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Stock recommendations – an analysis of usefulness

Introduction

Information is a highly influential factor to all financial market participants. Recommendations from analysts are one of its sources. They are taken account of by individual non-professional investors, in particular. The fact that they constitute a short summary of an analysis explains why they are often cited in the financial media and draw investors' attention to particular stocks.

The main objective of the research was to ascertain the accuracy and, thus, the usefulness of recommendations regarding the stocks listed on the Warsaw Stock Exchange. The analysis was based on a data set which includes almost 18,000 recommendations made by 82 analytical firms from 2000 to the end of June 2015, and consisted of two parts – one concerning qualitative recommendations, and the other one – target prices which were provided for 15,342 recommendations.

The article proceeds as follows: Section 1 deals with the theoretical background on stock recommendations, while Section 2 presents an overview of the literature related to the past research on the recommendations' accuracy. Sections 3 and 4 provide a description of the data set and the research methodology, respectively. Finally, having discussed the results, we shall draw conclusions.

1. Stock recommendations

Analysts' reports are one of the information sources that an investor may wish to employ. They vary in terms of length – from brief summaries to comprehensive documents. However, they generally consist of similar parts, such as a description of the core business of the company, its key financial indicators, an overview of the industry which it operates in, an explanation why the authors

predict that the company will thrive or fail, assumptions made by analysts while valuating the stock, an expected price for the stock over a given period of time, and an analyst's recommendation. Those reports are usually prepared by sell-side analysts, who work for brokers, investment banks or research firms. They are provided to external clients to encourage them to place buy or sell orders. The group of clients usually includes buy-side analysts or portfolio managers of pension funds, asset management companies or insurance companies (Stanislawek 2012). Furthermore, the reports are also aimed at individual non-professional investors.

A stock recommendation is a report section which probably attracts the most attention of its readers. It is an expression of analysts' beliefs concerning a stock value in relation to its current market price (Francis and Soffer 1997). Right after their publication, stock recommendations are usually available to clients of financial institutions only. After a certain period of time some recommendations can also be found on various financial websites and, therefore, they become commonly available. Although the preparation of analyses and recommendations is one of the services rendered by financial institutions to their clients, it is also a form of publicity aimed at attracting new clients.

Due to the fact that different financial institutions have different nomenclature for recommendations, and that rating scales are not uniform across them, investors have to face an abundance of terminology used. The most common ones are 'buy', 'hold' and 'sell'. Nevertheless, they can be replaced with 'strong buy', 'neutral' and 'strong sell'. There are also intermediate categories, though. Between 'buy' and 'hold' one can enumerate, for instance: 'accumulate', 'add', 'outperform' or 'over-weight', and 'reduce', 'underperform' or 'under-weight' between 'hold' and 'sell' (Investopedia 2014).

The distribution of stock recommendations is skewed towards the non-negative ones (Francis and Soffer 1997). It may be caused by a number of factors, for example (Investopedia 2014; Schmidt 2016; Stanislawek 2012):

- investment banking activities of brokerages, and a possible willingness to please large corporations – granting a negative rating might deter current and potential clients from using their services. In accordance with the so-called Chinese Wall concept, research and investment banking should be kept separate;
- access to corporate information – analysts who issue a negative recommendation may have strongly limited access to managers and other sources of information on the company in the future;
- increase of fees and commissions that are charged by brokerages when executing customer orders – positive recommendations may encourage clients to buy more stocks and, therefore, they may boost sales.

2. Literature overview

Studies concerning the accuracy of stock recommendations in the Polish market suggest that investors should be careful about using such analyses.

Biedrzyński (2009) analysed 516 recommendations which were issued by the five biggest brokerage houses between January 2006 and February 2008. He assessed the accuracy of recommendations by comparing target prices indicated in the analytical reports to the closing prices of the stocks noted on the last day of the analysed period – 1 February 2008, and in the cases where it was also possible, to the closing prices on a day after nine months from the issuance of particular recommendations. The deviations of target prices from market prices were substantial, regardless of the approach adopted. The arithmetic mean of the percentage differences between market prices on the last day of the analysis and target prices was equal to 60%, and the median was 46.36%. Within a nine-month time horizon, those values were equal to 44.77% and 29.46%, respectively. Next, Biedrzyński analysed qualitative recommendations and divided them into three groups. He regarded them as accurate if the percentage difference between the market price in the target period and the market price on the day of issuance of recommendation (Biedrzyński 2009):

- was higher than 5% in the case of 'buy' recommendations;
- did not exceed 10% in the case of 'hold' recommendations;
- was more than 5% lower in the case of 'sell' recommendations.

