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An outline of Polish investors' and stock traders' profiles

Zarys profili polskich inwestorów i traderów giełdowych

Abstract

Individual participants on financial markets do not constitute a homogeneous group. Hence, defining the whole community as "investors" may be too simplistic. This article is of a research nature and poses an attempt to identify rough characteristics and differences between Polish retail investors and stock traders. The results of the pilotage research confirm a distinction of a class of stock traders proposed in the literature, due to their idiosyncratic business model. Furthermore, minor differences in declared risk propensity, frequency of the ovetrading and motivation to undertake activity on the markets were identified. The results described in this article can be used by brokers and brokerage houses to better understand their client and tailor an offer to his diverse needs.

Keywords
investors, traders, financial markets, stock exchange, research results

Streszczenie

Indywidualni uczestnicy rynków finansowych nie stanowią jednolitej grupy, a określenie całej zbiorowości mianem inwestorów może stanowić zbytnie uproszczenie. Prezentowany artykuł badawczy stanowi próbę identyfikacji przybliżonych charakterystyk oraz różnic dzielących polskich inwestorów indywidualnych oraz traderów giełdowych. Wyniki przeprowadzonych badań pierwotnych potwierdzają proponowane w literaturze rozróżnienie klasy traderów ze względu na ich unikatowy model działalności. Zidentyfikowano przy tym także pomniejsze różnice w deklarowanej przez osoby z tej grupy skłonności do ryzyka oraz częstotliwości ovetradingu, a także motywacji do prowadzenia działalności na rynkach. Prezentowanymi wynikami badań mogą posłużyć się brokerzy oraz domy maklerskie, celem lepszego zrozumienia ich klienta i dopasowania oferty do jego zróżnicowanych potrzeb.

Słowa kluczowe
inwestorzy, traderzy, rynki finansowe, giełda, wyniki badań

JEL: D91, E22, G41

Introduction

Although financial markets seem to be dominated by large, institutional entities with a considerable capital, retail investors also function on them. Those persons conclude transactions on their own, having an intention of making a profit (Wierzbicka, 2016). Their investment activity is broadly defined as undertaking present sacrifices in order to gain a profit in the future (Hirshleifer, 1965). Other definitions emphasize the fact of changing the form of owned resources: from cash to another type of assets (Frączek, 2012, p. 9). The motivation to invest one's financial surpluses may vary. It is indicated that investment goals change during the investors' lives, showing a significant correlation with their age, having a family and a number of its members, as well as the current financial status (Dębski, 2014, p. 552). On grounds of investment goals alone, investors are not a homogeneous group.

To a certain degree, stock traders constitute a separate group or a subgroup of individual participants of the financial markets. Traders speculate on prices of assets (which is sometimes referred to as "playing the markets"). There are many definitions of trading, some of which stress a high frequency of conducting transactions (Niederman, 2000, p. 73), whereas others indicate a

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relatively fast closing of a loss-making position, i.e. resale or repurchase (in the case of short sale) of the financial instrument (Patterson, 2002, pp. 465–466). It is difficult to connote short-selling (taking a short position on the market, which is quite popular among traders) with long-term investments. Short sell consists in an immediate sell of a financial instrument and an obligation to repurchase it when closing the position. Therefore, the more price of an instrument falls down, the more profitable the short-selling is (Zalewski, 20008, pp. 2–7). It should be emphasized that in the case of buying an instrument, potential losses are limited to an amount invested. By contrast, losses from short-selling are potentially unlimited, because they deepen as the price increases (Bernstein, 1996, p. 173).

On the other hand, market practitioners note that traders (unlike investors) buy intangible assets only, such as futures contracts or options. Furthermore, traders pay attention to the technical analysis of a stock chart, and not to the underlying factors of a price movement (Faith, 2017, p. 1). Some equate speculation with investing, but with the difference of high financial leverage (constituting a double-edged sword, that increase both profits and losses) in the former case (Colby, 2003, p. 6). The assessment of the phenomenon of speculation is ambiguous. Stock speculators are sometimes identified as people who are unprepared and do not have adequate skills for operating on the financial markets, and yet undertake a disproportionately high risk compared to their equity (Graham, 2015, pp. 29–32). The notion of speculation has never evoked positive connotations and actions of speculators are perceived as worthless to the society (Carret, 2007, pp. 1–3). Speculation is also referred to as an aggressive counterculture, where low instincts take control, which is opposed to a traditional, long-term investing. The wide spread of speculation is believed to be primary a result of significant fall in transaction costs (Bogle, 2012, pp. 1–12). In the case of operating on the foreign exchange market, the Polish Financial Supervision Authority warns that even rational actions of investors may still be just a speculation, due to the fact that brokers have an information advantage and control over the conditions of concluding transactions on their online trading platforms (Kurzejewski & Nowalińska, 2017, p. 22). Given the current notions and various grounds of contradictions, it seems necessary to identify existing similarities and differences between retail investors and stock traders, as well as their rough profiles. The authors of this research article tried to face these issues. The article is based on the literature of the subject, including publications addressed to market practitioners.

