (accessed on 20.04.2021)
- (3) *Die **Titel** von Estee Lauder profitierten von positiven Analystenkommentaren und bauten ihren achtprozentigen Kursgewinn vom Freitag mit einem Plus von 2,9 Prozent aus.*
[trans. Estee Lauder **shares** benefited from positive analysts' comments and extended their eight-per-cent gain from Friday with a rise of 2.9 per cent.]
<https://www.finanznachrichten.de/nachrichten-2021-02/51957792-aktien-new-york-wieder-auf-rekordjagd-laengste-gewinnserie-seit-sechs-monaten-016.htm> (accessed on 20.04.2021)

In Polish, in turn, the term *akcje* (Eng. 'stocks') is synonymous with *papiery* and *walory* (Eng. 'stocks/shares'):

- (4) *Przeszło 20-proc. wzrosty zanotowały także **papiery** lotniczego EnterAir, mBanku oraz Onco, które kontynuowało wzrosty na fali entuzjazmu po historycznej transakcji z czwartku.*
[trans. The **shares** in aviation EnterAir and mBank are up over 20 per cent, as is Onco, which continues to ride the optimism wave after Thursday's historic deals.]
<https://www.bankier.pl/wiadomosc/Gwaltowne-wzrosty-na-GPW-Odwrot-od-spoлек-covidowych-7998199.html> (accessed on 18.04.2021)
- (5) ***Walory** American Express zdrożały o 21%, Boeinga o 12%, banku JP Morgan Cahse o 13%, a Disneya o blisko 12%.*
[trans. The **shares** in American Express are up 21%, Boeing up 12%, JP Morgan Chase bank up 13% and Disney up nearly 12%.]
<https://www.bankier.pl/wiadomosc/Szczepionkowa-rotacja-na-Wall-Street-S-P500-i-Dow-Jones-z-nowymi-rekordami-7998317.html> (accessed on 18.04.2021)

The corpus analysis seems to show clearly that the specialist terms quoted above are used interchangeably in all three languages and the employment of a given linguistic unit is conditioned by stylistic criteria.

Interestingly, in the process of entering the specialist terminology linguistic units frequently undergo meaning extensions, in other words new semantic variants are added to the existing ones. Such new senses are created, for example, through the cognitive process of metonymy which "draws on the relationship that exists between the two items within a particular knowledge network" (Littlemore, 2015, p. 9). This is the case with the specialist terms Pol. *papiery* and Ger. *Papiere* (lit. 'paper' for both), which are typical linguistic illustrations of the metonymic pattern PART FOR WHOLE^d. Also in stock market communication, the linguistic representation of the metonymic pattern PART FOR WHOLE is observable in the use of *trading floor* (Eng.), *das Parkett* (Ger. 'floor' – instance (7)), and *parkiet* (Pol. 'floor' – instance (8)) in the sense 'stock market, place/building where stocks are bought and sold'.

^d The most elaborate and exhaustive typology of metonymic patterns within the cognitive linguistic framework has hitherto been proposed by Radden and Kövecses (1999), who distinguish between two general types of metonymies, namely WHOLE AND PART (here illustrated in examples (2), (4), (6) – (8)) and PART AND PART, each of which includes a number of Idealized Cognitive Models (ICMs). For example, the PART AND PART category includes the PRODUCTION ICM, which gives rise to the PRODUCER FOR PRODUCT metonymy type, here illustrated in examples (9) – (11).

- (6) *A paper by the University of Leicester suggests that female traders outperform males on average, and that more women on **the trading floor** would reduce crash events.*
<https://www.ft.com/content/16cbf8da-b9d7-11e9-96bd-8e884d3ea203> (accessed on 22.11.2020)
- (7) *Kurzfristig könnte sich allerdings etwas Katerstimmung auf dem Frankfurter **Börsenparkett** breit machen, wenn der Dax die Marke von 14 056 Punkten nicht verteidigen könne.*
[trans. In the short term, however, there could be some hangover on the Frankfurt **trading floor** if the Dax is unable to defend the 14,056-point mark.]
<https://www.boerse-frankfurt.de/nachrichten/d3838755-2ada-44ac-b5be-ed5b95a2630e>
(accessed on 18.04.2021)
- (8) *Lęki wywołane doniesieniami o kolejnej mutacji chińskiego koronawirusa doprowadziły do silnej przeceny akcji na światowych giełdach. Warszawski **parkiet** nie był tu wyjątkiem [...]*
[trans. The fear evoked by the news of another mutation of the Chinese virus has led to serious slides on the global stock markets. The Warsaw **trading floor** was no exception to that [...]]
<https://www.bankier.pl/wiadomosc/Koronastrachy-wrocily-na-GPW-Podwojny-szczyt-WIG20-8024915.html> (accessed on 18.04.2021)

Another metonymically based extension, namely PRODUCER FOR PRODUCT, is observable in the use of the names of companies to stand for their stocks:

- (9) *Borg and GM shares are up more than 30% year to date, while **Peloton** is down 45% and **Zoom** has fallen 12%.*
https://www.marketwatch.com/articles/the-tech-trade-is-dead-why-its-time-to-accept-that-reality-51620303293?mod=markets_seemore (accessed on 07.05.2021)
- (10) *Ölaktien profitierten vom gestiegenen Ölpreis. **ExxonMobil** gewannen im S&P 100-Index 4,0 Prozent und **ConocoPhillips** stiegen um 1,2 Prozent, während **Chevron** im Dow um 2,0 Prozent zulegten. **Johnson & Johnson** rückten um 1,1 Prozent vor.*
[trans. Oil shares have benefited from the higher oil price. **ExxonMobil** have gained 4.0 per cent in the S&P 100 index and **ConocoPhillips** have risen 1.2 per cent, whereas **Chevron** have increased 2.0 per cent in the Dow. **Johnson & Johnson** have moved up 1.1 per cent.]
<https://www.finanznachrichten.de/nachrichten-2021-03/52161645-aktien-new-york-hilfspaket-und-sinkende-anleihe-renditen-treiben-kraeftig-an-016.htm> (accessed on 18.04.2021)
- (11) *Najsilniejszy **CCC** rosło o 6,1%, 4,6% zyskiwał **CD Projekt**.*
[trans. The strongest, **CCC**, was up 6.1%, and **CD Projekt** gained 4.6%.]
<https://www.parkiet.com/Gielda/312239969-Pulapka-hossy-wciaz-straszy.html> (accessed on 18.04.2021)