Again, the analysis was carried out for two target periods – after nine months from the issuance of recommendation, and in the time horizon ending on 1 February 2008. Within the former time span, Biedrzyński analysed 391 recommendations and assessed 43.2% of them to be accurate, whereas within the latter – he scrutinised as many as 515 recommendations and regarded 36.5% of them as accurate.

Czyżycki (2013) based his research on an accuracy ratio that was calculated for 5,325 recommendations issued from March 2006 to August 2012. The formula for the ratio is as follows:

$$I_T = \begin{cases} 1 & if\ I_{T-1} = 1 \\ \dfrac{P_T - P_0}{P_{REK} - P_0} & in\ other\ cases \end{cases} \tag{1}$$

where P_T is stock price on day T (where T = 1, 2, ..., 100), P_0 is market price on the day of recommendation issuance and P_{REK} is target price. He used this ratio to create a ranking of financial institutions which issue stock recommendations. When T = 10, Wood & Company was the best of the analysed institutions. When T = 30, 50 or 100, the first place went to BDM. Moreover, he noticed that negative recommendations were less accurate if compared to positive ones.

Dąbrowski (2013) scrutinised 1,029 recommendations issued between 2007 and 2011 for five blue-chip companies listed on the Warsaw Stock Exchange –

Bank Pekao, KGHM, PKN Orlen, PKO BP, Telekomunikacja Polska. He classified them as accurate if a stock attained its target price within the time period that was indicated in an analytical report – 44.63% cases. He also analysed the cases in which the target price was not reached, but all the same, the stock generated a profit within the target period – 63.5% cases. Based on that, Dąbrowski created a ranking of the best brokerage houses. Dom Maklerski BZ WBK, Millenium Dom Maklerski and UBS were among the top performers. He also built hypothetical portfolios which were invested in according to recommendations. This approach revealed that the three top brokerage houses were: Millenium Dom Maklerski, Goldman Sachs and DI BRE.

An attempt to assess the accuracy of brokerage recommendations was also made by Zaremba and Konieczka (2014). They verified the profitability of investment strategies based on recommendations issued between 2005 and 2012. They created long/short portfolios and tested them against a market model and the capital asset pricing model. Their results indicated that recommendations are almost worthless to investors. The investment strategy of taking long positions in the best rated stocks and short positions in the worst rated ones gave negative excess returns. The two researchers analysed annual rates of return, but, statistically, their results were not significant.

Zaremba and Konieczka (2015) also analysed the profitability of recommendations for the period between 2004 and 2013, using monthly data on Polish stocks. Again, they built long/short portfolios and tested them against the capital asset pricing model, the three-factor model of Fama and French, and the four--factor model of Carhart. This time around, the results showed that investments in the best rated stocks gave higher returns than in the worst rated ones. Strategies which were based on stock recommendations brought positive and statistically significant returns.

Prusak (2015) analysed 470 stock recommendations which were issued between 2009 and 2012. To do that, he used different approaches. First, he calculated the deviation of the target price of a particular stock from its market price at the end of the analysed period, i.e. after six, nine, and twelve months following the issuance of recommendation, and at the end of its validity. Next, based on the subjectively defined five-level scale for deviations, he marked the analysed recommendations in the range from ‘very bad’ to ‘very good’. The other static approach was based on the assumptions made by the institutions which issued recommendations and which were presented in the analytical reports. He also verified whether, based on recommendations, an investor could achieve a positive rate of return.

A dynamic approach was based on percentage deviations used in the first static approach. The deviations were calculated for every single day of the following periods: six, nine, and twelve months following the issuance of recommendation, and for a period within which a recommendation was supposed to be valid. Next, for every period, Prusak found the minimal deviation and, using the same five-

-level scale as in the first static method, he marked the recommendations from 'very good' to 'very bad'. As for the last approach, Prusak checked whether the target price was attained within the six-, nine-, twelve-month time horizon, and within the time of validity of a recommendation (Prusak 2015).

