

Wojtasiewicz, Tomasz

Article

Accumulation of funds under the IKE pension system and WIG20 index fluctuation

The Central European Review of Economics and Management (CEREM)

Provided in Cooperation with:

WSB Merito University in Wrocław

Suggested Citation: Wojtasiewicz, Tomasz (2017) : Accumulation of funds under the IKE pension system and WIG20 index fluctuation, The Central European Review of Economics and Management (CEREM), ISSN 2544-0365, WSB University in Wrocław, Wrocław, Vol. 1, Iss. 1, pp. 65-82, <https://doi.org/10.29015/cerem.182>

This Version is available at:

<https://hdl.handle.net/10419/229725>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

Accumulation of funds under the IKE pension system and WIG20 index fluctuation

Tomasz WOJTASIEWICZ

WSB University in Wrocław, Poland

Abstract:

Aim: The topic of the pension pillar III, a voluntary pension scheme, is occasionally addressed in the media making the public wonder whether it is possible to live a dignified life after retirement. The article makes the attempt to show how households' interest in Individual Retirement Accounts (in the paper referred to as IKE) has changed in relation to the WIG 20 index. The author believes that the behavior of the capital market influences the public in its decision-making with regard to funds accumulation under the IKE pension system. The aim of the paper is to examine the relationship between household's showing interest in setting up an individual retirement account and the WIG20 index fluctuation. The study was conducted based on data spanning 12 years, i.e. from 2004 to 2015. The paper outlines the characteristic features of IKE pension accounts, as well as the impact of the stock index WIG20 on the flow of funds placed with IKE.

Design / Research methods: The analysis using Pearson's correlation coefficient indicated a small dependency between the number of IKEs and WIG20.

Conclusions / findings: Having examined the different segments of IKE, an unexpected dependency between IKE in a voluntary pension scheme managed by PTE /Universal Pension Fund Company/ and the WIG20 was found.

Originality / value of the article: Investors may find the paper interesting seeing it as a determinant in making investment decisions; it could also be of interest to scholars seeking to investigate in more depth the topic relating to the third-pillar.

Limitations of the research: The limitation of the study was lack of data on inactive accounts which have not been deleted.

Keywords: *IRA, households, investing, savings*

JEL: E2

1. Introduction

It is a common perception that there are not too many young Poles who think about saving money for retirement. Only when approaching the retirement age, the awareness about the need to save money starts growing. One of the reasons for the situation described above is the low income of people entering the labor market (Wądołowska 2010: 1-14).

According to studies conducted by the Polish institute ARC Rynek i Opinia (Białasek 2013), households who decide to accumulate funds for the future are most likely to choose low-risk financial products, commonly known as secure financial products. In the vast majority of cases, this entails saving money with a savings and checking account. The money stays mostly in the current account, and to a lesser degree is held on deposits.

Within the framework of the pension reform designed for the third-pillar, in 1999, employee pension funds were established (in the paper referred to as PPE). Up till now (2016) employers have been setting them up for employees. These programs are a form of organized, collective, regular accumulation of funds for future retirement. Participation in the program is voluntary for both sides. Neither are employers obligated to establish PPE in their companies, nor do employees have to participate in the program. Five years following the pension reform, in September 2004, the Polish government introduced changes in the third-pillar, making a new product available which was the Individual Retirement Account. Another solution for the future retirees came in 2012 with an offer of Individual Pension Insurance Accounts (in the paper referred to as IKZE). At present, individuals may save and invest collectively through PPE, and through different forms of IKE and IKZE (Jakubowski 2014: 241-248). Both schemes of funds accumulation are characterized by being voluntary. It should be noted that every form designed to build capital for retirement can constitute the third-pillar. What makes PPE, IKE and IKZE different from other forms of investing capital is their preferential tax treatment. Since the paper is concerned with the IKE pension system with the topic itself being vast, the author did not include PPE and IKZE in his study.

Despite having introduced a few preferential products encouraging retirement savings, the public has not been showing much interest, nor is it well informed about the pension insurance systems. This is proven by the surveys commissioned by the Chamber of Fund and Asset Management and conducted by CBOS. In 2013, 63% of respondents reported to recognize the IKE pension system (CBOS 2013: 2). A relationship between the education level and willingness to use the pension programs was found – the higher the education level, the greater interest in the programs. The group taking the least interest in the pension systems were farmers. As one of the barriers respondents reported not enough money and a lack of convincing arguments for viability of the pension systems.

