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IMPACT OF FUND MANAGERS CHANGES ON POLISH EQUITY FUNDS PERFORMANCE

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Abstract

Purpose – the aim of the article was an analysis of the returns of universal Polish equity investment funds before and after the change of portfolio managers. The article deals with the following research problem: how the replacement of investment fund managers impacts the results of Polish equity funds.
Methodology – the research methodology which used the indexes of relative strength allows determining the abnormal returns of funds in relation to the WIG Index before and after the change of managers.
Findings – the analyses showed negative abnormal returns before changing managers and ambiguous tendencies after the change of managers.
Originality – this kind of study has not been conducted for the Polish capital market so far.

Keywords: investment funds, portfolio management, relative strength

JEL classification: G11, G14, G23

Introduction

One of the most frequently analysed issues of the functioning of investment funds and other mutual funds institutions (collective investments) is the assessment of their effectiveness. As a rule, however, such studies focus on the funds themselves, yet they are only occasionally related to portfolio managers, who take investment decisions and who are responsible for their results.

The main aim of this paper is to analyse the events involving essential changes in the compositions of the management of universal Polish equity investment funds (i.e. funds investing mainly on the broad share market in Poland) in the context of returns achieved by these funds before and after such a change. Two hypotheses were put forward. According to the first one, a cumulative relative rate of return of the funds (in relation to the WIG Index) for the period before the change of a manager is negative, while under the other hypothesis, a relative cumulative rate of return of the funds is positive after the change of a portfolio manager.

The research problem is to examine how the replacement of investment fund managers impacts the performance of Polish equity funds. Knowledge on this topic is essential for managers themselves, for the management of investment fund management companies and for fund participants. Therefore, regulators should make all efforts to ensure that information on fund manager changes will be mandatory. To the best knowledge of the authors, it is the first research of this kind not only on the Polish, but also on all CEE capital markets.

The rest of the paper is organized as follows. Section 1 presents the review of related literature. Section 2 contains a description of the research methods, sample and data sources. The results and conclusions drawn from the research are presented in Section 3. The last section discusses the shortcomings of the study and indicates further possible research directions, which can enrich research in this area.

1. Changes of portfolio managers – a review of the selected studies

Persons who manage portfolio investments are key figures in a team, which makes up a company managing funds/assets. The quality of their work and effects of activities undertaken by them depend primarily on such factors as background, education, experience and developed skills (Perez, 2012). Highly educated managers (which are often confirmed by proper certificates and licenses) with many years of market experience, and innate talent as well as an impressive track record is unquestionably one of the most important ‘assets’ of a company. Thus, such

persons become targets of 'acquisitions', the result of which is the change in the position of the portfolio manager (manager turnover).[1]

The impact of these changes has been the subject of studies dealing mainly with developed markets (as well as with their other characteristics) since the 1990s. In a wider context, they are in line with research on the effectiveness of the mechanisms of external and internal control in the sector of the asset management industry.[2] The research findings of the existing studies generally show a negative impact of changes of portfolio managers on funds' performance (compared to their benchmark or the sample relating to funds, where such a change did not occur) before the change and positive after the change.

On the American market Khorana (1996) examined a sample of 339 American funds, which underwent manager turnovers in the years 1979–1992 and he concluded a change of a manager is preceded by a two-year statistically significant underperformance in relation to a control sample of 4,830 funds, in which such a change did not occur. Chevalier and Ellison (1999) confirmed the negative relationship between manager replacement and fund performance paying special attention to the age of the manager. In turn, such research carried out by the same author five years later (Khorana, 2001 – concerned the change of managers of 393 American equity and bonds funds in 1979–1991) proved that dismissals of inefficient managers leads to a significant improvement of the funds' post-exit performance compared to the previous period. However, Khorana, basing on alfa from the single-factor CAPM model and Carhart's four-factor model (1997) stated, that new managers still underperformed (Jensen's negative alfa). On the other hand, the funds which showed pre-exit outperformance suffered a noticeable decrease in their post-exit performance. A far stronger and inverse correlation between the change of a portfolio manager and the previous results of investment funds were shown by Kostovetsky and Warner (2015), who drew on new data (they analysed 11,405 manager changes/turnovers in American in equity funds from 1995 to 2009). Furthermore, contrary to Khorana's conclusions, they claimed that a change of fund managers does not improve the performance of funds, where earlier inefficient managers were employed, nor does it deteriorate the performance of funds, where earlier decisions were taken by efficient managers.