Based on the static approaches, he found a low accuracy of recommendations; however, he noticed that 'buy' recommendations generated positive returns following the above-mentioned time periods. Dynamic approaches led to a higher accuracy of recommendations – depending on the analysed time period, 53%–61% of recommendations were assessed as 'very good', which meant that the minimal percentage difference between the target price and the price reached by stock within the analysed time period did not exceed +/- 5%. The overall conclusion was that recommendations had little added value, and using them while selecting stocks for a portfolio was not an effective investment strategy (Prusak 2015).

The aim of Wnuczak (2015) was to analyse the effectiveness of stock recommendations within the periods of market collapse. His sample consisted of more than 12,000 recommendations issued between 2004 and 2014. Based on the linear regression, he concluded that stock analysts tend to identify a substantial growth potential for some stocks even under disadvantageous market conditions. Nevertheless, in such periods, an investor should treat recommendations with exceptional caution.

Stock recommendations have received attention in foreign literature as well. One of the approaches used to assess their usefulness was to check if investing according to recommendations was profitable (Barber et al. 2001, Barber et al. 2003, Green 2006, Hall and Tacon 2010, Andersen, Jones and Martinez 2016). Some papers also contain the analyses of the accuracy of target prices issued for shares listed on foreign stock exchanges. Asquith et al. (2005) divided scrutinised target prices into two subsets. If a target price was set above the current price of a stock, they considered the prediction to be accurate when the actual stock price equalled or exceeded it at any time within an annual horizon following the release of a report. If a target price was set below the current price of a stock, they considered it to be accurate if the actual price was equal or lower than the target price within an annual horizon. In order to assess the accuracy of target prices Bonini et al. (2010) developed their own accuracy metric, computed under- and overachievement of target prices, as well as analysed the distribution of prediction errors. Another measure was proposed by Kerl (2011). In this study, he assumed that any deviation of the actual price from the target reduced the accuracy of predictions. Therefore, he based his metric on the absolute values and then developed its modification by adjusting it by the stock-specific volatility to make stock predictions comparable. Bradshaw, Brown and Huang (2013) analysed target price forecasts by using a few metrics: rank correlation between realized returns and predicted returns that result from the analyst's target prices for the portfolio of covered stocks, target price forecast error, the absolute value

of this error, a binary variable which was equal to one if the actual closing price of a stock at the end of an annual horizon was at or above the target price, and last but not least, a binary variable set to one if the target price was met at any time within an annual horizon.

3. The data

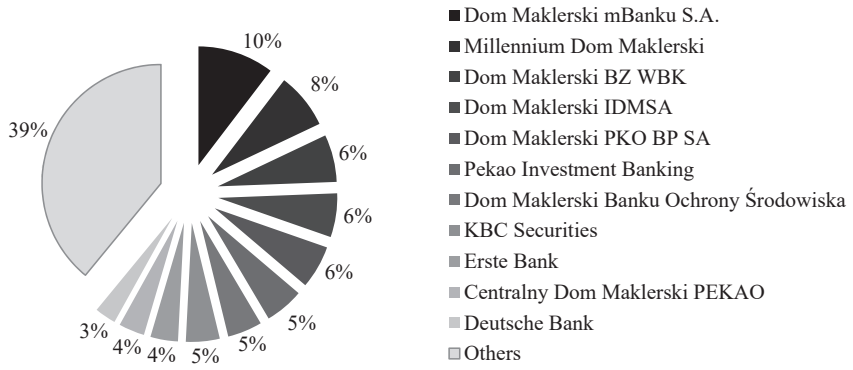
The data set consisted of qualitative stock recommendations (e.g. 'buy', 'hold', 'sell') and target prices published from the beginning of 2000 to the end of June 2015, which were taken from the website Bankier.pl. Observations were excluded from the analysis if there were two different target prices or two contradictory qualitative recommendations (and no target price) issued with the same date by one institution for a particular stock. If there was one target price with two different qualitative recommendations issued on the same day by one institution for a given stock, each time we chose a recommendation which was less neutral – e.g. 'buy' instead of 'hold'. It is worth noting that the rating nomenclature was very diversified – there were about thirty distinct, but often synonymous terms used by financial institutions. Moreover, a few institutions changed the terms used over the analysed period of time. Due to this fact, we arbitrarily decided to reclassify them into four separate categories – 'buy', 'hold', 'sell' and – when it was doubtful which category to choose – 'others'.