At the end of 2007 the assets held by the Investment Fund Company (TFI) amounted to PLN 134 bn (Chamber of Fund and Asset Management 2008). The amount was unprecedented. Sadly, however, as early as in 2008 – due to the stock market crash – the value of assets fell by 45%. The investors through the IKE pension system reacted less nervously, showing resilience in the face of the market turmoil. This may suggest that IKE is chosen by financially mature individuals who invest capital with a long-time horizon.

The aim of the paper is to examine the relationships between the households' interest in setting up an account under the IKE pension system and the WIG20 index fluctuation. The study was developed based on the data spanning 12 years, i.e. from 2004 to 2015. The paper outlines characteristic features of IKE, as well as the impact of the WIG20 stock market index on the flow of funds placed with IKE.

2. The essence and general features of Individual Retirement Accounts

Individual Retirement Account is governed by the Act of 20 April 2004 on IKE and IKZE, as amended (Journal Of Laws 2004, no. 116, item 1205).

The rule arising from Article 2 of the aforementioned act provides a precise definition of what an Individual Retirement Account is, it is “a separate entry in the register of investment fund participants, a separate securities account or other account where financial instruments other than securities are recorded, and a cash

account used to service such accounts with an entity running a brokerage business, or a separate account in insurance capital fund, a separate bank account in a bank, a separate IKE account in a voluntary pension fund, kept pursuant to the rules laid down herein, and to the extent not provided for herein – pursuant to the rules laid down in provisions applicable to these accounts and registers.

The Act on IKE specifies who may set up the account, it being an individual over 16 years of age. Moreover, the legislator limited the possibility of establishing an account under IKE to one person, and thus the saver may not accumulate savings together with their spouse and child. Further to that, there is a cap on the amount contributed, which, as of this date (2016), is an equivalent of 300% of national projected monthly salary determined in the Budget Act for a given year. The contributions accumulated under the third pillar are voluntary (Stańczyk 2013: 186). The objective behind the introduction of IKEs was to encourage the public to responsible saving which should increase the future pension. In addition, the third pillar is designed for investors who invest in investment funds, bonds and shares, obtaining above average rates of return. This enables them to take advantage of the tax shield in that they don't have to pay taxes on returns on investment, which is 19% of the taxable amount (Witczak 2012: 153-165). The higher the rate of return on investment, the higher the benefits in terms of real money.

A wide variety of the IKE pension systems allows for tailoring the account to the risk that is acceptable; ranging from the IKE in a bank, where money is most likely to be accumulated in the form of bank deposits, the IKE in investment funds and insurance undertakings under the management of competent staff or offering ready-made financial products; to the IKE in brokerage houses, where investors build and manage the investment portfolio from scratch, e.g. buying stocks from the companies of their choice. In choosing the IKE system, investors should make an informed decision adjusting their knowledge, the time they can devote to analyses and risk level. A chance decision is not recommended, for it can have a significant impact on the viability of the pension plan (Kubiak 2011: 334).

Withdrawal of funds accumulated in IKE, subject to the tax exemption on capital gains, is possible only if the following statutory requirements are met: the

individual saving money is past the age of 60, or he/she acquired pension rights and is over 55, and further, if one of the two requirements cited below has been met:

- Contributions into IKE should be made at least for over the period of any five calendar years.
- At least half of IKE contributions should be made over five years before submitting the application for withdrawal of funds.

This, however, does not imply that the individual who has been saving under the IKE pension system may not withdraw the funds he/she accumulated before acquiring pension rights. They may request to be paid in full or one-time payment at any time. But if this is the case, return on investment settlement is required. On the other hand, there is no obligation to withdraw funds immediately after the retirement age.

3. IKE development over the years 2004-2015

Many publications and studies, e.g. 04/BMN/18/12 case study headed by Piotr Żuk argue that there is real decrease in the value of future pension. This problem refers both to individuals who do not experience career breaks as well as those who retire at the age of 67. One of the methods of slowing down the replacement rate is saving under the third-pillar.