Gallagher and Nadarajah (2004) found that managerial replacement in Australian equity, fixed income and balanced funds (in the period 1991–2001) resulted in the reversal

[1] Obviously changes of portfolio managers in investment funds obviously are not caused only by 'poaching' the best managers by competitive entities (already operating or entering the market) – they may also result from, e.g. poor investment results (compared to similar funds), however, a closer analysis of these reasons goes beyond the scope of this article.

[2] More information on internal control in investment funds may be found in the study by Szczepankiewicz (2014).

of performance both for underperformers and outperformers (they used such measures as objective-adjusted return, one-factor alpha and four-factor alpha (only for equity funds)). These conclusions were consistent with Khorana.

In the years 1997–2011 Clare, Motson, Sapuric and Todorovic (2014) carried out an analysis of changes of portfolio managers in the UK. The research sample comprised equity funds and fixed income funds – in total during the analysed period 941 manager turnovers were identified (the sample included only those entities, which were managed by one person, but funds with team management were excluded). The analysis concerned both surviving funds and non-surviving funds; therefore the so called survivorship bias did not occur.[3] These authors investigated the performance of investment funds within a three-year period pre- and a post-exit using modified method of event study.[4] Cumulative Average Abnormal Return (CAAR) for the whole sample in the pre-exit period was approx. –1.0%, which means, that at that time the fund managers performance was worse than that of benchmarks. Post-exit performance in the first 12 months for the majority of funds worsened, for the period of 24 months it improved significantly (CAAR was approx. +2.0%), whereas for the period of 36 months after the change it got worse again (up to about +1.0%). However, the average performance of funds for all the six research annual periods (three pre-exit and three post-exit) proved to be statistically insignificant. Similar results were found for UK equity funds (CAAR for the period of pre-exit 36 months was –2.80% and for 36 months of the post-exit period – +1.5%, with the results also being statistically insignificant). Very different results were achieved in the group of equity funds on the emerging markets, where CAAR for the periods of 36, 24 and 12 months respectively was found to be positive, i.e. the managers of these funds outperformed their benchmarks before their resignation from management. Then, in turn, following the change in the position of a manager CAAR for these funds, as in the above described categories, was also positive (in particular two years after the event). Here again, the results proved to be of no statistical importance.

Bessler, Blake, Lückoff and Tonks (2014) examined the role of fund flows and manager changes on long-term performance persistence for 6,207 actively managed US equity funds over the period from 1992 to 2011. They found, that these two equilibrating mechanisms acting

[3] Survivorship bias on the investment fund market occurs when its analysis (e.g. relating to the assessment of funds' efficiency) takes into account only active funds, while non-active funds (i.e. which ceased their operations) are excluded. It causes errors in interpretation of the received findings as this kind of approach tend to overestimate fund performance, due to the fact that entities which ceased their operations usually had relatively poor investment performance.

[4] They did not use a traditional method of event study based on a market model (which requires that alphas and betas should be estimated in the initial stage of the procedure), because in their opinion – consistent with for example Cremers, Petajisto and Zitzewitz (2012) as well as Angelidis, Giamouridis and Tessaromatis (2013) – it is more useful for investors and researchers if the performance of investment fund managers is measured in relation to a passive benchmark.

simultaneously influence the future performance of winner (past outperforming) and loser (past underperforming) mutual funds, with the proviso that manager changes have only a limited effect.

2. The sample, research method and data sources

The study on the relationships between the changes of portfolio managers of Polish equity funds and the returns of these funds covered investment funds registered in Poland with legal forms of open-end investment funds or specialized open-end investment funds (closed-open funds were excluded) and their sub-funds belonging to the category 'the universal Polish equity funds' as classified by Analizy Online. It referred exclusively to those entities, which ran investment activities until the end of the year 2015,[5] therefore a survivorship bias occurred there.

Generally, the study consisted of two phases. In the first one a selection of sample entities was made, which met both the qualitative and quantative criteria determined earlier. The main purpose of the other phase was to identify the moments of 'significant changes' in the composition of the management of the above mentioned (sub)funds. On that basis – using the adopted research method – there were analysed returns of these funds at the time before and after the managers' turnovers.