In order to assess the accuracy of recommendations and target prices, we used minimal, maximal and closing daily prices of the analysed stocks, downloaded from the GPW Infostrefa website, and adjusted for stock splits and reverse splits, based on the related information, also published on this website. Due to name changes, mergers and acquisitions, fifteen stock companies were excluded from further analysis.

The number of qualitative recommendations amounted to 17,739 and 15,342 of them were also provided with target prices. They concerned 468 stocks from the Warsaw Stock Exchange, also the ones which were delisted before the end of the analysed time period. In total, they were issued by 82 financial institutions (60% of which can be classified as banks). Figure 1 shows the percentage share of the eleven institutions which issued more than 500 recommendations in the overall number of qualitative recommendations over the analysed time period. They accounted for approximately 60% of the data set, and only 40% of recommendations were prepared by other 71 analytical companies.

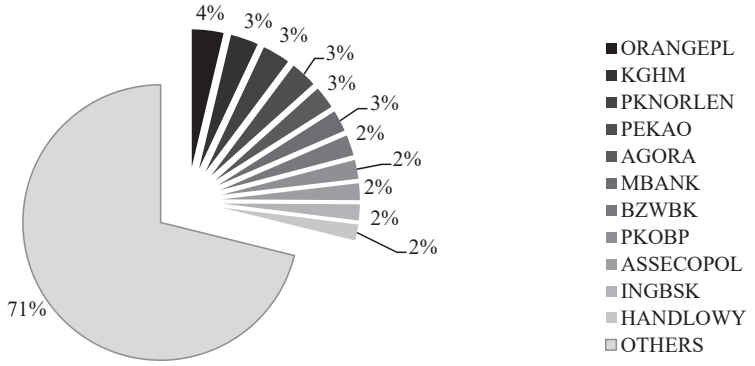
Figure 2 presents the percentage share of ten companies which drew most attention of analysts, in the total number of qualitative recommendations. This group includes stocks from the banking industry mainly; however, there are also representatives of the telecommunications, media, extractive and IT sectors.

Figure 1
Breakdown of recommendations by institutions in the analysed period – percentage share



Source: authors' own calculations based on data from Bankier.pl.

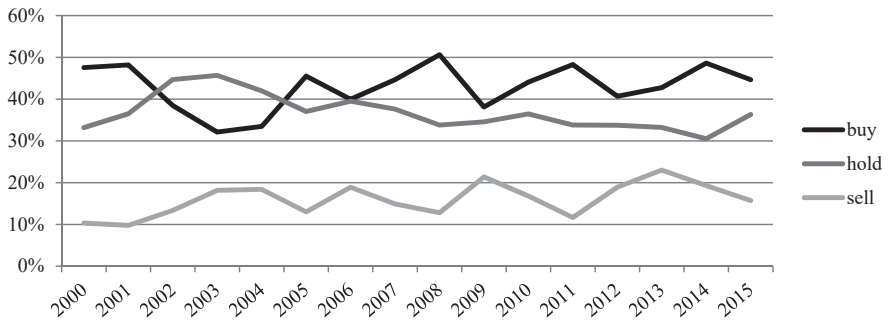
Figure 2
Breakdown of recommendations by stock companies in the analysed period – percentage share



Source: authors' own calculations based on data from Bankier.pl.

Figure 3 depicts the breakdown of recommendations by their type from 2000 to June 2015. We can easily observe a bias towards non-negative recommendations. On average, the percentage share of recommendations denoted as 'buy' and 'hold' accounted for 80% of all recommendations. It is worth noting that in 2008, in comparison to 2007, the share of 'buy' recommendations increased by 6 percentage points. It dropped, however, in 2009, and was accompanied by an increase in the share of 'sell' recommendations.