Since the day IKE was established the public have not taken much interest in the program, although a wide range in terms of financial institutions, risk level and adequate knowledge was offered. The main reason could be perceived in the fact that the topic of pension saving was not attractive to: the media, Office for Competition and Consumer Protection, Financial Supervision Commission and State Treasury. Only after 2010, the State Treasury began to educate the public actively by organizing a program Civic Shareholding “Invest wisely” (Ministry of Treasury 2016).

In spite of the fact that the training enjoyed much popularity, there were no records of rapid increase in the number of accounts in the third-pillar by 2016. In the middle of 2011 only 5% of the working population held an account under the IKE

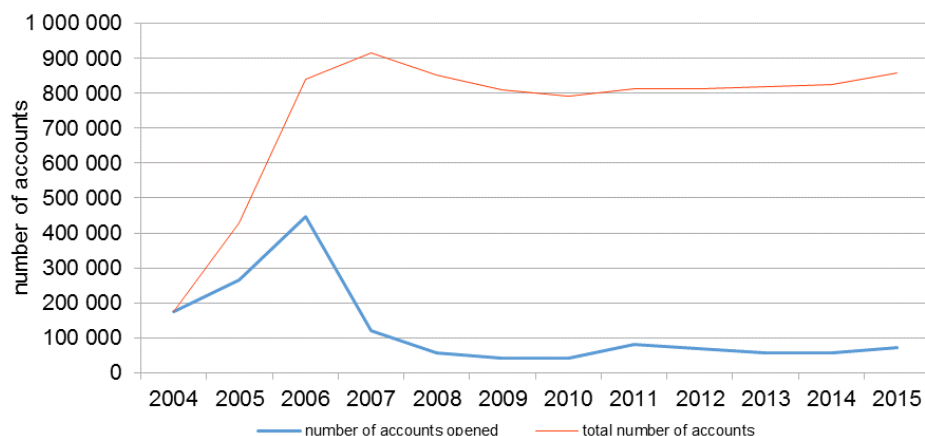
pension program (Jagielnicki 2012: 80). Over the years this proportion barely changed, and it was equal to 5.4% in the middle of 2016 (interim report of the Financial Supervision Commission).

Since 1 January 2012, another product, alternative to the IKE pension system, has been available on the market - Individual Pension Insurance Account. The introduction of the IKZE triggered a debate in the mass media which product was better. It is likely that the increased interest in IKE was the consequence of these debates and exchanges of views.

Chart 1 shows the trend in taking interest in the IKE pension system since it was established. The claret-colored line shows the number of accounts incrementally, while the bottom line shows the data pertaining to the accounts being opened at the end of every year. It can be gleaned from the chart that at the beginning, i.e. over the first three years, there was a rapid increase in the accounts. In 2007 over 100 thousand accounts were opened, breaking the historical record as far as the number of accounts kept is concerned – 915,492. However, the following years saw the interest in this form of saving decline considerably and until 2015 the number of openings did not exceed a 100 thousand accounts annually.

In addition, we can observe based on Chart 1 that in the years 2007-2010 there was a sudden decline in the number of accounts. Over the three years their number went down by nearly 13.5%, from 915,492 to 792,466. This indicates that more accounts were being closed than opened. One of the reason why the clients stayed away could be the stock market crash and the global financial crisis. In 2011 this situation improved, which is attested by an increase by 22 thousand accounts kept under the IKE pension system. A disconcerting development noticed over the years between 2011 and 2014 was continuous decline in the pace of openings of new accounts. The first sign of things getting better came with the year 2015 when an increase in openings of 30% was recorded, compared to 2014. There are, however, no data on inactive accounts which were not deleted.