As can be observed in the examples given, the role of metonymy in stock market communication seems to be reduced to the referential function (cf. Littlemore, 2015, pp. 65-72) and is predominantly focused on ascertaining precision through mental shortcuts, which are obvious to both stock market specialists and lay observers of the stock exchange. Furthermore, as also proven by Brdar (2019, p. 67), “[...] a number of metonymic patterns in [the] specialized register exhibit a high degree of regularity. This phenomenon, referred to as regular metonymy, logical metonymy or logical polysemy, crosses boundaries of languages and cultures.” The analysis of the data has proven the regularity, cross-linguistic and cross-cultural nature of both the metonymic patterns observed: PART FOR WHOLE and PRODUCER FOR PRODUCT. In all three languages it is the most characteristic, hence the most salient, part of the stock exchange building, namely the trading floor, that is metonymically transferred to stand for the whole place where all the exchange deals are executed. After all, be it the market news on television or visual additions of online reports, the pictures of and from the trading floor (screens, dealing rooms, stockbrokers) are the most frequent ones to accompany the written or spoken market reports and analyses. Also, in all three languages the names of the companies are employed to metonymically represent the shares in a given firm. As clearly shown in example (9), this “mental shortcut” is frequently used

on a par with literal non-metonymic reference to a company's shares. A linguistic variation worth noting at this point, which is observable in the German language, is the use of plural verbs together with the names of companies, which seems to directly point to the elliptical clipping of the plural noun *shares* (Ger. *Aktien*). In contrast, in Polish and in English the verb agrees with the grammatical number of the noun representing the name of the company, whereas in German, even though the name of the company is singular, the accompanying verb is plural as though the nominal head *shares* was still present (see, instance (10): *ExxonMobil gewannen*, *ConocoPhillips stiegen*, *Chevron legten ... zu*, *Johnson & Johnson rückten ... vor*).

METAPHORICAL MAPPINGS

The data analysis has shown that the vast majority of stock market communication constitutes a linguistic reflection of human conceptual processes, which are to a large extent metaphorical in nature. It seems that it is metaphor that structures the framings within stock market communication more frequently than metonymy. The stock market reporters presumably find it extremely hard to refrain from figurative means in their representations and commentaries on stock market events. Hence, stock markets *fall*, *plunge* and *reach* psychological peaks or even *digest*, and such a seemingly endless list appears to aptly illustrate the metaphorical nature of presumably non-figurative specialist communication.

The already well-grounded Conceptual Metaphor Theory, as proposed by Lakoff and Johnson (2003), clearly elucidates why we, human beings, tend to make use of aspects of more familiar, tangible domains in order to understand aspects of domains that are less well-known or somewhat intangible for us. Stock market communication is no different in this respect. Embodied experience (such as spatial orientation) and/or more familiar source domains (for example, SPORTS, CONSTRUCTION) provide mental access to abstract virtual economic concepts. More importantly, however, as Kövecses (2015, p. 49) puts it, “metaphorical concepts do not arise from prestored mappings in the conventional conceptual system, [...] but result from the priming effect of contextual factors in real situations of discourse on the human mind to establish metaphors.”^e Although the vast majority of conceptual metaphors to be found in stock market communication are contextually grounded, there is at least one example of the so-called conventional metaphorical concept, which seems to be an appropriate starting point for the ongoing discussion. This conventionalized metaphor is observed in the conceptualization behind the two animal metaphors prevailing in the world of finance, that is BULL IS A RISE/OPTIMISM and BEAR IS A FALL/PESSIMISM (see, instances (12) – (14) as linguistic representation of these metaphorical mappings). A bull (in German *der Bulle* and in Polish *byk*) symbolises a time when the price of shares is rising, or an investor who hopes the price of shares they have bought will rise so as to sell them at a higher price later. In contrast, a bear (in German *der Bär* and in Polish *niedźwiedź*) is a symbol of a decline in share prices, or an investor who anticipates a fall in a share price before they purchase and then a rise enabling them to sell at a profit. The symbolism in question originates in the fighting style of these two animals. Bulls attack with their horns and toss their opponents up in the air. They symbolise courage and eagerness to fight. Bears, on the other hand, try to throw their enemies to the ground and trample on them. This juxtaposition in the orientation of the movement of the animal's opponent should be responsible for building the image schema present in the metaphorical mappings BULL IS UP and BEAR IS DOWN reflected in stock market communication in the following linguistic examples:

^e For more on conceptual metaphor used as a communicative tool in a specialized discourse, see, for example, Silvestre-López (2020).

- (12) [The] Biden administration's unprecedented spending packages are helping to boost economic growth, a positive for dollar **bulls**. But **bears** argue that America's growth will eventually be overshadowed by a broader revival in the global economy and renewed appetite for riskier assets. <https://www.bloomberg.com/markets/fixed-income> (accessed on 07.05.2021)
- (13) Am deutschen Aktienmarkt haben **Bullen** und **Bären** am Donnerstag weiter um die Oberhand gekämpft. Anders als am Vortag gingen letztere wieder als Sieger hervor, wie der Dax (DAX 30) mit einem Minus von 0,69 Prozent auf 13 879,33 Punkte zeigte.
[trans. On the German stock market, **bulls** and **bears** continued to fight for the upper hand on Thursday. Unlike the previous day, the latter emerged victorious again, as the Dax (DAX 30) showed a decline of 0.69 per cent to 13,879.33 points.]
<https://www.finanznachrichten.de/nachrichten-2021-02/52129405-dax-mdax-co-mit-verlusten-deutsche-bank-und-bayer-im-fokus-aixtron-mit-kurssprung-124.htm> (accessed on 10.04.2021)
- (14) *Niedźwiedzie* znowu górą [...] *Byki* nawet próbowały iść za ciosem i w pewnym momencie indeks największych spółek zyskiwał ponad 0,5 proc.
[trans. **Bears** have the upper hand again [...] **Bulls** even tried to follow up, and at one point the index of the biggest companies gained over 0.5 per cent.]
<https://www.parkiet.com/Gielda/304209872-Niedzwiadzie-znowu-gora.html> (accessed on 07.05.2021)