Figure 3
Breakdown of recommendations by their type from 2000 to June 2015



Source: authors' own calculations based on data from Bankier.pl.

4. Methodology

4.1. An analysis of qualitative recommendations

In the first stage of our analysis we put the focus on the assessment of accuracy of qualitative recommendations. As stated in the analysts' reports, recommendations are usually supposed to be realized over six or twelve months, unless they are revised. Due to this fact, we calculated two arithmetic means – the arithmetic mean of daily closing prices of stocks in the sixth month, starting from the day of making a particular recommendation, and the analogous mean in the twelfth month. Then, we defined the initial price as the closing price on a day preceding the recommendation, and calculated a modified rate of return using the following formula:

$$\text{modified return} = \frac{\text{average price-initial price}}{\text{initial price}}. \qquad (2)$$

Next, we issued post factum recommendations. If a return defined in such a way was lower than -0.1, we issued a 'sell' recommendation; if it was greater than 0.1, a 'buy' recommendation, and 'hold' otherwise. After that, we compared the analysts' recommendations with recommendations made post factum. To do so, we calculated the number of cases where they were equal and the number of cases where an analyst issued a 'buy' recommendation while we made a 'sell' one, and the other way around.

4.2. An analysis of target prices

The analysed target prices were adjusted for splits and reverse splits. In order to do that, on the day of occurrence of such a corporate action, the target price was divided by the split ratio (e.g. in the case of a 2-for-1 split, it was divided by 2, while in the case of a reverse split, it was multiplied by the ratio). From that time on, it was the adjusted target prices that were used for further analysis. No adjustments for other types of corporate actions were made as we assumed that they should be taken into consideration by analysts when issuing a recommendation.

The initial price of a stock may be defined as the closing price on the day preceding the day when the recommendation was issued. The day of forecast realization was determined as follows:

- if the initial price was lower than the target price, we checked on which day, starting from the day a recommendation was made, the maximal daily price was greater or equal to the target price;
- if the initial price was higher than the target price, we checked on which day, starting from the day of making a recommendation, the minimal daily price was lower or equal to the target price;
- if the initial price was equal to the target price, we assumed that the forecast was realized immediately.

Moreover, we calculated the time span between the day of recommendation issuance, and either its realization or change.

As the last step, we prepared the ranking of financial institutions which was based on the accuracy of target price estimates. We limited our data set to institutions which made more than 500 recommendations in the analysed period. In order to assess the accuracy in the longer run, we analysed 'buy' and 'sell' recommendations only.

5. The results

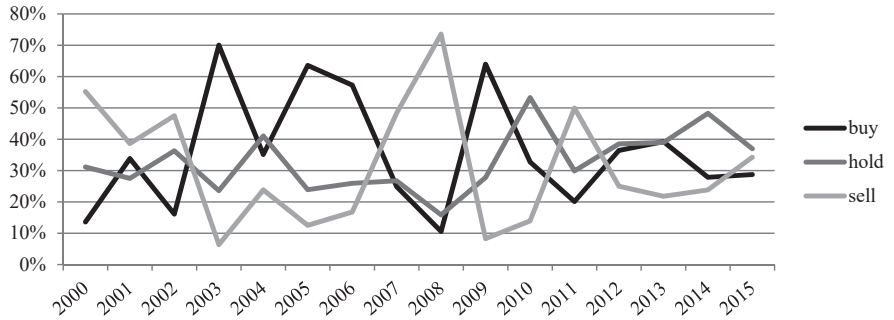
5.1. The results of the analysis of qualitative recommendations

The two figures below show the share of recommendations issued post factum in every single year of the analysed period. The first one is based on recommendations issued for a six-month time horizon, whereas the other figure concerns those for an annual horizon. As we can see, in comparison to the results in Figure 3, which depicted the share of analysts' recommendations according to their type, the share of particular types of post factum recommendations is substantially more volatile. In both cases – semi-annual and annual, it can be noted that the share of 'buy' recommendations started to drop in 2006, achieving its minimum in 2008 (for the semi-annual horizon) and 2007 (for the annual horizon). At the same

time, there was a noticeable increase in the share of 'sell' recommendations – it started in 2006 and reached its maximum in 2008 (for the semi-annual horizon) and in 2007 (for the annual horizon). It could indicate that analysts reacted with a delay, and, by and large, did not manage to adjust their recommendations to the upcoming crisis.