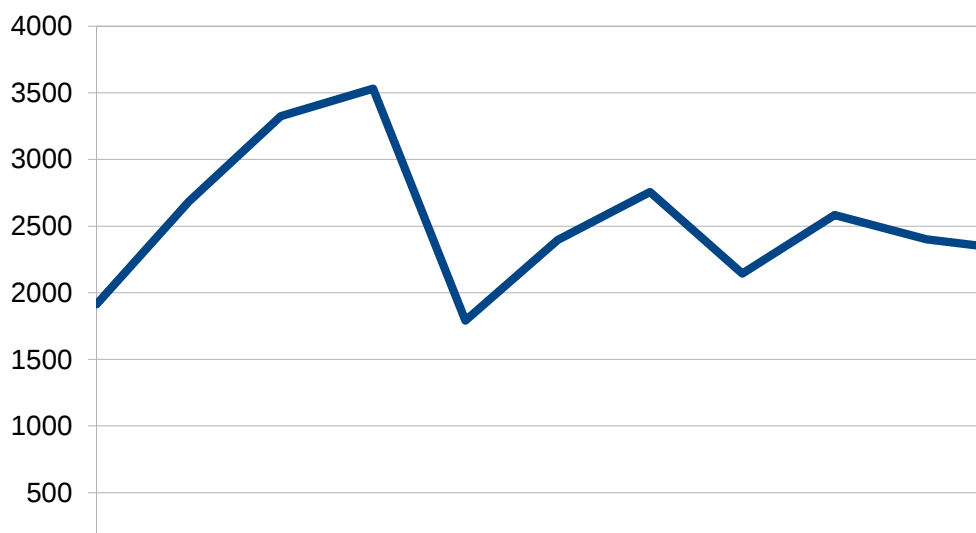
Chart 1. Number of IKE accounts over the period of 2004-2015 (as of the end of year)



Source: The author's own study based on the data from the Financial Supervision Commission

Chart 2 shows the change in the value of the most smooth and prestigious stock exchange index WIG 20 over a decade. A yearly interval was used. In the years 2007/2008 panic erupted on the financial market, which could confirm the reason why the number of accounts and interest in IKE declined, and thus the withdrawal of some of the funds from the capital market. Only after two years of a rising stock market, in 2010 the mood on the capital markets slightly improved. This behavior could be confirmed by an increase in the number of accounts under the IKE pension system.

Chart 2. WIG20 index value at the end of year over the years 2004-2015 (data given in points)



Source: The author's own study based on the data from the Financial Supervision Commission

Table 1 presents information helpful in assessing the attractiveness of the Individual Retirement Account. The first item shows the average capital saved by investors at the end of the year in IKE. It contains the cumulative value of assets per one participant. In 2004, investors saved on average PLN 960.69, with the amount growing up to PLN 6,616 in 2015. This could imply that payments were made systematically into the account and the capital was managed efficiently as well. However, assuming that, over 12 years, investors make contributions in the maximum amount, they should hold PLN 92,411 in capital alone.

Another item shows the cap on contributions paid into the account in a given year. With each year an increase in the value can be observed. The year 2009 saw the biggest change as the result of the new rules on the cap calculation introduced by the legislator.

The penultimate item in the table shows the average contribution to IKE by a participant in a given year. The dynamics in 2005 in relation to 2004 equaled 229%, being the highest in the period under study. Over the next three years the average

contribution went down, with the lowest value recorded in the year 2008. The situation improved in the years 2012-2015.

In the table below, we can also see the extent to which the limit was utilized, which shows as percentage how much cash was paid in relation to the limit. It turns out that the values are no longer so optimistic. Only in the years 2005 and 2006 not much over 60% of the limit was used, i.e. at the time when the stock market was very high. In the worst year – 2009 the value of the limit utilized was only 19%. At that time the legislator changed the method by which the limit on the IKE contributions was calculated, raising it from 150% to 300% of the national average projected monthly gross salary for a given year. It is possible that the savers had not enough time to react to these changes. The stabilization of the situation on the financial market, even though accompanied by the public's limited trust, could also account for the lowest degree of the limit utilization. This degree of the limit utilization could be seen as an "index of fear"; with the stock market boom, contributions increase while with its fall, so does the limit utilization.

Since 2008, a systematic increase in the average IKE contribution can be observed. Over the period of eight years the contribution almost doubled. This information may indicate that the public slowly began to believe that this method of saving for retirement was the right thing to do.

Chart 3 shows the amount of the accumulated capital in IKE compared to withdrawals made over the 12 years the system was in operation. In 2012 the balance shows savings equal to over PLN 3.7 bn. The year 2008 was not one the most successful for those saving under the pension program, since the capital held with IKE decreased for the first time. The reason must lie in the stock market crash, for no considerable withdrawals of funds could be noticed.