Apart from the afore-mentioned conventionalized animal metaphor, the analysis of the data in the three languages has shown a whole range of metaphorical mappings, which may be grouped according to the source domain employed in order to provide mental access to abstract target domains within the financially complex and complicated world of stock trading. The following source domains are observed^f:

- perceiving events within financial markets in terms of **sports** and/or **competition**, as in English *record*, *winner*, *loser*, *race*, *rally*^g, in German *der Rekord* (Eng. 'record'), *der Gewinner* (Eng. 'winner'), *der Verlierer* (Eng. 'loser'), *die Rallye* (Eng. 'rally'), and in Polish *rekord* (Eng. 'record'), *wygrany* (Eng. 'winner'), *przegrany* (Eng. 'loser'), *rajd* (Eng. 'rally/race'), respectively:

- (15) *Wall Street's blue-chip S&P 500 index rose 0.2 per cent to close at a new **record** high, while the Nasdaq Composite slid 0.1 per cent.*
<https://www.ft.com/content/958c320d-704f-4fa6-bc44-13d2c548c148> (accessed on 16.04.2021)
- (16) *Trotz der Pandemie-Unsicherheit hat die gute Börsenstimmung den Dax am Dienstag erstmals knapp über die 14 600 Punkte geführt. Ein Kurssprung bei Volkswagen galt für den erneuten **Rekord** als wichtige Stütze.*
[trans. Despite the pandemic uncertainty, the good mood on the stock market took the Dax just above 14,600 points for the first time on Tuesday. A price jump of Volkswagen was considered an important support for the new **record**.]
<https://www.finanznachrichten.de/nachrichten-2021-03/52311138-aktien-frankfurt-schluss-dax-angetrieben-von-vw-mit-erneutem-rekord-016.htm> (accessed on 12.04.2021)
- (17) *Wyraźnie słabszy był S&P500, który podniósł się tylko o 1,17 %, **finiszując** z wynikiem 3550,50 pkt. W trakcie sesji S&P500 wybił sierpniowy szczyt ustanawiając nowy **rekord** wszech czasów na poziomie 3645,99 pkt.*

^f For each source domain, the linguistic units named are the most frequently used representation of the metaphorical mappings. In the majority of source domains the range of linguistic units reflecting the conceptual metaphors is significantly broader. For the sake of preserving clarity and coherence of the text, only one contextual example in each of the three languages is provided to illustrate every source domain under analysis.

^g Note that the verb *rally* can also be included in the domain *war/fighting* as its primary sense is 'come together again in order to continue fighting'. However, it has acquired a specialized sense 'drive in a long-distance race for motor vehicles' (Oxford English Dictionary), which currently seems to have superseded the primary sense in terms of its frequency of use.

[trans. The considerably weaker S&P500, which rose only by 1.17%, **finished** with the score of 3550.50 points. During the session S&P500 surpassed the August peak climbing to a new all-time **record** of 3645.99 points.]

<https://www.bankier.pl/wiadomosc/Szczepionkowa-rotacja-na-Wall-Street-S-P500-i-Dow-Jones-z-nowymi-rekordami-7998317.html> (accessed on 01.04.2021)

However, there are a number of cycling race terms, which seem to be present only in the Polish language, such as *peleton*, *lider*, *czołówka*, *finisz/finiszować*, *odrabiać straty* (Eng. ‘peloton’, ‘leader’, ‘the lead’, ‘to finish/finishing’, ‘make up for the loss’, respectively). In most cases when the term *peleton* (Eng. ‘peloton’) occurs a larger part of the text is structured following the pattern of a cycling race commentary, rather than stock market commentary.

- perceiving events within financial markets in terms of **meteorology**, as in English *barometer*, *forecast*, *melt (down)*, in German *das Barometer* (Eng. ‘barometer’), *die Prognose* (Eng. ‘forecast’), *zusammenschmelzen* (Eng. ‘melt’), and in Polish *barometr* (Eng. ‘barometer’), *prognoza* (Eng. ‘forecast’), *topnieć* (Eng. ‘melt’):

(18) *Japan’s benchmark stock **barometer** has closed at its highest level in 30 years, boosted by a softer yen, US stimulus hopes and a “short squeeze” sparked by investors trimming their bets against the market.* <https://www.ft.com/content/88682458-0f72-40d9-a339-3150596f761a> (accessed on 09.03.2021)

(19) *Die Aktie von Nordex ist gegenwärtig der größte Gewinner im SDAX-Index. Das **Kursbarometer** steigt kräftig um 1,10 Prozent.*

[trans. Nordex stock is currently the biggest winner in the SDAX. The price **barometer** is rising strongly by 1.10 per cent.]

<https://www.finanzennachrichten.de/nachrichten-2021-03/52315649-dpa-afx-boersentag-auf-einen-blick-leichte-verluste-erwartet-016.htm> (accessed on 12.04.2021)

(20) *Duża w tym zasługa miedzi, która także była dobrym **barometrem** nastrojów gospodarczych, a w 2011 roku jej cena przekroczyła mityczne 10 tys. dolarów za tonę.*

[trans. Much credit goes to copper, which also was a good **barometer** of the economic mood, and in 2011 its price exceeded the mythic 10 thousand dollars per ton.]