The selection of sub(funds) was made in three stages. In the first one there 54 sub(funds) were selected, both open-end and specialized open-end, which by the end of 2015 belonged to the category of 'universal Polish equity' funds. Then the research group was reduced exclusively to sub(funds), for which the benchmark portfolio was at least 90% the WIG index.[6] This was the basis for selecting 33 entities. Out of these 14 were sub(funds) for which the WIG index was a 100% benchmark. The WIG index was a 95% benchmark for 6 entities. For the remaining 13 sub(funds) the WIG index was a 90% investment benchmark.[7] At the third and last stage a list of the examined entities was verified taking into account the actually exercised investment policy (based on the composition of the investment portfolio), as well

[5] The analysis does not take into consideration the sub-fund Inventum Akcji under Inventum Parasol FIO, which is in liquidation. By the Polish Financial Supervision Authority Decision of 7 October 2014 Inventum TFI is deprived of the license on managing investment funds. It does not examine either those funds, which ceased to function during the examined period or which significantly altered their investment policy.

[6] The information on the composition of the benchmark portfolio of the (sub)funds at the end of 2015 were taken from their prospectuses and Analizy Online website.

[7] Among 18 funds, for which the WIG index benchmark was less than 100%, in as many as 15 cases the remaining benchmark part was the average rate of deposits offered on the Warsaw money market (WIBID) coming from different periods (ranging from O/N to 6-month) For the rest of cases these were other money market indexes.

as the frequency of valuations (exclusively daily valuations). In this way two sub(funds) were excluded. Consequently, 31 sub(funds) were the subject of the research in the second phase.

On selecting the sample, the next step was to identify events in which 'a significant change' in the position of the portfolio manager took place. 'A significant change' was defined as follows:

– in the case of a single-person an (individual) model of management of the fund – the change of a manager,
– in the case of a multi-person (collective) model of management of the investment fund (also in the form of a so called investment committee)[8] – a change in the composition of at least 50% of the managing team (e.g. adding another member to the team, replacing two out of four team members, etc.).

The analysis covered a period of nine years – since the beginning of 2007 till 2015. The information on changes among portfolio managers was taken from the website of Analizy Online, as well as from websites of investment fund management companies. On this basis, 23 entities were selected, in which at least one significant manager replacement occurred in the examined period (in the remaining 8, there was no such a change) – Table 1 presents their list. In total, 39 'significant changes' were identified in the position of portfolio managers.

Table 1. The list of sub(funds) of Polish universal equity funds classified to the research sample, where in 2007–2015 a 'significant change' occurred

No.	(Sub)fund	Investment fund management company	Benchmark	Number of significant changes in the position of a portfolio manager
1	2	3	4	5
1	Alior Agresywny	Money Makers	90% WIG + 10% WIBID 3M	1
2	Alior Stabilnych Spółek	Money Makers	90% WIG + 10% WIBID 3M	1
3	Allianz Akcji	Allianz Polska	95% WIG + 5% WIBID O/N	3
4	Allianz Selektywny	Allianz Polska	90% WIG + 10% WIBID O/N	2
5	Arka BZ WBK Akcji Polskich	BZ WBK	95% WIG + 5% WIBID O/N	1
6	Aviva Investors Polskich Akcji	Aviva Investors Poland	90% WIG + 10% Citigroup PLN 1 Month Eurodeposit Local Currency	1
7	AXA Akcji	AXA	95% WIG + 5% WIBID O/N, less management costs	1
8	BPH Akcji	BPH	95% WIG + 5% WIBID 3M	2
9	Caspar Akcji Polskich	CASPAR	100% WIG	1

[8] In the selected research group in as many as 19 cases the management took a collective form.