Despite the crisis of several years, the figure above shows that there was an increase in assets on the accounts, and in terms of value, even a considerable growth rate in the last four years. Specifying the number of accounts by gender proved to be an interesting investigation, as illustrated by Table 2. It appears that while in 2004, i.e. at the moment of IKE launch, the number of accounts of women and men was comparable, in the years to follow it was women whose accounts prevailed. The

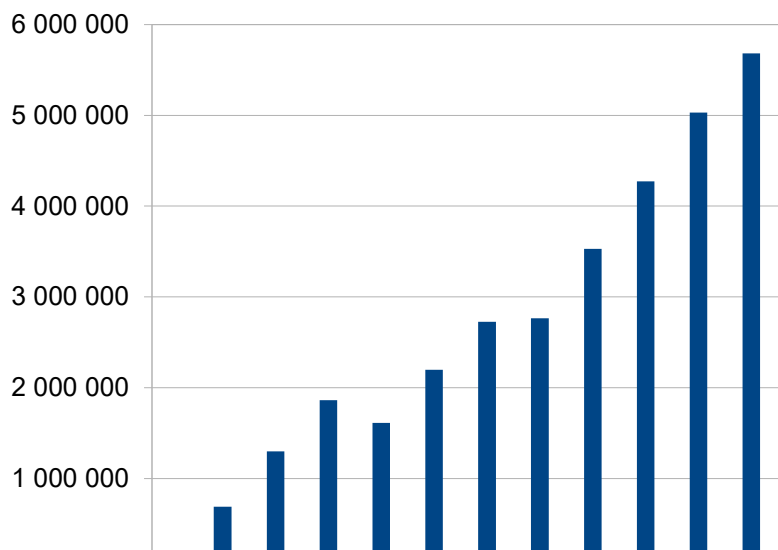
surprise is all the greater in the light of the common view that the financial sector has been dominated by men (Szynek, Karasek 2015).

Table 1. Summary of changes in the IKE accounts in terms of amount and percentage

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Average capital saved on IKE (PLN)	961	1612	1545	2037	1890	2718	3440	3394	4341	5224	6101	6618
Contribution limit (PLN)	3435	3635	3521	3697	4055	9579	9579	10077	10578	11139	11238	11877
Average contribution into IKE in reporting period (PLN)	961	2208	2199	1719	1561	1850	1971	1982	2584	3130	3440	3500
The degree of limit utilization (%)	28	61	62	46	38	19	21	20	24	28	31	29

Source: The author's own study based on the data from the Financial Supervision Commission

This might indicate that women see the opportunity to protect capital through tax optimization. This is corroborated by a study conducted by a credit company, Experian (Druś 2013), which was reported in the magazine Puls Biznesu on 22 May 2013. The finding was that women, despite being lower earners, were better at cash managing, paying their loans on time. Since 2008, there was a downward trend regarding the difference between the accounts held by women and those by men. While in 2008 the difference was 7.3%, in 2015 it was 4.4%.

Chart 3. Aggregated capital on IKE in relation to withdrawals in the years 2004-2015

Source: The author's own study based on the data from the Financial Supervision Commission
 Blue column – Total amount accumulates in IKE at the end of the year.
 Orange column – Amount withdrawn from IKE in the accounting year.

Table 2. Number of accounts by gender

	2004	2005	2006	2007	2008	2009
Men	86 063	194 204	385833	418 619	395 899	377 816
Women	89 413	233 661	454429	496 873	457 933	431 403
w-m	1.91%	9.22%	8.16%	8.55%	7.27%	6.62%
	2010	2011	2012	2013	2014	2015
Men	371 756	381 683	385 094	387 046	392 675	410 324
Women	420 710	432 766	428 497	430 605	431 810	448 401
w-m	6.18%	6.27%	5.37%	5.33%	4.75%	4.43%

Source: The author's own study based on the data from the Financial Supervision Commission

4. The impact of the WIG20 index fluctuation on IKE

In order to test whether there is a dependency between the WIG20 index and IKE, Pearson's correlation coefficient was used, given by:

$$r_{XY} = \frac{C(X,Y)}{\sqrt{S_x^2 \cdot S_y^2}} = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \cdot \sum_{i=1}^n (y_i - \bar{y})^2}}$$

Quoting (Greń 1976), Pearson's correlation coefficient refers to the strength and direction of the relationship between variables. It has a value between -1 and 1. The closer the value to zero, the weaker the relationship. The closer it gets to 1 (or -1), the stronger the relationship. The value equal to 1 (or -1) means a perfect linear correlation. The sign of the correlation coefficient tells us about the direction of the relationship: "+" means a positive correlation, i.e. increase (decrease) in the value of one characteristic causes increase (decrease) in the value of the other (a directly proportional correlation). "-" a negative direction, i.e. increase (decrease) in the value of one characteristic causes decrease (increase) in the value of the other (a reversely proportional correlation).