<https://www.bankier.pl/wiadomosc/30-lat-GPW-30-spolek-ktore-napisyly-historie-gieldy-8094006.html> (accessed on 07.05.2021)

- perceiving events within financial markets in terms of **war** or **fighting**, as in English *struggle*, *conquer*, *withstand*, *hostile (takeover)*, *defensive*, in German *kämpfen* (Eng. ‘struggle’), *erobern* (Eng. ‘conquer’), *der Widerstand* (Eng. ‘resistance’), *feindlich (-e Übernahme)* (Eng. ‘hostile (takeover)’), *defensiv* (Eng. ‘defensive’), and in Polish *walka* (Eng. ‘struggle’), *podbijać (rynek)* (Eng. ‘conquer (a market)’), *opór* (Eng. ‘resistance’), *wróg/wrogi* (Eng. ‘enemy/hostile’), *defensywny* (Eng. ‘defensive’):

(21) *Tech shares **withstand** a broad-based decline on Wall Street as lockdowns tighten in major cities.* <https://www.ft.com/content/4f65ec35-9957-4bab-91c4-9f76c0a44a2b> (accessed on 14.03.2021)

(22) *Am Dienstag ist der Ausbruch über den charttechnischen **Widerstand** bei 130,00 USD gelungen und jetzt muss die Aktie nur noch die September-Hürde bei 138,00 USD nehmen und wenn dieser Sprung gelingt, könnte das die Initialzündung hervorrufen.*

[trans. On Tuesday, the breakout above the chart **resistance** at USD 130.00 succeeded and now the share only has to take the September hurdle at USD 138.00 and if this jump succeeds, this could cause the initial ignition.]

<https://www.finanzennachrichten.de/nachrichten-2020-12/51585449-apple-wird-der-widerstand-geknackt-warten-gewinne-061.htm> (accessed on 14.05.2021)

- (23) *Z lokalnymi **oporami** poradził sobie sWIG80, który wciąż utrzymuje się powyżej psychologicznego poziomu 15000 punktów.*
[trans. sWIG80 has managed to cope with the local **resistance** and is still above the psychological level of 15,000 points.]
<https://www.parkiet.com/Gielda/312239969-Pulapka-hossy-wciaz-straszy.html> (accessed on 01.04.2021)
- perceiving events within financial markets in **marine** terms, as in English *plunge*, *sink*, *tailwind*, (*put/be*) *on course*, *waves*, in German *abtauchen* (Eng. ‘plunge’), *absacken* (Eng. ‘sink’), *Rückenwind geben* (Eng. ‘give tailwind’), *Kurs halten* (Eng. ‘stay on course’), *die Welle reiten* (Eng. ‘ride a wave’), and in Polish *nurkować* (Eng. ‘plunge’), *tonąć* (Eng. ‘sink’), *nabrać wiatru w żagle* (Eng. ‘put wind in the sails’), *obrać kurs* (Eng. ‘adopt a course’), *na fali* (Eng. ‘on a wave’):
- (24) *The value of mergers and acquisitions is **on course** to pass the \$2 trillion milestone in record time this year, boosted by the blockbuster spinoff of AT&T Inc.’s media business.*
<https://www.bloomberg.com/markets/fixed-income> (accessed on 17.05.2021)
- (25) *Auch Helaba-Experte Ralf Umlauf erwartet keine Änderung der US-Geldpolitik: „Falls es Hoffnungen geben sollte, dass die Fed Hinweise auf ein baldiges Ende der extremen Geldpolitik geben wird, dürften diese wohl enttäuscht werden. Die Fed wird, wie schon die EZB, zunächst **Kurs halten**. [...]”*
[trans. Helaba expert Ralf Umlauf also does not expect any change in US monetary policy: “If there are hopes that the Fed will give some indication of an early end of the extreme monetary policy, they are likely to be dashed. The Fed, like the ECB, will **stay on course** for the time being. [...]”]
<https://www.finanznachrichten.de/nachrichten-2021-03/52319772-aktien-frankfurt-anleger-halten-fuesse-still-vor-zinsentscheid-der-us-notenbank-016.htm> (accessed on 12.04.2021)
- (26) *W reakcji na wydarzenia na Wall Street, **kurs w dół obrały** także indeksy w innych częściach świata.*
[trans. In response to the events on Wall Street, indexes in other parts of the world also **adopted a downward course**.]
<https://www.bankier.pl/wiadomosc/Korekta-2018-Dlaczego-gieldy-spadaja-i-co-to-oznacza-Analiza-7571614.html> (accessed on 01.04.2021)

An observation that needs to be made here is that among the marine terms to be found within stock market communication there are several animal-related terms, such as in Polish *grube ryby*, *rekiny* and in English *big fish*, *sharks*, respectively, which seem to be semantic equivalents. A contrastive perspective, however, gives us a somewhat more detailed picture, namely, that the use of different adjectives *gruby* (Eng. ‘fat’) in Polish and *big* in English illustrates different image schemata for importance. In English *big* conceptualizes size in both vertical and horizontal dimensions, whereas in Polish *fat* encompasses only the horizontal dimension. Another linguistic variation is represented by the use of the name of a particular species of fish, namely *leszcz* (Eng. ‘bream’) and – less frequently – *plotka* (Eng. ‘roach’) in Polish and *minnow* in English (all three used figuratively in colloquial spoken language in the sense ‘insignificant people’) to refer to individual investors who have little influence on the overall stock market, unlike those important, influential ones (called *big fish*). In English, also, a similar idea of insignificant investors is realised with the noun phrase *small fish*, as is the case in German with the noun phrase *kleine Fische*.^h The afore-mentioned examples, quite naturally and understandably, show the interlinking between the source domain of SEA and ANIMALS in construing the mappings to the domain of INVESTMENT. Yet

^h For more on animal metaphor, see Prazmo and Augustyn (2020), who focus on this type of metaphorical mapping in Japanese discourse.

another contrastive peculiarity is the use of the phrase *zielona wyspa* (Eng. ‘green island’) which seems to be present only in the Polish language and has its roots in the use of this phrase with reference to Ireland, as is the case with the English phrase *the Green Island*. As the analysis of the data has shown, in Polish the phrase *zielona wyspa* (Eng. ‘green island’) started to be used in the extended sense ‘economically successful’, especially with respect to a European country that, unlike other nations, could boast a positive value of gross national product at a given time. For example, in 2009 the Polish government announced that Poland was the only country in the European Union with a positive gross national product and the Prime Minister together with the Minister of Finance had their photo taken in front of a map of Europe on which all the other countries were red and only Poland was green (Lonczak, 2010). On that occasion Poland’s economic growth was likened to that of Ireland (the Green Island), which enjoyed a marvellous economic success between the late 1990’s and 2007 (see, for example, Murphy, 2000 and McAleese, 2007). This is the origin of the conceptualization of an individual statistically-represented success as an isolated island. Similarly, in stock market communication the conceptualization of a trend for stocks to make profits (represented with the green colour) or losses (represented with the red colour) as the sea is linguistically reflected in English as *a sea of green/red*, in German as *ein Meer von Grün/Rot*, and in Polish as *morze zieleni/czerwieni*. The difference, however, is observed in the frequency of use of the terms in particular languages. In Polish the terms seem to be the most frequent as, on many occasions, they are reinforced with the use of the term *zielona wyspa* (Eng. ‘green island’) to refer to ‘shares with a positive result’. Hence, Polish stock market reporters often write about *cztery zielone wyspy na mapie Europy* (Eng. ‘four green islands on the map of Europe’), *w morzu czerwieni były jednak zielone wyspy* (Eng. ‘there were, however, green islands in the sea of red’) or *jak toną zielone wyspy* (Eng. ‘how green islands are sinking’). In turn, the English and German terms (*a sea of green/red*, *ein Meer von Grün/Rot*) seem to be relatively seldom and employed in texts directed to lay readers rather than stock market specialists.