Investors versus Traders

Differences between traders and investors might be found in the field of assessment of a transactional risk and propensity to undertake it. Risk itself is an inseparable element of any business activity, constituting the possibility of an undesirable contingency, i.e. loss (Brzozowska, 2012). The positive dimension should also be emphasized, namely the eventuality of gaining additional profit (Brzezińska & Maciejewski, 2015). Comparing the betas is commonly used as a risk evaluation method among investors. The beta risk factor informs about the change in the rate of return (expressed in percentage points) on an asset when the rate of return on the stock index increases or decreases by one percentage point (Gołębiowski & Tłaczała, 2009, p. 212). Risk estimation is slightly different in the case of trading, where the Risk/Reward ratio (RR) widely applies. RR consists in comparing the maximum loss allowed for a transaction to the expected profit from it. It is noted, that in case of many stock strategies the optimal value of RR is usually 1:3. It means that one profitable transaction equalizes the loss resulted from three entirely unsuccessful trades (www 1). Regardless of the methodology used for risk estimation, it is assumed that personal risk propensity might be: aversion (avoidance), propensity (fondness) or neutrality (Begg et al., 2014, pp. 456–458).

The number of concluded transactions is not insignificant and seems to be related to the transaction horizon, that is adopted by an individual. Intuitively, it can be expected that number of trades will be higher among traders, who place their capital on the market for a relatively shorter time period than long-term investors. Some traders base their activity on the so-called day-trading, which is a short-term speculation that is entirely focused on the ongoing trading session. Hence, all open market positions are terminated before the end of the day. It should be noted that this allows traders to avoid the risk of undesirable price gaps at the next day's stock market opening, the occurrence of which may be particularly severe for individuals using the leverage (Zalewski, 2008, p. 151). Such a strategy is interrelated with a more aggressive style of trading and closing trader's positions often only after a dozen or so minutes. The so-called scalping is to a certain extent an amplification of the day-trading idea, that aims to gain a profit by using minimal price movements. It is possible through opening up to hundreds of positions in a single day, most of which is not infrequently closed in less than a minute (www 2). It is worth emphasizing that scalpers (persons using scalping strategy) are told apart from speculators. The main difference is the extremely short-term transactional attitude of the former. However,

persons from the both groups belong to the category of stock market traders (Faith, 2017, p. 6).

A related phenomenon might be the so-called overtrading, which is based on concluding too many transactions in a relation to the adopted style of "playing the market". It is noted that the tendency to overtrade may lie in succumbing to the Wobegon Lake effect, which is an illusion of superiority, own infallibility and opening too many market positions on this account (Montier, 2002, p. 1 3). The Fear of Missing Out (FOMO) may also potentially trigger overtrading. If market changes occur rapidly (e.g. the price increases quickly), fear of missing the opportunity of gaining additional profits may outweigh, which in turn would result in an increased risk tolerance and conclusion of an excess transaction ("the train is leaving the station and there is an urgent need to get on its board or one will stay on a platform"). The desire to reduce future grief, that would be a result of not taking advantage of (as one may think) a fine opportunity, underlines the FOMO. Considering the fact that the main motivation to open another market position is a potential loss of profits, to some extent greed has its share in the FOMO (Grable, Lytton & O'Neill, 2004). Both the "hot hand" fallacy and gamblers' fallacy may also potentially lead to overtrading. The "hot hand" is based on a belief that recent victories (originally — a score in basketball) condition an increased chance of consecutive success in the future. The player (trader) is then considered as "in luck", which means he should bet more (open larger positions) and do it more often, as long as his winning streak lasts. In the case of gamblers' fallacy, an opposite principle is established — if the player has recently lost, it is assumed that he has an increased chance of winning in the future. Such an illusion is hinged on a confidence that deviations are being smoothed in the long horizon. Hence, if the last 5 transactions (assuming their theoretical probability of being profitable at 50%) made losses, then a chance that the next market position will be profitable is perceived as greater than 50% (Xu & Harvey, 2014). It should be noted, that overtrading can lead to deepened losses, although some studies suggest a lack of an evident association (Bregu, 2016).

One of the biggest problems for investors or traders to overcome might be heuristics, of which no one is completely free. In its essence, heuristic is a simplified way of thinking, due to an insufficient amount of information and relatively modest analytical capabilities of a human brain (Zaleśkiewicz, 2012, p. 57). A prime example is the Anchoring, that consists in setting a specific figure as a "mental anchor" (e.g. a specific price level) and comparing subsequent values with it (Kahneman, 2012, p. 162). It may also be potentially hazardous to determine effectiveness of one's investment method based on results of just a few transactions. This error is known as the Law of Small Numbers, due to the fact that when the number of observations is insufficiently low, the results of a research are at the mercy of a blind chance (Kahneman, 2012, pp. 151–160). It should be noted that a distribution of the strategy's profitability over time is unknown to traders. Hence, even in the case of a strategy that is effective in the long term, there may be some prolonged series of losses. In the context of financial markets, the effect of possession is also interesting. It is expressed by assessing a value of possessed goods (assets) higher than the same person would from the perspective of a potential buyer (Thaler, 2018, pp. 29–38). Investors can potentially get attached to obtained assets and be willing to sell them only at an excessive price, which may as well not be reached on the market.