In order to determine the correlation coefficient of the WIG20 value and the number of IKE accounts, a tabulated summary was produced of the prices at the close of the WIG20 index at the last session in a given year (variable X) and the number of IKE accounts kept in individual segments (variable Y), also on an annual basis – Table 3. The correlations are illustrated in Table 5.

The measure for IKE against WIG20 is positive, but of small strength equal to 0.27. An interesting value of the correlation coefficient was calculated for IKE DM /brokerage houses/ -0.34 and IKE PTE, approximately -0.92. In the case of IKE DM one could expect the association to be negative and strong, for rational long-term investors use corrections, and breaks to buy shares, and thus to expand the risk profile portfolio. In the case of PTE, the strong negative value came as a surprise. Yet, as it was measured since 2012, the time is too short to be able to formulate any conclusions.

Table 3. Tabulated summary of individual IKE and prices at the close of WIG20

Date	WIG20 value at the last session in a given year	Number of accounts					
		IKE	IKE – Brokerage Houses	IKE – banks	TFI	Insurance undertakings	Voluntary pension funds managed by PTE
2004	1912	175 476	6 279	7 570	50 899	110 728	
2005	2683	427 865	7 492	49 220	103 624	267 529	
2006	3324	840 263	8 156	53 208	144 322	634 577	
2007	3530	915 492	8 782	42 520	192 206	671 984	
2008	1790	853 832	9 985	36 406	173 776	633 665	
2009	2396	809 219	11 732	31 982	172 532	592 973	
2010	2757	792 466	14 564	30 148	168 664	579 090	
2011	2144	814 449	17 025	29 095	200 244	568 085	
2012	2583	813734	20 521	47 037	188 102	557 595	479
2013	2401	817 651	21 712	49 370	182 807	562 289	1 473
2014	2316	824 485	22 884	51 625	174 515	573 515	1 946
2015	1859	858 725	25 220	52 371	205 494	573 092	2 548

Source: The author's own study based on the data from the Financial Supervision Commission

Quite unexpected might be the prevalence of accounts set up by Insurance Undertakings. Since the IKE pension system was established, no other form enjoyed such great interest. In terms of attractiveness, Investment Funds Companies were second in the rank, with savers taking, from the very beginning of the study, the least interest in Brokerage Houses and voluntary pension funds managed by PTE. However, this last form of saving was only made available in 2012 and despite a small number of accounts, the dynamics of new openings exceeds 20%.

Still, the number of accounts is not enough to make an argument that ZU /insurance undertakings/ play the most important role in the third pillar prepared by the government. It appears that showing interest is not matched by average amount of money saved – as Table 4 illustrates. The table below shows that investors using brokerage houses dominate in terms of the capital paid in. The activity of individuals

holding accounts in ZU is the lowest of all the available forms under the IKE pension system. An average contribution in the last three years hardly exceeds PLN 2500. Those who save with brokerage houses made, over the same time period, contributions in the amount of PLN 8600.

Table 4. Average capital paid into IKE

Date	IKE – Brokerage Houses	IKE – banks	TFI	Insurance undertakings	Voluntary pension funds managed by PTE
2004	3 300	no data	2 322	498	
2005	3 349	1 521	2 758	1 205	
2006	3 211	1 649	2 708	1 226	
2007	3 102	1 214	2 327	1 386	
2008	2 848	1 953	1 795	1 352	
2009	8 388	2 609	1 911	1 435	
2010	7 813	2 973	2 196	1 421	
2011	8 004	2 928	1 811	1 526	
2012	8 100	4 600	2 600	1 600	4 600
2013	8 800	4 700	3 200	2 200	5 800
2014	8 600	4 000	3 500	2 800	5 200
2015	8 700	4 500	3 700	2 600	4 600

Source: The author's own study based on the data from the Financial Supervision Commission