1	2	3	4	5
10	Copernicus Akcji	Copernicus Capital	100% WIG, less the percentage of fixed remuneration costs for management	1
11	Copernicus Spółek Wzrostowych*	Copernicus Capital	100% WIG, less the percentage of fixed remuneration costs for management	2
12	Eques Akcji	Eques Investment	90% WIG + 10% WIBOR 3M	2
13	Ipopema Akcji	Ipopema	90% WIG + 10% WIBID 6M	1
14	Legg Mason Akcji	Legg Mason	100% WIG	1
15	Millennium Akcji	Millennium	90% WIG + 10% WIBID 6M, less management fees	2
16	NN Akcji**	NN Investment Partners	100% WIG	3
17	NN SFIO Akcji 2***	NN Investment Partners	100% WIG	3
18	Noble Fund Akcji	Noble Funds	90% WIG + 10% WIBID O/N	2
19	Novo Akcji	Opera	100% WIG, less management costs	4
20	Open Finance Akcji	Open Finance	90% WIG + 10% Citigroup Poland Government Index (1–3)	1
21	Pioneer Akcji – Aktywna Selekcja	Pioneer Pekao	90% WIG + 10% WIBID 1M	2
22	Quercus Agresywny	Quercus	100% WIG	1
23	PZU Akcji Spółek Dywidendowych****	PZU	90% WIG + 10% WIBID 1M*(1 – NBP mandatory reserve ratio)	1

* Previously – Copernicus Akcji Dywidendowych.
** Previously – ING Akcji.
*** Previously – ING Akcji 2 SFIO.
**** Previously – PZU Akcji Zagraniczny.

Source: own study.

It was presumed that the date of a (sub)fund manager turnover is the actual day of posting a given person(t_0). If a fund did not inform about the exact date of a change, and the information gave only a month of taking up a position, it was assumed that such a change took place on the first day of a given month. If another 'significant change' took place before the end of the year, it was not included in the analysis due to the adopted (and described further in the article) calculation method.

The study used the relative strength of daily changes in the valuations of investment fund units[9] of (sub)funds with reference to the WIG index (i.e. a basic benchmark for the investment performance of the research group), in order to eliminate the impact of a general stock market situation on the unit quotations. The research methodology was based on a constructed price index covering only the unit quotations of those funds, which comprised the research group. The index was calculated as the arithmetic mean of the index sum of the relative force of

[9] The research takes into account the valuations of basic investment fund units (addressed to investors generally).

particular units, i.e. quotients of prices from a given period P_t to value of the WIG index on that day.[10] It can be presented by the following formula:

$$IC_t = \frac{\sum_{n=1}^{N} \frac{P_{n,t}}{WIG_t}}{N} \tag{1}$$

where:

IC_t – price index of the group on day t,
N – number of changes of fund portfolio managers included in the index,
n – number of next change of fund portfolio managers included in the index,
$P_{n,t}$ – price of nth investment fund unit on day t,
WIG_t – value of the WIG index on day t,
t – next trading sessions, while t_0 means the day of the change of a portfolio manager.

The quotations of selected securities were reduced to one time point, assuming that the day t_0 means the day of a manager change. The price index for the whole research group was given on that day the value of 100 points. The analyses with regard to this time point were conducted within 125 days before and after the change, which corresponds approximately to periods of six months. The choice of such periods for the analysis was caused by the fact, that some parallel can be drawn between 'a significant change' of a manager and a registration of a new fund (or creation of a sub-fund). In the latter case the regulator recommends open-end investment funds to apply investment policy to legal requirement just within a 6-month period (Art. 106, Section 3 of the Act on Investment Funds and Management of Alternative Investment Funds).

The whole research was based on the assumption, that the investment fund units of all the funds have the same share in the price index of the research group and the change of a unit valuation of each fund, including changes of the WIG index, identically affects the change of the price index. Thus, the price index of the group is a non-weighted arithmetic mean of price indices.

The valuations of investment fund units used in the research were taken from Stooq.pl website and the websites of investment fund management companies. The quotations of the WIG index were taken from Stooq.pl website.

[10] The research methodology was based on the work of Bałtowski, Kwit (2002).

3. Results and conclusions

The research has proved, that within six months before a change of managers in universal Polish equity investment funds the relative strength of the valuations of units of these funds showed a clear downward trend (Figure 1). Apart for the first 30 trading days with some irregular variations, these trends can be described with the use of technical analysis, i.e. the downward trend line. The average fall of the price index of the relative strength for the whole group accounted for 1.5%. It was most distinct between the 59th and 31st day before a change of managers. The lowest value was recorded 7 days prior to the change of managers. Therefore, the hypothesis that the CAAR of the funds (against the WIG index) before the change of portfolio managers is negative was positively verified.