Fundamental and technical analysis are often considered as opposite and mutually preclusive. Exploration of market fundamentals evokes connotations with investors, especially long-term ones, while examination of a price chart — with traders, that focus their activity in a relatively short time horizon. The primary aim of fundamental analysis is to evaluate the internal value of a share, which can be then compared with the current market price, as to decide whether to buy, sell or withhold from action. In order to achieve that goal, it is necessary to thoroughly study the factors underlying a financial instrument's value (Borowski, 2014, p. 30). Technical analysis, by contrast, is built upon three essential principles (Murphy 2017, pp. 23–26):

1. The market discounts everything,
2. Prices move in trends,
3. History repeats itself.

The basic methodology is therefore to scan historical charts for repeating price patterns, that (with certain probability) can be used for predicting future price behaviour (Douglas, 2000, p. 23). Technical analysts assume that the market is a mechanism that discounts the future, which means that neither history nor the present matters (Komar, 1993, p. 91). Therefore, a contradiction arises, because if history does not matter, then it should not repeat itself in the form of price formations on stock charts. Tape reading (TP for short) may be considered as a "third way". TP is a method of analyzing an order book, which is a record of all buy and sell orders of a specific financial instrument. The purpose of reading such a list is to identify temporary imbalances between demand and supply. Skillful use of this technique allows analyst to forecast price behaviour in the short term, thus gaining an advantage over other market participants and gaining a profit. Due to the relatively easy access to the order book, this technique is widely used in day-trading on the stock exchange (www 3).

The particular importance of technical analysis on specific markets is pointed out. On the futures market the use of financial leverage necessitates a precise selection of the moment of opening or closing a position. Due to the distinctive characteristic of the leverage, even a minor price movement may absorb a majority or even all of one's margin. Fundamental analysis can be used effectively to assess the advisability of buying or selling an asset, while the exact time of concluding the transaction is strictly the domain of technical analysis (Murphy, 2017, pp. 26–28). Moreover, the fundamental analysis cannot be used for determination of a precise moment for closing trader's position, both profitable and loss-making. It is worth noting that the listed methods of analyzing the market do not have to exclude one another. Fundamental analysis does not necessarily have to be used solely by investors, while the technical one — only by traders. A prime example of the universality of some ideas are Japanese candlesticks, the foundations of which were created in Japan as early as the 18th century (Nison, 2018, pp. 29–33). Until the early 1990s, candlesticks were almost unknown in the West — thanks to the literature on technical analysis, the advantages of candlesticks charts have been noticed by plurality of market participants. As of 2019, this type of chart is used on a par with line charts — both by traders and investors (Nison, 2018, p. 16).

Methodology of research and data description

For the purpose of this article, primary research was conducted at the turn of March and April 2019 among people actively operating on financial markets who responded to the authors' invitation to participate in a research project. The researchers used the survey method, specifically the on-line survey technique. The questionnaire contained 9 authorial, substantive questions — mostly in the form of ordinal, bipolar, 7-point scales — and 8 metric ones. Respondents could leave their e-mail in order to receive an article based on the research findings — 36% of them expressed an interest in such a possibility. Invitations to participate in the study were posted on Polish message boards and groups on Facebook that concern financial markets. Links to the questionnaire were also attached to a newsletter addressed to people interested in the Forex market, who signed up to the mailing database of one of thematic portals. The circle of recipients of the invitations amounted to around 8,000 people. It is estimated there are about 80,000 retail investors in Poland (www 4), while there is no information on the number of stock market traders. It should be taken into account that some people may undertake both types of activity — being long term investors and day-traders at the same time. It has been assumed, that the total number of active individual market participants in Poland is 100,000 persons. For the purpose of the pilot study, the task was to collect two hundred answers. After initial verification, 154 completely and correctly completed questionnaires were qualified for further analysis.

There was a significant majority of men in the research group who constituted as much as 94.8% of respondents. The age of answerers was most often in the range of 18–35 years (32.5%), with the median being 44 years (43 for traders and 46.5 for investors). The characteristics of the test sample are presented in Table 1. A dominance of people in civil unions (53.9%) and with higher education (71%) was observed. Townspeople constituted a strong majority of the research group (85.7%). Respondents most often described their financial situation as good (50%) or average (35.7%).

59.7% of answerers claimed they were traders, whereas 40.3% thought about themselves as investors.

People from the research group most often worked as analysts or mechanics. Many of them were IT specialists, entrepreneurs, economists or have already retired. Minor differences between traders and investors were noted. The former slightly more often pointed to professions not related directly to finance or broadly understood economic sciences. Moreover, traders more frequently declared trading as the only gainful activity they undertake.

When asked about reasons underlying their decision to start activity on financial markets, respondents as a rule pointed to an interest in (and even a fascination with) the markets. This passion is an exciting hobby, which in addition may result in extra earnings. The answerers often pointed out the need to assert their pensions, diversify sources of income and achieve "financial freedom". In their statements, investors showed a relatively more long-term view, while traders were somewhat more interest in the markets and "playing" on them in order to gain satisfaction and a bit of profit for now.

Research results

Possible transactional horizons were divided into four time ranges:

- day-trading (so/called intraday, position remains open up to the end of a current trading session or day),
- short-term (up to a week),
- medium-term (up to a month),
- long-term (over a month).