Figure 4

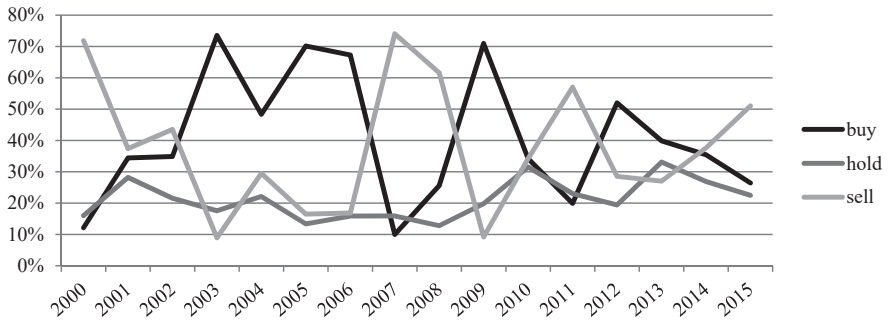
A breakdown of post factum recommendations – the semi-annual time horizon



Source: authors' own calculations based on data from Bankier.pl and GPW Infostrefa.

Figure 5

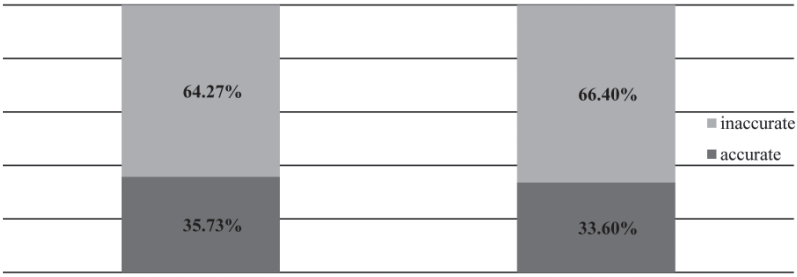
A breakdown of post factum recommendations – the annual time horizon



Source: authors' own calculations based on data from Bankier.pl and GPW Infostrefa.

A comparison of analysts' recommendations with the ones issued post factum showed that in the case of the semi-annual time horizon, 36% of analysts' recommendations could be classified as accurate, whereas 64% as inaccurate. Moreover, 19% of the total number of recommendations was highly inaccurate – either an analyst's recommendation was positive, whereas post factum it became evident that it should have been negative, or an analyst's recommendation was negative, while it should have been positive.

Figure 6
The results of a comparison of analysts' recommendations with recommendations issued post factum



Source: authors' own calculations based on data from Bankier.pl and GPW Infostrefa.

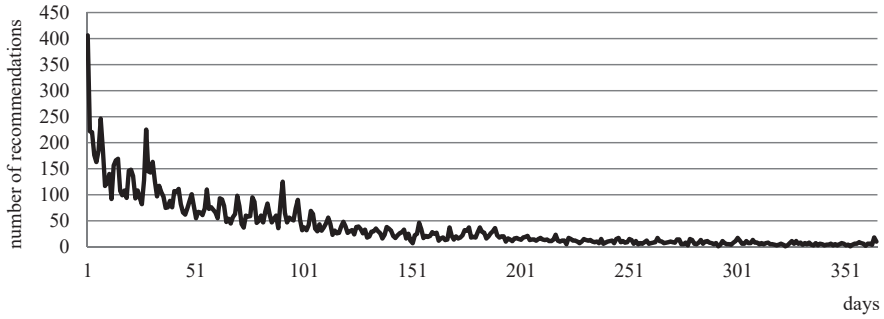
In the annual time horizon, 34% of analysts' recommendations were accurate, and 66% inaccurate, which means that the correctness ratio increased slightly in the longer run. Nevertheless, the percentage of highly inaccurate recommendations rose to as many as 28% of the overall number of recommendations.