Although the reasons for this were not examined, it can be presumed – in accordance with Khorana observations (1996) – that it might result from the fact, that managers when threatened with dismissals (it refers to those persons, who underperformed in terms of investments) undertook various rescue measures, which had a bad effect on their investment results. For instance, they might increase the volume of performed transactions disposing of loss-making investments (window dressing) and/or buying those securities, which were held by funds-winners (following the herd) and which led to higher transaction costs. They might take a higher investment risk (e.g. buying high-risk shares) to obtain higher returns, which would compensate losses incurred earlier or which would reduce underperformance.

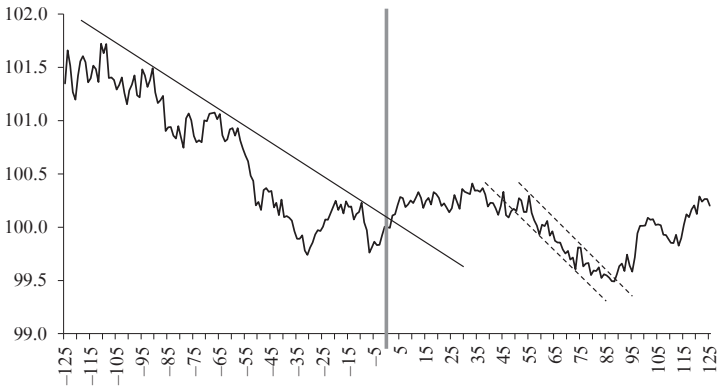

Figure 1. The index of the relative strength of universal Polish equity fund units six months before and after the manager change

Source: own study.

A slight improvement in the performance in the examined group could be observed after the change of portfolio managers, followed by the stabilization of quotations of the investment fund units. Fluctuations, to a very limited extent, lasted for 50 trading days, which corresponds approx. 2.5 calendar months. These data suggest, that at that time new managers do not make radical changes in investment policy (anyway such changes do not affect the relative returns of the funds). A noticeable increase in relative strength may be observed again since the fiftieth-first day after the change of a manager. A very stable downward trend lasting 36 trading days (less than two months) might be described as trend channel (Figure 1.) Just then new managers are more likely to undertake activities to a greater extent adapting an investment portfolio to the adopted strategy. First of all, portfolio cleaning, i.e. disposing loss-making securities and replacing them with new ones, within a short time may generate additional transaction costs (however, over a long period of time they should be decreasing compared to the period before the manager's replacement). Secondly, it generally means accepting the fact that some investments are unlikely to be finished with a profit and it is better to close the position as soon as possible, which, unfortunately, also means the necessity to realize losses. New fund managers implement new investment strategies usually within a period six months after their appointment (although in this regard some differences may occur resulting, e.g. from the volume and structure of the portfolio). Thus, the middle time of this period seems to be most proper for such adjustments to be done. This presumption may be confirmed by the stability of a downward trend as well as its limited scale (approx. 0.8%). A clear trend of the relative strengthening of the quotations of investment fund units against the benchmark in the final phase of the research period may be a positive signal in these changes, although a positive result at the end of that period (approx. 0.2%) turned out to be relatively small. It could result, however, from a relatively short period of examining the funds' performance after the change of portfolio managers. It is quite likely that in the long term the result would be more evident.

To sum up, the hypothesis which states that the CAAR of the equity funds (against the WIG index) after the change of managers is positive on the market of universal Polish equity investment funds was not fully confirmed.

Conclusions

The research findings related to returns of universal Polish equity funds in the context of significant changes among these funds' portfolio managers in the years 2007–2015 basically confirmed the findings of similar research conducted so far on developed markets (American

and British, in particular). They showed a negative impact of fund manager changes on fund performance before the change and positive after the replacement. In the period of six months prior to the manager change, a noticeable deterioration of investment performance against the adopted benchmark (the WIG index) was observed. After the change of the manager there was a slight improvement of investment performance, although a cumulative return of the examined funds got clearly worse and it was negative. However, it should be noted that the adopted research period covering 6-month periods pre-and post-change (due to the specificities of the Polish fund market, where these changes take place – as compared to developed markets – relatively often) was much shorter than for the research conducted on foreign markets (as a rule these were two or three years).