Table 1. Characteristics of the research sample (N=154)

Description		Research sample	
		in numbers	in %
Sex	Female	8	5,20
	Male	146	94,80
Age	18–35	50	32,50
	36–45	32	20,80
	46–59	43	27,90
	60+	29	18,80
Marital status	unmarried	54	35,06
	married	83	53,90
	divorced	12	7,79
	widowed	5	3,25
Education	primary	1	0,70
	vocational	8	5,20
	secondary	36	23,30
	higher	109	70,80
Place of residence	village	22	14,30
	town to 50k inhabitants	24	15,60
	town between 51k and 200k inhabitants	27	17,50
	town over 200k inhabitants	81	52,60
Subjective assessment of the financial situation of own household	very good	17	11,00
	good	77	50,00
	average	55	35,70
	bad	4	2,60
	very bad	1	0,70
Form of activity on markets	trader	92	59,70
	investor	62	40,30

Source: Own research.

Further cross-sections of respondents were also used. Based on their subjective material status, the answerers were divided into those financially satisfied (answers: very good or good) and unsatisfied (answers: average, bad, very bad). Smaller cities & villages shall be understood as places of respondents' residence with under 200 thousand inhabitants, whereas bigger cities as places with over 200 thousand inhabitants. Bachelors, bachelorettes, divorcees, widows and widowers constitute a group of "lone" answerers.

In the total sample, the majority of people were in favour of one of two extremes: day/trading (34.4%) or long-term investing horizon (26%) — Figure 1.

Day-trading prevailed among respondents over the age of 35 and answerers that were married. Intraday horizon was also the most common choice for persons from smaller towns or villages (42.5%) and those dissatisfied with their material status (41.6%). The majority of investors adapted long-term view (61.3%), while traders typically declared day-trading approach (56.5%). Obtained results confirm the cardinal distinction of traders and investors, that is proposed in the literature, due to their transactional horizon.

People who had only a general set of goals or a trading plan, that was not always followed by them, prevailed in most of cross-sections of the respondents (both 32.5% of the sample in total) — Figure 2.

Answerers satisfied with their financial status and those married most often had a transaction plan, but had trouble respecting it. Majority of investors admitted they had the same problem (37.1%). By contrast, respondents from the opposite cross-sections generally developed only some set of general goals. Traders were not an exception — most of them had some ambiguous outlines (33.7%), but 31.5% of people from that group (the highest percentage among all cross-sections) admitted they had and always tried to follow their trading plan. It is worth noting that 5.5% of traders declared an absolute lack of any type of a plan, while among investors as many as 16.1% of them — a higher percentage was obtained only in the group of respondents aged 60+ (24.1%).

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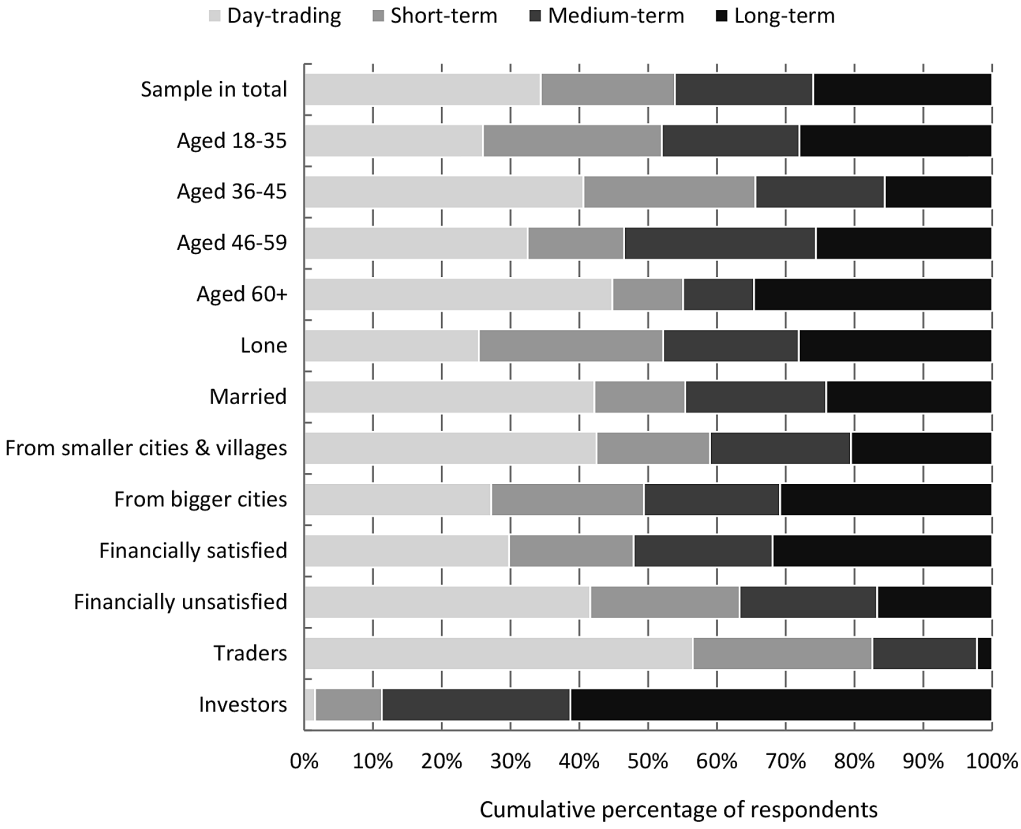
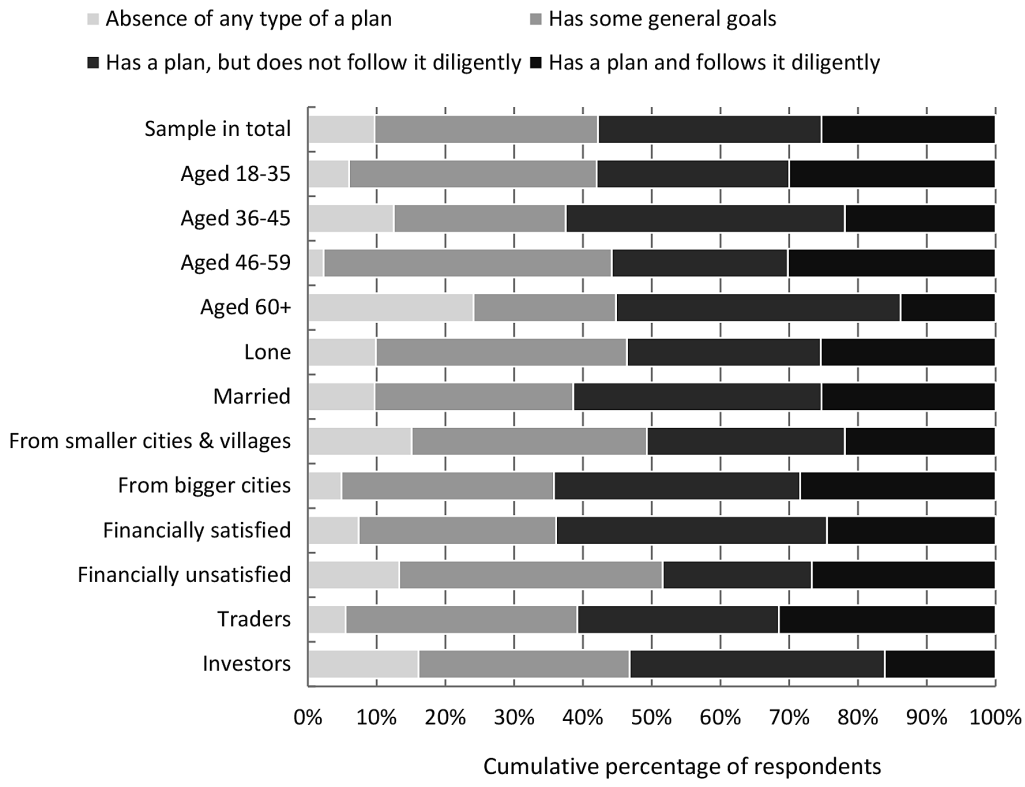
Figure 1. Declared basal transactional horizon