5.2. The results of the analysis of target prices

The time of validity of a particular recommendation was established as the time span between the day when it was issued and the day when it was either realized or changed. It is presented in Figure 7. The time of validity decreased over time. On average, a recommendation was realized or replaced with a new one within 141 days. We excluded from the analysis the recommendations with the validity time equal to 0, which denotes that they were issued and realized on the same day. The peak was reached around the 28th day, when the number of recommendations amounted to 225 – 45% of them were realized, and 55% revised. This may result from the fact that some institutions issued recommendations for particular stocks on a regular basis, e.g. monthly.

Having established the time of validity, we determined how many target prices were or were not achieved within six and twelve months. We did that for all the recommendations supported by a target price and also – separately – for the negative and non-negative ones. The results for the semi-annual time horizon are presented in Table 1 and for annual one in Table 2. Both tables contain the number of recommendations issued with a target price, the number of cases where the target price was reached, and the number of cases where it was not. We also calculated the percentage share of attained and not attained target prices for all recommendations in each category (in each row of the first column with numbers in the table).

Figure 7
The time of validity of recommendations



Source: authors' own calculations based on data from Bankier.pl and GPW Infostrefa.

Table 1
The accuracy of total, negative and non-negative recommendations in the semi-annual time horizon – the number and percentage of all the recommendations issued in each category

		Issued	Reached		Not reached	
All recommendations		15 342	8 874	57.8%	6 468	42.2%
Negative recommendations	All negative	4 204	2 803	66.7%	1 401	33.3%
	≤ -10%	2 144	1 049	48.9%	1 095	51.1%
	(-10%; -5%)	883	684	77.5%	199	22.5%
	<-5%; 0%)	1 177	1 070	90.9%	107	9.1%
Non-negative recommendations	All non-negative	11 138	6 071	54.5%	5 067	45.5%
	<0%; 5%>	1 827	1 584	86.7%	243	13.3%
	(5%; 10%)	2 010	1 408	70.0%	602	30.0%
	≥ 10%	7 301	3 079	42.2%	4 222	57.8%

Source: authors' own calculations based on data from Bankier.pl and GPW Infostrefa.

The number of the analysed target prices was equal to 15,324. In 57.8% of the cases, target prices were reached within six months. In 66.2% of the cases, they were achieved within twelve months. The target prices of negative recommendations were characterised by a higher rate of accuracy than the non-negative ones. It indicates that negative recommendations were issued with more caution.

If a target price did not differ much from the market price noted on the day of recommendation preparation, it could be attained very quickly. Due to this fact, we split the observations into six groups depending on the difference between these two prices. The groups contained the recommendations for which those differences were, respectively, below or equal -10%, between -10% and

-5%, between -5% and 0, between 0 and 5%, between 5% and 10%, and were equal or greater than 10%. The observed pattern is the same for both Table 1 and Table 2 – the greater the absolute difference, the lower the accuracy.

The creation of rankings of financial institutions which issued more than 500 recommendations from 2000 to June 2015 was the final stage of the analysis. The proportion of achieved target prices estimated by a particular institution in the total number of estimates of this institution is presented in Tables 3 and 4. The former table shows the accuracy rate in the semi-annual and the latter in the annual time horizon.

Table 2

The accuracy of total, negative and non-negative recommendations in the annual time horizon – the number and percentage of all the recommendations issued in each category

		Issued	Reached		Not reached	
All recommendations		15 342	10 159	66.2%	5 183	33.8%
Negative recommendations	All negative	4 204	3 086	73.4%	1 118	26.6%
	≤ -10%	2 144	1 260	58.8%	884	41.2%
	(-10%; -5%)	883	723	81.9%	160	18.1%
	<-5%; 0%)	1 177	1 103	93.7%	74	6.3%
Non-negative recommendations	All non-negative	11 138	7 073	63.5%	4 065	36.5%
	<0%; 5%>	1 827	1 640	89.8%	187	10.2%
	(5%; 10%)	2 010	1 541	76.7%	469	23.3%
	≥ 10%	7 301	3 892	53.3%	3 409	46.7%

Source: authors' own calculations based on data from Bankier.pl and GPW Infostrefa.