Since the assumption goes that the stock market is ahead of the economic situation, a test was conducted in that the data on IKE were shifted a year, later referred to as autocorrelation. Table 5 shows the dependency between the WIG20 quotations from a given year and the number of IKE accounts from the following years. If the shift goes forward in the case of the number of IKE accounts, the autocorrelations for the banks all of a sudden changes value to – 0.14. This means that the dependency between the number of accounts and the behavior of the WIG20 index is reversely correlated. For insurance undertakings the value increases from

0.31 to 0.58, and thus, the behavior of the stock market grows in importance when we make a decision to set up an account under the IKE pension system. For brokerage houses the dependency goes down to -0.24. A high negative value of the index for voluntary pension funds operated by PTE is the result of its short history, making it difficult to consider the findings to be meaningful. At the beginning, virtually all kinds of accounts show an upward trend of the accounts that are being set up which is due to the low basis.

Table 5. Correlation coefficient of the Stock Exchange index in relation to number of IPA accounts

WIG20	Banks	Brokerage houses	TFI	Insurance undertakings	Voluntary pension funds managed by PTE
Wyprzedzający	0.064896	-0.51150	-0.49416	-0.35277	-0.83680
bez zmian	0.34955	-0.33891	0.075017	0.3149	-0.91918
Opóźniony	-0.13640	-0.23756	0.321608	0.5788	-0.96222

Source: The author's own study based on the data from the Financial Supervision Commission

It seems that the most interesting group investigated are investors who make their own investment decisions through brokerage accounts, without any support of qualified advisors. This group has to devote the highest amount of time to make analyses. For the rest of individuals who use the third pillar the decision is to buy a ready-made product created by insurers, investment funds and banks.

5. Conclusion

In the light of the data and discussion presented, one can notice that there is a gradual increase in the public's interest towards setting up individual retirement accounts, which is mainly attested by the increase in the amount of funds accumulated in the accounts. The improved situation on the capital market and that of economy could account for this. It is worth underlining that women are more

likely than men to open an account under the third pillar. The reason why the fair sex takes more interest could be both their far-sightedness and being aware of the fact that their pensions are lower than men's.

The analysis conducted in the paper shows that there is a correlation between IKE accounts set up in banks and the WIG20 index. However, for IKE in general this dependency is very small, only when introducing the time lag the correlation coefficient improves. Naturally, the analysis demonstrated is general in nature, and in order to make it a more in-depth investigation, it would be necessary to conduct a survey of people who use this form of funds accumulation for the future.

Although the news in the media are rarely positive, with every year people transfer ever greater sums into their IKE accounts. One of the reason why the interest in IKE has grown could be the tax on so called "anti-Belka" capital investment, which restricted the possibilities of the tax shield and triggered the discussion on the preferential treatment of capital accumulation.

In terms of substance, the reverse correlation between IKE and WIG20 index is of a virtual nature. For if we take into account the short history of IKE, the increase in the number of accounts being set up reflects the clients' willingness to take advantage of the new offer, regardless of the current stock market situation, which at that time showed a downward trend. A broader analysis of the phenomenon would call for a research conducted over a longer term.

Bibliography

Annual reports of the Financial Supervision Commission on the Individual Retirement Account Market (IKE) 2004-2015.

Białasek M. (2013), ARC. Rynek i opinia, http://www.arc.com.pl/konto_oszczednosciowe_najpopularniejsze-41999464-pl.html [27.12.2016].

CBOS (2013), Polacy o produktach długoterminowego oszczędzania, http://www.dobraemerytura.org/media/uploads/raport/Polacy_o_produkach_dlugoterminowego_oszczedzania_2013.pdf [27.12.2016].

Chamber of Fund and Asset Management (2008), Rynek funduszy inwestycyjnych w Polsce w 2007 roku, <http://www.izfa.pl/Media/files/aktualnosci/2008/Rok%202007%20-%20podsumowanie.pdf> [28.12.2016].

Druś M. (2013), Kobiety lepiej dysponują pieniędzmi, Puls Biznesu, <http://www.pb.pl/3140129,35550,kobiety-lepiej-dysponuja-pieniedzmi> [03.01.2017].

Greń J. (1976), Statystyka matematyczna. Modele i zadania, PWN, Warszawa.

Jagielnicki A. (2012), Twój osobisty fundusz emerytalny, Helion, Gliwice.