Source: Own research

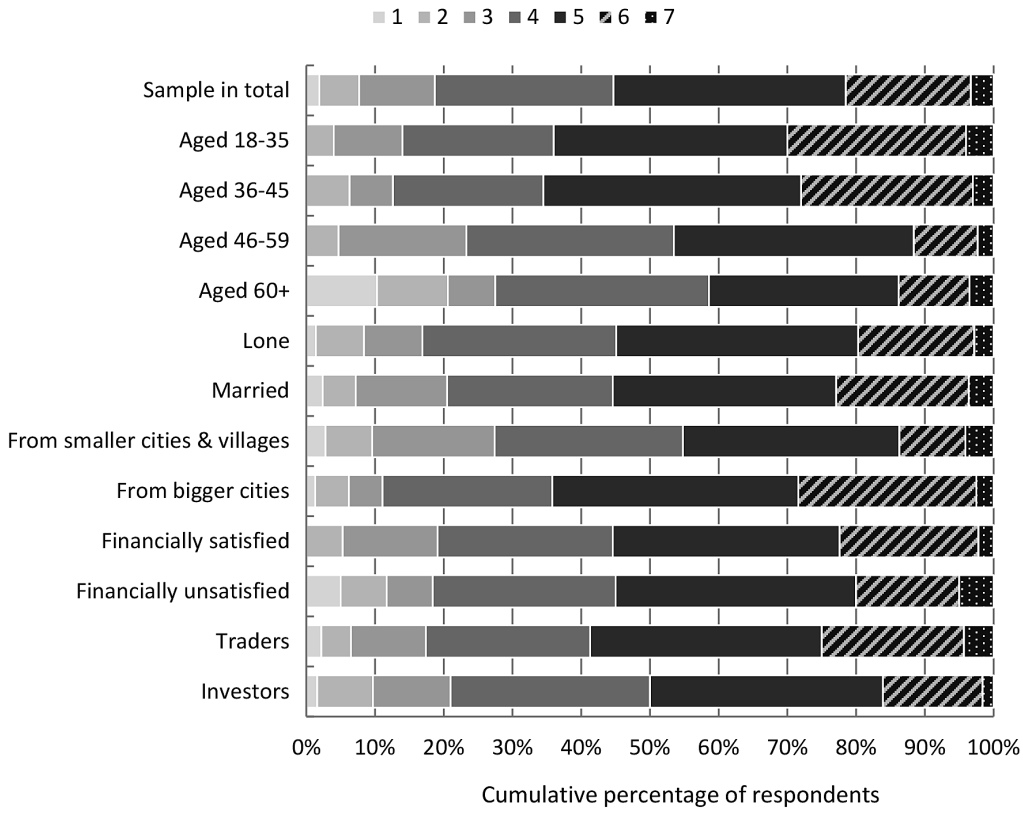
Figure 2. Declared possession of an investment plan and degree of compliance to it



Source: Own research

Figure 3. Declared propensity to risk

where: 1 - utter aversion & 7 - utter proclivity



Source: Own research

As a rule, the respondents altogether could be characterized by a certain degree of risk appetite (Mode = 5). People aged over 60 were an exception, due to the fact that most of them had a neutral attitude towards risk (Mo = 4) — Figure 3.