Table 3

Ranking of financial institutions based on the accuracy of target price estimates – the semi-annual time horizon

Nº in ranking	Financial Institution	% of accurate recommendations
1	Centralny Dom Maklerski PEKAO	55.1
2	KBC Securities	50.2
3	Millennium Dom Maklerski	49.4
4	Dom Maklerski PKO BP SA	47.7
5	Dom Maklerski mBanku S.A.	46.4
6	Dom Maklerski Banku Ochrony Środowiska	45.5

Nº in ranking	Financial Institution	% of accurate recommendations
7	Dom Maklerski BZ WBK	45.3
8	Pekao Investment Banking	45.0
9	Erste Bank	43.8
10	Dom Maklerski IDMSA	40.8
11	Deutsche Bank	40.0

Source: authors' own calculations based on data from Bankier.pl and GPW Infostrefa.

Table 4

Ranking of financial institutions based on the accuracy of target price estimates – the annual time horizon

Nº in ranking	Financial Institution	% of accurate recommendations
1	Centralny Dom Maklerski PEKAO	67.1
2	Millennium Dom Maklerski	62.0
3	KBC Securities	60.0
4	Dom Maklerski PKO BP SA	58.1
5	Dom Maklerski BZ WBK	58.0
6	Dom Maklerski mBanku S.A.	56.6
7	Dom Maklerski Banku Ochrony Środowiska	56.3
8	Pekao Investment Banking	55.0
9	Dom Maklerski IDMSA	53.8
10	Deutsche Bank	51.4
11	Erste Bank	51.2

Source: authors' own calculations based on data from Bankier.pl and GPW Infostrefa.

Centralny Dom Maklerski PEKAO is the leader in terms of accuracy rate, and the first four places of both rankings are taken by the same four institutions – Centralny Dom Maklerski PEKAO, KBC Securities, Millennium Dom Maklerski and Dom Maklerski PKO BP SA. Moreover, the accuracy rate is higher for the annual time horizon – it ranges from 51% to 67%, whereas for the semi-annual time horizon – from 40% to 55%. The standard deviation of the percentage of accurate recommendations for the annual ranking is also slightly higher (4.7 p.p.) than for the semi-annual one (4.3 p.p.).

Concluding Remarks

Stock recommendations, and in general, the analyst coverage, are important for stock market efficiency as they reduce the asymmetry of information between company management and investors. They also help investors identify potential investment opportunities (Hall and Tacon 2010) and draw their attention to particular stocks. Barber and Odean (2008) showed in their study that individual investors usually considered the purchase of stocks which attracted their attention in a given moment. Therefore, stock recommendations may positively affect investors' interest in trading particular stocks on the Warsaw Stock Exchange.

The aim of this research was to assess the usefulness of stock recommendations with respect to stocks listed on the Warsaw Stock Exchange between 2000 and June 2015. These time frames were wider than the time horizons scrutinised in the related literature on the Polish market and, therefore, our data set consisted of more observations. Our analysis demonstrated that stock analysts put the main focus on the selected biggest companies. In the examined period 29% of recommendations were issued with regards to 11 companies and 71% with respect to the remaining 457 stocks. This may imply that investors have a limited access to professional analyses of small and medium-sized businesses, which may result in the lack of interest in investing in stocks of some of these entities and adversely affect their liquidity.

Moreover, the analysis showed that a bias towards non-negative recommendations, as described in the literature, can be observed on the Polish market. On average, in the analysed period of time, a recommendation was realized or replaced with a new one within 141 days. Financial institutions differed from each other in terms of accuracy rate. Our results imply that investment decisions should not be based solely on stock recommendations. However, they do not suggest, either, that recommendations should be totally rejected as some of them can be informative.

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Stock Recommendations – An Analysis of Usefulness

Summary

This article presents the results of an assessment of the reliability and thus usefulness of the recommendations concerning stocks listed on the Warsaw Stock Exchange. In order to meet this goal, the authors analysed thoroughly a data set consisting of nearly 18,000 recommendations, issued from 2000 to the end of June 2015 by 82 analytical firms. The research was supported by an evaluation of the accuracy of target prices. The results obtained were used to assess the quality of the recommendations, and to make an attempt at ranking financial institutions on that basis.

Keywords: stock recommendation, accuracy of recommendations, target price