- perceiving events within financial markets in terms of **health issues/in medical** terms, as in English *recover/recovery*, *health (of the economy)*, *(financial) well-being*, *weakness*, *fever*, *hobble*, *resuscitation*, in German *sich erholen/die Erholung* (Eng. ‘recover/recovery’), *die Besserung* (Eng. ‘recovery’), *gesund* (Eng. ‘healthy’), *die Schwäche* (Eng. ‘weakness’), *das Fieber* (Eng. ‘fever’), *die Wiederbelebung* (Eng. ‘recovery/revival’), and in Polish *zdrowienie (gospodarki)* (Eng. ‘recovery (of the economy)’), *uzdrowić (spółkę/nastroje)* (Eng. ‘heal (a company/sentiment)’), *slabość* (Eng. ‘weakness’), *gorączka* (Eng. ‘fever’), *reanimacja* (Eng. ‘resuscitation’):

(27) *One need only look at Europe and Japan to see why negative rates are hardly a “gift” and actually **hobble** the path to **recovery**.*

<https://www.ft.com/content/0fe3f853-4430-4cb1-b3f7-0b30d0fa079a> (accessed on 21.03.2021)

(28) *Nach etwas besseren Zahlen notierten H&M 0,1 Prozent leichter. Bei H&M gebe es Anzeichen der **Erholung**, so die Analysten von Bernstein.*

[trans. After slightly better figures, H&M edged down by 0.1 per cent. There are signs of **recovery** in the case of H&M, according to Bernstein analysts.]

<https://www.finanznachrichten.de/nachrichten-2021-03/52297993-maerkte-europa-etwas-leichter-roche-kauft-genmark-diagnostics-015.htm> (accessed on 12.04.2021)

(29) *Redukcja długu i emisja akcji ma **uzdrowić** kondycję Wielkopolskiej Fabryki Mebli.*

[trans. Reduction of debt and issuance of shares are expected to **heal** the condition of Wielkopolska Fabryka Mebli.]

<https://www.bankier.pl/wiadomosc/Wielkopolska-Fabryka-Mebli-wychodzi-na-prosta-1201516.html> (accessed on 14.05.2021)

Interestingly, recently in the context of the ubiquitous topic of the COVID-19 pandemic and vaccination, it is observed, especially in the Polish language, that the conceptualization of shares, stocks, and the economy in general in terms of a patient triggers such linguistic expressions as *być odpornym na/uodparniać się na* (Eng. ‘be immune to’) and *być narażonym na* (Eng. ‘be prone to’).

- perceiving events within financial markets in terms of **driving/riding**, as in English *ride, gear up, into high gear, speed up/accelerate, collide with, brake*, in German *die (Tal-)Fahrt* (Eng. ‘descent’, lit. ‘downhill ride’), *Gas geben* (Eng. ‘speed up’), *einen Gang höher schalten* (Eng. ‘accelerate’), *einen Gang zurückschalten* (Eng. ‘gear down/brake’), *an etwas prallen* (Eng. ‘crash’), *der Bremsklotz* (Eng. ‘a brake’, lit. ‘brake pad’), and in Polish *rajd* (Eng. ‘race’), *motor napędowy/wzrostu* (Eng. ‘driving force’), *nacisnąć/przycisnąć pedał gazu* (Eng. ‘speed up’), *zderzyć się* (Eng. ‘crash’), *hamować/hamulec* (Eng. ‘to brake/a brake’), *nabierać rozpędu* (Eng. ‘accelerate’):

(30) *Get ready for ‘reflation and reopening’ stock-market trade to kick into high gear, says JPMorgan’s top quant.*

https://www.marketwatch.com/story/get-ready-for-the-reflation-and-reopening-trade-to-kick-into-high-gear-says-jpmorgans-top-quant-11618950173?mod=article_inline (accessed on 14.05.2021)

(31) *Auf hohem Kursniveau haben die Dax-Anleger am Montag einen Gang zurückgeschaltet. (...) Als Bremsklotz in Europa entpuppte sich unter anderem der Impfstopp mit dem Impfstoff von Astrazeneca in einigen Ländern.*

[trans. At a high price level, Dax investors **geared down** on Monday. (...) Among other things, the vaccination stop with Astrazeneca’s vaccine in some countries turned out to be a **brake** in Europe.]
<https://www.finanzennachrichten.de/nachrichten-2021-03/52297644-tagesausblick-fuer-16-03-dax-legt-pause-ein-vw-und-halbleiter-geben-gas-203.htm> (accessed on 26.04.2021)

(32) *Inwestorzy od początku sesji wystartowali z „piątego biegu” i nie zwalniali tempa do końca, dzięki czemu w ostatecznym rozrachunku wyniki czwartkowej potyczki były następujące: Dow Jones +2,05%, S&P500 2,30% oraz Nasdaq +1,84%.*

[trans. Investors started from the beginning of the session **in high gear** and did not slow down until the end, thanks to which the final results of Thursday’s skirmish were as follows: Dow Jones +2.05%, S&P500 2.30% and Nasdaq +1.84%.]
<https://www.bankier.pl/wiadomosc/Akcje-Komentarz-poranny-DM-BZWBK-2040073.html> (accessed on 14.05.2021)