Some of the highest estimates of own risk propensity were observed among respondents under the age of 46, for which arithmetic mean (M) was approximately 4.8. Respondents from bigger cities evaluated their risk proclivity slightly higher (M = 4.77) than their counterparts from smaller cities & villages (M = 4.23). A similar tendency also occurred among traders, who were on average more prone to risk (M = 4.62) than investors (M = 4.35).

The respondents generally claimed, that they do not experience any greater emotional tension when they trade on financial markets. Arithmetic means for sample in total and for cross-sections were roughly 3.8 — Figure 4.

Relatively high M (equal to 4) was obtained in the group of answerers aged 60+. It was also a cross-section with the highest percentage of responses declaring a very high intensity of emotions (7 — 6.9%). Answers of traders and investors were quite similar. However, it should be noted, that none of the traders declared experiencing very strong emotions (7), while 3.2% of investors did.

On average, the respondents described their overtrading as relatively infrequent, rather incidental. The mode in the total sample was 3 (23.4% of responses), which indicate a relatively rare overtrading. Slightly fewer answerers (22.7%) claimed that they overtrade fairly rarely (answer: 2). M in the total sample was a bit higher and amounted to 3.51. The lowest declarations were observed in the group of respondents between 18 and 35 years old (M = 3.2), while the highest — among the oldest, aged 60+ (M = 3.76). It is worth noting, that the latter was the only age cross-section where responses declaring very frequent, or even continuous overtrading were obtained (7 — 3.5%) — Figure 5.

There was a strong divergence of modes among respondents that were satisfied (Mo = 2) and dissatisfied (Mo = 5) with their financial status. Similar results were also obtained among people from smaller places of residence (Mo = 3 & 5) and bigger cities (Mo = 2). Traders generally were tempted to conclude too many transactions more often (M = 3.64, Mo = 4) than investors (M = 3.31, Mo = 2 & 3).

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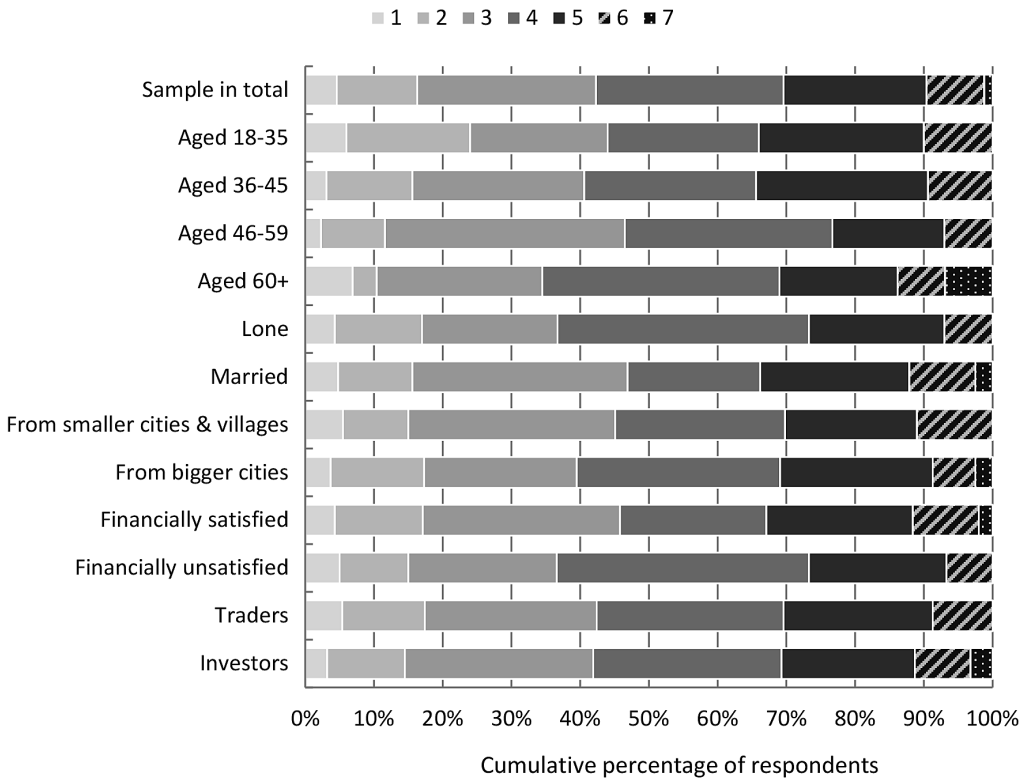
Figure 4. Declared sense of emotions when concluding a transaction