Jakubowski S. (2014), Fundusze emerytalne, in: Rynki finansowe – organizacja, instytucje, uczestnicy, ed. Banaszczyk-Soroka U., CH BECK, Warszawa.

Kubiak D. (2011), Rynek indywidualnych kont emerytalnych w Polsce - stan i perspektywy, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, Lublin.

Makowiecki A. (2013), KNF: Mniej niż 1 mld zł na IKE i IKZE. III filar potrzebuje zmian, Gazeta Ubezpieczeniowa, http://www.gu.com.pl/index.php?option=com_content&view=article&id=47157:knf-mniej-ni-1-mld-z-na-ike-i-ikze-iii-filar-potrzebuje-zmian&catid=96&Itemid=98 [07.01.2017].

Ministry of Treasury (2016), http://akcjonariatobywatelski.pl/ftp/dokumenty/Infografika_5_lat_programu.pdf [07.01.2017].

Stańczyk B. (2013), Konsument na rynku Indywidualnych Kont Emerytalnych, Wydawnictwo Uniwersytetu Łódzkiego, Łódź.

Szzyk A., Karasek J. (2015), Kobiety w finansach, Fundacja Instytut Innowacyjna Gospodarka, Warszawa.

Ustawa z dn. 20 kwietnia 2004 r. o indywidualnych kontach emerytalnych oraz indywidualnych kontach zabezpieczenia emerytalnego (Act on Individual Retirement Accounts and Individual Pension Insurance Accounts), Journal of Laws 2004, no. 116, item 1205.

Wądołowska K. (2010), Sposoby gospodarowania pieniędzmi w gospodarstwach domowych, CBOS, Warszawa.

Witczak R. (2012), Opodatkowanie IKE i IKZE jako formy gromadzenia środków emerytalnych oraz instrument optymalizacji podatkowej, Wydawnictwo Uniwersytetu Łódzkiego, Łódź.

Żuk P. (2012), Stopa zwrotu, dywersyfikacja ryzyka i wysokość emerytury w systemie emerytalnym w Polsce, Komitet Obywatelski ds. Bezpieczeństwa Emerytalnego, http://kobe.org.pl/wp-content/uploads/2013/06/Piotr-%C5%BBuk_stopy-zwrotu.pdf [27.12.2016].

Gromadzenie środków w ramach IKE, a zmienność indeksu WIG 20

Streszczenie

Cel: Temat III filaru, dobrowolnego ubezpieczenia emerytalnego, pojawia się co pewien czas w mediach i wywołuje pytanie wśród społeczeństwa czy na emeryturze da się godnie żyć. Artykuł podejmuje próbę pokazania zmian zainteresowania Indywidualnymi Kontami Emerytalnymi (zwane dalej IKE) przez gospodarstwa domowe względem indeksu WIG20. Zachowanie rynku kapitałowego według autora ma wpływ na społeczeństwo podczas podejmowania decyzji gromadzenia środków w ramach IKE. Celem artykułu jest zbadanie zależności pomiędzy zainteresowaniem gospodarstw domowych zakładaniem IKE a fluktuacją indeksu WIG20. Przeprowadzone badanie zostało opracowane na podstawie danych z okresu 12 lat, tj. od 2004 do 2015 roku. W treści opracowania przedstawiono charakterystykę IKE, a także wpływ indeksu giełdowego WIG20 na przepływ środków lokowanych na IKE.

Układ / metody badawcze: Badanie z wykorzystaniem współczynnika korelacji Pearsona, wskazało na niewielką zależność między liczbą IKE a WIG20.

Wnioski / wyniki: Po przeanalizowaniu poszczególnych form IKE, można zauważyć nieoczekiwaną zależność między IKE w dobrowolnym funduszu emerytalnym zarządzanym przez PTE, a WIG20.

Oryginalność / wartość artykułu: Artykuł może znaleźć zainteresowanie wśród inwestorów, jako wyznacznik w podejmowaniu decyzji inwestycyjnych; naukowców, w celu dalszego pogłębiania tematu związanego z III filarem.

Ograniczenie badań: Ograniczeniem badania jest brak danych dotyczących nieaktywnych kont, a które nie zostały zlikwidowane.

Słowa kluczowe: IKE, gospodarstwa domowe, inwestowanie, oszczędności

JEL: E2