- perceiving events within financial markets in terms of **construction/building**, as in English *collapse, foundations, build, solid, floor, ceiling*, in German *der (Kurs-)Verfall* (Eng. ‘(price) collapse’), *der (Kurs-)Einbruch* (Eng. ‘slump (in prices)’), *das Fundament* (Eng. ‘foundations’), *ausbauen* (Eng. ‘extend’), *stabil* (Eng. ‘stable’), *tragfähig* (Eng. ‘stable’), *der Boden* (Eng. ‘floor’), and in Polish *runąć* (Eng. ‘collapse’), *fundamenty* (Eng. ‘foundations’), *rozbudować* (Eng. ‘extend’), *podłoga* (Eng. ‘floor’), *sufit* (Eng. ‘ceiling’):

(33) *Kioxia was carved out of Toshiba in 2018 after the Japanese technology conglomerate was pushed to the brink of bankruptcy by the collapse of its US nuclear business.*

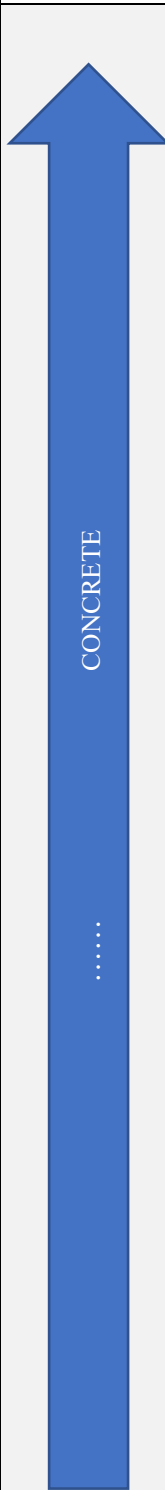
<https://www.ft.com/content/4b0edaa3-b2c0-4b02-bafd-c6272df9e577> (accessed on 15.03.2021)

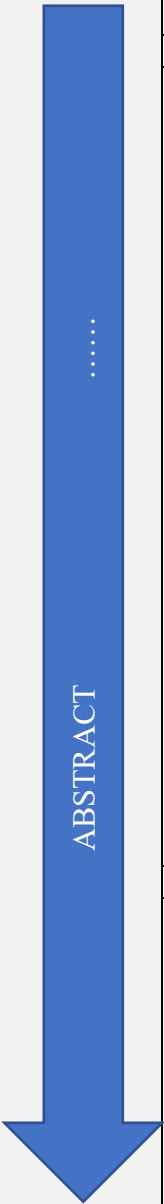
- (34) *Der heftige **Kurseinbruch** geht auch heute bereits in die dritte Runde. Im Tief verliert das Biotech Unternehmen bis auf 126,50 Euro, kann sich zur Stunde aber wieder etwas erholen und notiert aktuell bei 135,70 Euro.*
[trans. The sharp **collapse in the share price** is already entering its third round today. At its lowest point, the biotech company lost up to 126.50 euros, but has somewhat recovered and is currently listed at 135.70 euros.]
<https://www.finanznachrichten.de/nachrichten-2021-05/52796067-biontech-einbruch-setzt-sich-fort-chartcheck-178.htm> (accessed on 16.05.2021)
- (35) *Notowania bitcoina **runęły** dopiero w poniedziałek.*
[trans. The price of bitcoin **collapsed** only on Monday.]
<https://www.bankier.pl/wiadomosc/Tesla-zjezdza-ostro-w-dol-Co-zatrzymalo-rajd-bitcoin-szczepionka-czy-Pekin-8062599.html> (accessed on 17.05.2021)

It must be stressed, however, that the list presented above is by no means exhaustive and merely constitutes a compilation of the most frequent source domains construing metaphorical mappings within stock market communication. For example, in English the food metaphor seems to be prevalent as well, which is linguistically represented by *hunger, digest, swallow, a slice of*. However, the analysis of the data gathered shows a virtual absence of such a conceptualization pattern in Polish or German.

Apart from these structural mappings (to use Lakoff and Johnson's terms), there is one particular conceptualization that seems to be prevalent in stock market communication, namely perceiving profits with motion upwards or being up and losses with motion downwards or being down. This deeply-rooted orientational metaphor of MORE IS UP and LESS IS DOWN (see, for example Lakoff and Johnson, 2003) is reflected in linguistic terms on a number of levels which go from concrete (such as vertical movement, animals, candles) to abstract (such as emotions/feelings of investors, mathematics). These various levels of abstraction in orientation schemata are represented in Table 1:

TABLE 1. Levels of abstraction in up-down orientation as represented in English, German and Polish linguistic expressions

	level of abstraction	English examples	German examples	Polish examples
	VERTICAL MOVEMENT	↑rise, climb, surge, soar, pile, overflow, jump, leap, up; ↓ fall, drop, shed, slide, decline, tumble, plunge, sink, collapse, down	↑ sich erhöhen (Eng. 'rise'), sich verteuern (Eng. 'become more expensive'), zulegen (Eng. 'improve its position'), anziehen (Eng. 'rise/escalate'), klettern (Eng. 'climb'), gewinnen (Eng. 'gain'), sich verbessern (Eng. 'move up'), sich erholen (Eng. 'rally'), sich steigern (Eng. 'increase'); ↓ sinken (Eng. 'fall'), verlieren (Eng. 'drop'), rutschen (Eng. 'slide'), einbüßen (Eng. 'lose'), sich verbilligen (Eng. 'become cheaper'), nachgeben (Eng. 'drop/fall'), sich ermäßigen (Eng. 'be reduced'), abstürzen (Eng. 'plunge'), einbrechen (Eng. 'collapse/nosedive'), abbröckeln (Eng. 'easy off'), sich abschwächen (Eng. 'drop/recede/weaken')	↑ wzrost (Eng. 'rise/surge'), rosnać (Eng. 'rise/surge'), piąć się (Eng. 'climb'), na fali (Eng. 'on a wave'), wyjść ponad kreskę (Eng. lit. 'go above the line'), szybować (Eng. 'soar'), skok (Eng. 'jump'), wybić szczyt (Eng. 'reach a record high'), w górę (Eng. 'up'), marsz w górę (Eng. 'climb up'); ↓ spadki (Eng. 'decrease/fall/drop'), spadać (Eng. 'fall'), w dół (Eng. 'down'), nurkować (Eng. 'nosedive'), ześlizgnąć się (Eng. 'slide'), runąć (Eng. 'plunge'), tonąć (Eng. 'sink')
			