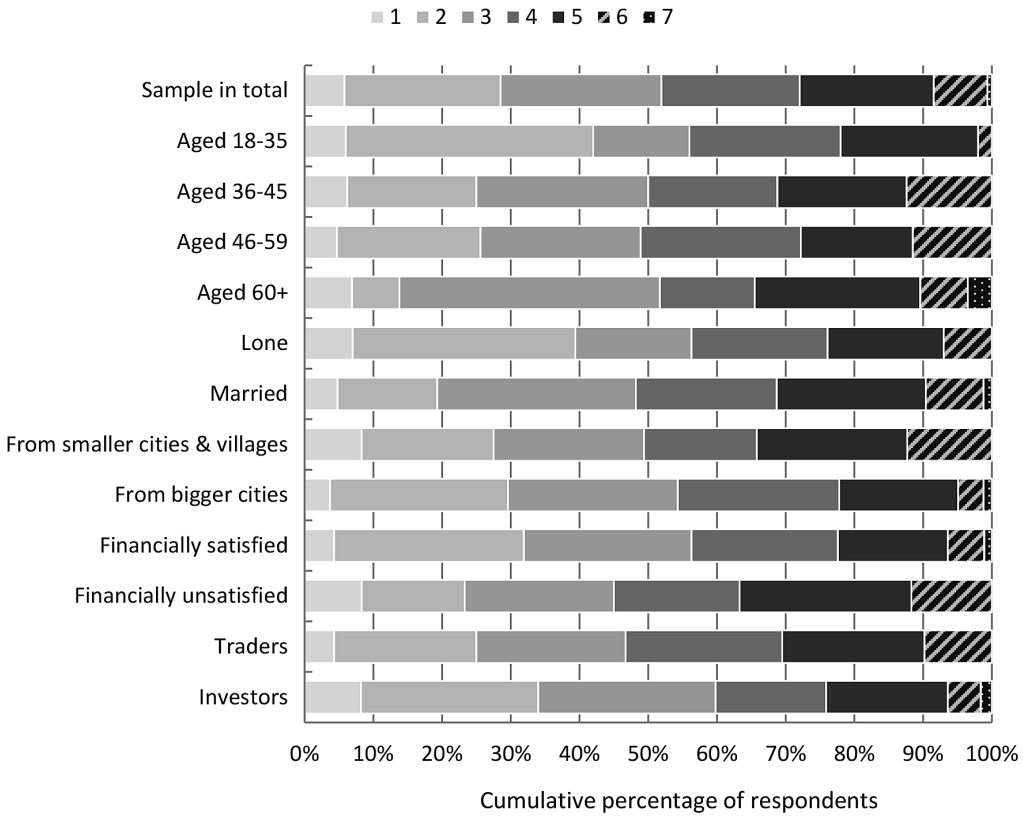
where: 1 - very low intensity & 7 - very high intensity



Source: Own research

Figure 5. Declared frequency of overtrading

where: 1 - very rarely or never & 7 - very often or always



Source: Own research

Conclusions

This research article is intended not only as a voice in the discussion about the differences between retail investors and stock market traders, but also try to emphasize their common grounds. The strong advantage of men and a relatively young age of the respondents in the research sample are noteworthy. The respondents most often were in civil unions and had higher education, although — inferred from their declared professions — not necessarily in the field of broadly understood economics or finance.

The results of this study confirm a basic distinction between investors and stock market traders that is proposed in the literature. The main basis of differentiation is the transaction horizon chosen by an individual, which in turn seems to affect the number of transactions concluded by an investor or a trader. It should be mentioned that some minor differences in the respondents' motivations and occupations were observed. Investors were more frequently professionally associated with the stock exchange, although people from that group less often described operations on the markets as their only gainful activity. In traders' statements relatively more repeatedly appeared the motive of continuous taking of some smaller profits and also a fascination with the markets and various possibilities of operating on them.

Based on the results, traders should not be considered as persons ill-prepared for the activity that they undertake or excessively emotional in it. Both investors and traders declared similar levels of risk propensity (Maciejewski 2012), as well as they were alike conscientious in following their trading or investment plans. However, investors generally chose a slightly more conservative style of concluding transactions, with a rather long-term attitude.

When it comes to the intensity of emotions, it was somewhat lower for traders. Possibly due to somehow being accustomed to trading on — more or less — daily basis and not getting attached to currently possessed assets. On the other hand, investors generally considered their tendency for overtrading lower. The latter can be explained by differences in transactional horizons. In the case of day-trading, which is the most popular strategy among traders, it is easier to lose moderation, due to the fact that such a strategy consists in concluding a relatively large number of transactions. Both retail investors and market traders seem to be well prepared for their activity, which, however, is undertaken in divergent ways and for slightly different reasons.

Bibliografia/References

Begg, D., Vernasca, G., Fischer, S. & Dornbusch, R. (2011). *Mikroekonomia*. Warszawa: Polskie Wydawnictwo Ekonomiczne.

Bernstein, J. (1996). *Cykle giełdowe*. Warszawa: WIG-Press.

Bogle, J. C. (2012). *The Clash of Cultures: Investment vs. Speculation*. John Wiley and Sons.

Borowski, K. (2014). *Analiza fundamentalna. Metody wyceny przedsiębiorstwa*. Warszawa: Difin.

Bregu, K. (2016). *Overconfidence and (Over)Trading: The Effect of Feedback on Trading Behavior*. University of Arkansas.