The research that was carried out was the first one of this nature on the Polish capital market. It was some kind of a pilot study, as it concerned a nine-year period and its scope was limited to a relatively simple analysis of returns of the funds (of the whole sample) both before and after the change of portfolio managers. It seems appropriate to continue this kind of research with regard to the Polish market with regard to five aspects. First of all, it would be reasonable to extend the analysis period (e.g. one year or two) as well as a study period (also referring to the data from the previous years), possibly reducing the frequency of the use of fund units prices (e.g. to weekly data). Due to the small transparency of the data concerning the Polish fund manager changes (in particular those from several years ago), it may prove a difficult task. Second, it would be worth extending the study to other equity fund categories and other fund subcategories (e.g. debt funds) as well as eliminating the survivorship bias. Thirdly, it would be worth considering the use of other research methods (e.g. CAAR) as well as other ways of analysing fund returns, e.g. abnormal returns on the basis of the one-factor CAPM model, the Carhart four-factor model, or objective-adjusted performance, when a benchmark is provided by the performance of competitive funds. Fourth, it would be extremely interesting to disaggregate the research sample (if justified, considering a relatively small number of some categories of Polish investment funds) and to analyse separately the impact of a manager, e.g. on the funds, which earlier underperformed and entities, which earlier achieved better results than benchmarks. Fifth, and finally, in view of Khorana's research in the long term, it seems appropriate to analyse the correlation between the change of portfolio managers and other fund characteristics such as, e.g. investment risk, portfolio turnover ratio, expense ratio, or net inflow (outflow) of capital. Therefore, it is clear that, there are a number of research areas, whose profound analysis should allow knowing and understanding better internal control mechanisms in Polish entities from the asset management industry.

References

Act on Investment Funds and Management of Alternative Investment Funds. Journal of Laws from 2004, No. 146, item 1546, as amended.

Angelidis, T., Giamouridis, D., Tessaromatis, N. (2013). Revisiting mutual fund performance evaluation. *Journal of Banking and Finance*, *37* (5), 1759–1776.

Bałtowski, M., Kwit, J. (2002). Wycena przez rynek kapitałowy przedsiębiorstw sprywatyzowanych. In: M. Bałtowski (ed.), *Przedsiębiorstwa sprywatyzowane w gospodarce polskiej* (pp. 167–169). Warszawa: Wydawnictwo Naukowe PWN.

Bessler, W., Blake, D., Lückoff, P., Tonks, I. (2014). Why Does Mutual Fund Performance Not Persist? The Impact and Interaction of Fund Flows and Manager Changes (Report No. PI-1009). London, UK: Pensions Institute.

Carhart, M.M. (1997). On Persistence in Mutual Fund Performance. *Journal of Finance*, *52*, 57–82.

Chevalier, J., Ellison, G. (1999). Are some mutual fund managers better than others? Cross-sectional patterns in behavior and performance. *Journal of Finance*, *3*, 875–899.

Clare, A., Motson, N., Sapuric, S., Todorovic, N. (2014). What impact does a change of fund manager have on mutual fund performance? *International Review of Financial Analysis*, *35*, 167–177.

Cremers, M., Petajisto, A., Zitzewitz, E. (2012). Should benchmark indices have alpha? Revisting performance evaluation. *Critical Finance Review*, *2*, 1–48.

Gallagher, D.R., Nadarajah, P. (2004). Top Management Turnover: An Analysis of Active Australian Investment Managers. *Australian Journal of Management*, *29* (2), 243–274.

Khorana, A. (1996). Top management turnover. An empirical investigation of mutual fund managers. *Journal of Finnacial Economics*, *40*, 403–427.

Khorana, A. (2001). Performance Changes following Top Management Turnover: Evidence From Open-End Mutual Funds. *Journal of Financial and Quantitative Analysis*, *36* (3), 371–393.

Kostovetsky, L., Warner, J.B. (2015). You`re Fired! New Evidence on Portfolio Manager Turnover and Performance. *Journal of Financial and Quantitative Analysis*, *50* (4), August 2015, 729–755.

Perez, K. (2012). *Efektywność funduszy inwestycyjnych. Podejście techniczne i fundamentalne*. Warszawa: Difin.

Szczepankiewicz, E.I. (2014). *Zasady rachunkowości, kontrola wewnętrzna i audyt w towarzystwach funduszy inwestycyjnych*. Warszawa: CeDeWu.