	ANIMALS	↑ bull, bull case, bullish, bull market; ↓ bear, bearish, bear market	↑ der Bulle (Eng. 'bull'), der Bullenmarkt (Eng. 'bull market'), bullisch (Eng. 'bullish'); ↓ der Bär (Eng. 'bear'), der Bärenmarkt (Eng. 'bear market'), bärisch (Eng. 'bearish')	↑ byk (Eng. 'bull'), rynek byka (Eng. 'bull market'); ↓ niedźwiedź (Eng. 'bear'), rynek niedźwiedzia (Eng. 'bear market')
			
	CANDLES/ COLOURS	↑ (long) white/green candle; ↓ (long) black/red candle	↑ eine (lange) weiße/grüne/bullische Kerze (Eng. '(long) white/green/bullish candle'); ↓ eine (lange) schwarze/rote/ bärische Kerze (Eng. '(long)	↑ biała/zielona świeczka (Eng. 'white/green candle'); ↓ czarna/czerwona świeczka (Eng. 'black/red candle')

		black/red/bearish candle')	
	EMOTIONS/ FEELINGS	↑ improvement in global risk appetite, optimism mounts; ↓ *worries mount, *appetite evaporates	↑ gute Laune/Stimmung an den Börsen (Eng. 'good mood on the stock markets'), Konjunkturoptimismus (Eng. 'economic optimism'), positive Haltung der Marktteilnehmer (Eng. 'positive attitude of market participants'), Jubelmeldungen (Eng. 'good news', lit. 'jubilant messages'), die Euphorie am Markt (Eng. 'euphoria on the market'); ↓ schlechte Laune/Stimmung (Eng. 'bad mood on the stock markets'), Zukunftspessimismus (Eng. 'pessimism about the future')	↑ apetyty są bardzo duże (Eng. 'appetites are very strong'), silny głód na rynku (Eng. 'strong hunger on the market'), lepsze nastroje (Eng. 'better mood'), optymizm (Eng. 'optimism'), entuzjazm (Eng. 'enthusiasm'), euforia (Eng. 'euphoria'), ożywienie (Eng. 'revival'); ↓ pesymizm (Eng. 'pessimism'), rynkowe stresy (Eng. 'stress on the market')
			
	MATHEMATICS	↑ add, plus (+); ↓ minus (-)	↑ ein Plus (Eng. 'plus'), im Plus (Eng. 'in plus/in the plus zone'), ↓ ein Minus (Eng. 'minus'), im Minus (Eng. 'minus/down')	↑ powyżej % (Eng. 'above/over'), ponad (Eng. 'above/over'), plus (Eng. 'plus'), maksima (Eng. 'peaks/high'); ↓ poniżej % (Eng. 'below'), minus (Eng. 'minus'), minima (Eng. 'minimum/low')

As for the orientation schema within the VERTICAL MOVEMENT domain, it is worth noting that the linguistic expressions listed are – in the vast majority of cases – contextually collocated with such nominal subjects as *indexes* or *stock/share prices*, which oftentimes are metonymically represented by names of companies (see, instances (9) – (11)). However, it has been observed that the UP-DOWN orientation schema present within the EMOTIONS/FEELINGS domain seems not to be as straightforward as in the case of the VERTICAL MOVEMENT domain. Here, as shown in the examples *worries mount* and *appetite evaporates*, the upward orientation of the verb *mount* metaphorically illustrates the intensification of worries present among investors. Hence, the metaphorical concept MORE/GOOD IS UP is by all means present. Only when the whole context of investment is taken into account, whereby worried investors are not a positive signal for other investors, can it be observed that MORE (WORRIES) IS LESS (INVESTMENT), hence LESS IS UP. In turn,

the example *appetite evaporates* illustrates a different metaphorical concept, namely that the upward movement entrenched by the verb *evaporate* is experientially based, as Konieczna (2020, p. 168) elucidates, on the correlation “between evaporation of water from water reservoirs during which molecules of liquid change into vapour. This phenomenon profiles a conceptual link between the upwards movement of vapour and the exhaustion of a water supply.” In the context of stock market communication, the evaporation of investors’ appetites indicates the exhaustion of their willingness to buy shares and/or invest money for a profit, hence BAD IS UP.

Yet another case worth discussing is the conceptualization of the forthcoming profit or loss with candlesⁱ. Interestingly, the analysis of the online corpora has shown that this metaphorical mapping is far more frequent in the Polish stock market reports, which is reflected in such examples as: *Dzisiejsza biała świeczka nie jest żadnym zaskoczeniem* [trans. Today’s **white candle** is of no surprise] (<https://www.bankier.pl/wiadomosc/Analiza-indeksow-technikami-japonskimi-indeksy-polskie-117765.html>; accessed on 28.04.2021) or [...] *byki rysują kolejną białą świeczkę* [trans. the bulls are creating another **white candle**] (<https://www.bankier.pl/wiadomosc/JP-WIG20-bazujac-na-poziomie-1118-punktow-podaz-powinna-jutro-wreszcie-doprowadzic-do-spadku-notowan-458179.html>; accessed on 28.04.2021). In turn, both English and German stock market reports are virtually devoid of this particular metaphorical pattern and the use of candlestick charts and the related terminology are restricted to stock market data analysis per se. In English and German stock market data analyses (but not in stock market reports and commentaries), the adjectives (Eng.) *bullish*/ (Ger.) *bullisch* and (Eng.) *bearish*/ (Ger.) *bärisch* are used to modify the nominal head *candle* with the same meaning as (Eng.) *white/green*/ (Ger.) *weiß/grün* and (Eng.) *black/red*/ (Ger.) *schwarz/rot*, respectively. This constitutes a clear illustration of the overlapping of the three domains CANDLE, ANIMALS, and COLOURS.