Brzezińska, J., Maciejewski, G. (2015). Multivariate data in the estimation of consumer risk. Ekonometria. *Econometrics*, *3*(49), 20–32. https://doi.org/10.15611/ekt.2015.3.02

Brzozowska, B. (2012). Ryzyko na rynkach finansowych: zarządzanie ryzykiem kredytowym w sektorze bankowym w Polsce. *Zeszyty Naukowe SGGW w Warszawie. Ekonomika i Organizacja Gospodarki Żywnościowej*, 96, 89–99.

Carret, P. L. (2007). *The Art of Speculation*. Marketplace Books.

Colby, R. W. (2003). *The Encyclopedia of Technical Market Indicators*. McGraw-Hill.

Dębski, W. (2014). *Rynek finansowy i jego mechanizmy: podstawy teorii i praktyki*. Warszawa: Wydawnictwo Naukowe PWN.

Douglas, M. (2000). *W transie inwestowania. Podbij rynek pewnością siebie, żelazną dyscypliną i postawą zwycięzcy*. Gliwice: Wydawnictwo HELION.

Faith, C. M. (2017). *Droga żółwia. Metody, dzięki którym zwykli ludzie stali się legendarnymi traderami*. Warszawa: Wydawnictwo Linia.

Frączek, B. (2012). *Inwestycje finansowe na rynkach polskim i zagranicznym*. Katowice: Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach.

Gołębiowski, G. & Tłaczała, A. (2009). *Analiza finansowa w teorii i praktyce*. Warszawa: Difin.

Grable, J., Lytton, R. & O'Neill, B. (2004). Projection Bias and Finance Risk Tolerance. *The Journal of Behavioral Science*, *5*(3), 142–147. https://doi.org/10.1207/s15427579jpfm0503_2

Graham, B. (2015). *Inteligentny inwestor. Najlepsza książka o inwestowaniu wartościowym*. Warszawa: Wydawnictwo Studio Emka.

Hirshleifer, J. (1965). Investment Decision under Uncertainty: Choice-Theoretic Approaches. *The Quarterly Journal of Economics*, *79*(4), 509–536. https://doi.org/10.2307/1880650

Kahneman, D. (2012). *Pułapki myślenia*. Poznań: Media Rodzina.

Komar, Z. (1993). *Sztuka spekulacji*. Warszawa: Wydawnictwo PRET.

Kurzejewski, M. & Nowalińska, D. (2017). *Zysk a ryzyko na rynku Forex: Poradnik klienta usług finansowych*. Warszawa: Komisja Nadzoru Finansowego.

Maciejewski, G. (2012). Perceived risk in purchasing decisions of the polish consumers — Model-based approach. *Journal of Economics & Management*, (8), 37–52.

Montier, J. (2002). *Behavioural finance: insights into irrational minds and markets*. John Wiley & Sons, Chichester.

Murphy, J. J. (2017). *Analiza techniczna rynków finansowych*. Poznań: Wydawnictwo Maklerska.

Niederman, D. (2000). *Wizjonerzy, sceptycy, łowcy okazji: profile psychologiczne inwestorów giełdowych*. Warszawa: WIG-Press.

Nison, S. (2018) *Świece japońskie i analiza wykresów cenowych*. Poznań: Wydawnictwo Maklerska.

Patterson, R. (2002), *Kompendium terminów bankowych po polsku i angielsku*. Warszawa: Fundacja Rozwoju Rachunkowości w Polsce.

Thaler, R. H. (2018). *Zachowania niepoprawne: Tworzenie ekonomii behawioralnej*. Poznań: Media Rodzina.

Wierzbicka, A. (2016). Rola inwestorów w rozwoju nadzoru korporacyjnego. *Studia Ekonomiczne. Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach*, 263, 179–189.

Xu, J. & Harvey, N. (2014). Carry on winning: The gamblers' fallacy creates hot hand effects in online gambling. *Cognition*, *131*(2), 173–180. https://doi.org/10.1016/j.cognition.2014.01.002
Zaleśkiewicz, T. (2012). *Psychologia ekonomiczna*. Warszawa: Wydawnictwo Naukowe PWN.
Zalewski, G. (2008). *Kontrakty terminowe w praktyce*. Warszawa: WIG-Press.
[www 1] https://www.investopedia.com/terms/r/riskrewardratio.asp (access: 10.09.2019).
[www 2] https://www.investopedia.com/terms/s/scalping.asp(access: 10.09.2019).
[www 3] https://www.investopedia.com/terms/t/tape-reading.asp (access: 10.09.2019).
[www 4] https://money.pl/gospodarka/wiadomosci/artykul/rachunki-maklerskie-gielda-inwestorzy,174,0,2402478.html (access: 10.09.2019).

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Współpracownik Katedry Rynku i Konsumpcji Uniwersytetu Ekonomicznego w Katowicach. Z zamiłowania zawodowo związany z rynkami finansowymi, pracuje jako analityk giełdowy. Jego zainteresowania naukowe obejmują ekonomię behawioralną, psychologię giełdową, a także politykę monetarną. Interesuje się praktycznymi implikacjami analizy technicznej oraz wpływu odczytów makroekonomicznych na rynki finansowe. Szczególną wagę przykłada do zachowań jednostki — konsumenta i inwestora.