(36) *white/green/bullish candle*
black/red/bearish candle

(37) *eine weiße/grüne/bullische Kerze* (Eng. ‘white/green/bullish candle’)
eine schwarze/rote/ bärische Kerze (Eng. ‘black/red/bearish candle’)

(38) *biała/zielona świeczka* (Eng. ‘white/green candle’)
czarna/czerwona świeczka (Eng. ‘black/red candle’)

As shown in example (38), Polish seems to prove its distinctive syntactic character, whereby the words *byki* and *niedźwiedzie* (Eng. ‘bulls’ and ‘bears’, respectively) can only be found as separate noun phrases functioning as distinct constituents, rather than as adjectival modifiers, as it happens in English and German: *Byki rysują kolejną białą świeczkę* [trans. **The bulls are creating** another white candle].

Taking into consideration the extended conceptual metaphor theory proposed by Kövecses (2019, p. 23), “conceptual metaphors that characterise the concept of money occupy different levels (image schema, domain, etc.) and belong to different schematicity hierarchies [which] comprise essentially two large metaphor systems: the (MOVING) LIQUID and the FORCE-POWER system.” Even though Kövecses (2018, 2019) illustrates the metaphorical conceptualization of money on the basis of several metaphorical idioms, the schematicity hierarchies proposed seem to be at work for both creative and conventionalized metaphors found in stock market communication. On the most general image schema level, money is perceived as a resource, an

ⁱ Note that in the market analyses it is a common practice worldwide that different types of charts are employed to represent market movements, one of them being a candlestick chart in which each candle (a vertical rectangle) represents one day and shows the opening price (the top of the rectangle/candle), the closing price (the bottom of the rectangle/candle), as well as the high price (a line at the top/upper wick) and the low price (a line at the bottom/lower wick).

entity, or as participating in occurrences and changes, having force, or as owned by people. On a domain level, which is the next level in Kövecses's (2019, pp. 23-25) schematicity hierarchies, the domain matrix for money includes the whole array of concepts from EXCHANGE, VALUE through WEALTH, INVESTMENT, CHARITY to WORK, MATERIAL, LENDING. The list is by no means exhaustive and merely marks the possible domains present in the conceptualization of money. In turn, on a more specific frame level, domains can take different forms, and within each frame certain desirable, hence salient, aspects may be highlighted whereas others might be left in the background (Kövecses, 2019, pp. 25-26). To illustrate the point, let us consider the domain INVESTMENT, which may be seen as CHANGE OF POSSESSION OF MONEY (from person A to person B) IS MOTION (from source-container to target-container). Such verbs as *climb*, *plunge* or *collapse*, which are used with reference to share prices (*climb*, *plunge*) or business (*collapse*), highlight the perspective of shares, stocks, or companies, whilst the aspect of the investor and their actions, attitudes/feelings is left in the background. In turn, the aspect of the investor's feelings is highlighted through similar up-down oriented verbs, such as *mount* and *evaporate*, used to describe optimism or worries. More importantly, however, the most specific level within schematicity hierarchies, namely the mental space level, provides further clarification for the metaphorical use of the verbs mentioned above. As Kövecses (2019, pp. 26-27) elucidates, "mental spaces are only partial representations of frames; they do not reflect entire frames with all the roles and relations that characterize frames." Hence, taking example (33) into consideration, at the mental space level the speaker of the sentence conceptualizes the bankruptcy of a business as the collapse of a building, whereby the business owners are investors who caused the bankruptcy through unprofitable investments, thus leading to money losses. What is foregrounded here is the result of investors' actions whereas the transactions, buyers or sellers are left in the background.

CONCLUSION AND FURTHER RESEARCH

What follows from the analysis conducted is that image schema and domain levels largely overlap in the three languages under scrutiny, and cultural variation occurs at the level of frames or mental spaces. For instance, in all three languages it is observed that the stock market is conceptualized as a building and investment as construction. However, highlighting the highest point of stock/currency value as a ceiling seems to be observable only in English and in Polish (*sufit* 'a ceiling') where both *ceiling* and *sufit* are commonly used in stock market communication in this particular sense. Also, within the SEA domain different aspects are highlighted depending on the language analysed. As shown in detail above, the concept of insignificant investors is realized through the use of particular fish species in Polish *leszcz* (Eng. 'bream'), *plotka* (Eng. 'roach'), and in English *minnow*, or in German and English through the use of the general noun phrases *kleine Fische* and *small fish*, respectively.

Another conclusion drawn is that apart from metonymic patterns within the PRODUCTION ICM (NAME OF THE COMPANY FOR SHARES IN THE COMPANY), cognitive precision seems to be achieved through the employment of metaphorical orientation schemata, which are linguistically represented by numerous verbs in each of the three languages. Not only do the verbs reflect the UP-DOWN image schema, but they also convey the additional underlying tendency and characteristics of the change of stock prices. For example, the use of Eng. *climb*, Ger. *klettern* and Pol. *piąć się* conceptualizes the arduous nature, in addition to the upward movement, whereas Eng. *surge*, *jump*, *soar* Ger. *stark/deutlich steigen*, *springen*, *zunehmen* and Pol. *skoczyć*, *szybować* reflect a sudden and significant upward change. In an analogous way, downward movement is

further characterized with the use of such verbs as Ger. *abbröckeln*, *sich ermäßigen*, *rutschen* Eng. *slide* and Pol. *ześliznąć się*, which also conceptualize a gradual and slight change downwards, whilst Ger. *abstürzen*, *einbrechen*, Eng. *tumble*, *plunge* and Pol. *runąć* additionally conceptualize a sudden and significant downward movement.

Obviously, the role of metaphor in stock market communication needs to be studied further and in more detail. However, the analysis conducted seems to provide initial, though ample, evidence that together with the urge to be precise and accurate stock market reporters resort to metaphorical concepts in order to enliven the presentation of data and make their commentaries more expressive and emotive. After all, it is common knowledge in the stock market world that the mood of the investors influences their actions and decisions, which, in turn, have a direct impact on the general condition of a given index as a whole. Nevertheless, further research based on a larger corpus of data from the three languages is expected to contribute to the study of the frequency and further specificity of source domains and image schemata employed in the conceptualization of stock market events (see, for example, Deignan, 2005, pp. 96-102). Another line of development for ongoing research is an analysis of the metaphorical nature of intertextual links found in stock market reports and commentaries (cf. Hart, 2017).

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