

# POLISH FINANCIAL MARKET IN 2016-2020 AND ITS RISKS

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**Abstract:** Proper functioning of the financial market possible through the provision of information on the situation of issuers, so it was pointed out how important are the information obligations arising from the specifics of the market to ensure equal access of investors to relevant information. Therefore, it was presented what should be the mode of providing information and defined information and the time of its disclosure. An important part of the Act are the provisions that impose obligations on investors, for example, in the form of disclosure of information on the state of shareholding, in addition, calls and other rights and obligations of shareholders of a public company are regulated.

**Keywords:** risk, financial market, transactions.

## 1. Introduction

One of the economic and financial issues that has lived to see dynamic development from both the theoretical and practical sides is the issue of financial stability and the related issue of systemic risk (financial system risk). The main facts of economic life, especially the functioning of the financial system, which have caused this are as follows: - the large negative consequences of financial mishaps for the real economy and households; - the increase in the value of assets of financial institutions (too big to fail); - the increase in the interconnectedness of financial institutions (too interconnected to fail).

From a scientific point of view, this means the emergence of a new area of research. From a practical point of view, it means the emergence of new challenges, primarily related to the risks of the financial system, and not just the risks of individual institutions. This has resulted, among other things, in the emergence of macro-prudential regulations that complement the previously dominant micro-prudential regulations. In addition, financial

stability committees and councils have begun to emerge in various countries (as well as transnationally). Already, central banks have begun publishing reports financial stability. These reports are also published by supranational organizations such as the International Monetary Fund and the European Systemic Risk Board.

## **2. Regulation of financial institutions**

The financial market operates on the basis of legal regulations, without this they would be just a set of recommendations and the participants in this market would decide for themselves whether to comply with these orders. In Poland, the financial market operates on the basis of [Srokosz, Zawadzka, 2018, p. 398-399]:

- statutory regulations, which include laws, regulations and EU regulations,
- regulations issued by supervisory authorities - these are decisions, recommendations and regulations issued by the Financial Supervision Commission (KNF),
- regulations issued by the organizers of a given market - e.g. by the Stock Exchange, the National Depository for Securities,
- regulations issued by financial institutions - these include regulations of derivatives brokers. This is called soft law - these norms, despite the lack of a formal obligation to comply with them, are observed by the subject of the law.

The financial market law creates the institutional infrastructure for the provision of financial services only by entities authorized to do so. The law defines a catalog of financial services and the entities authorized to provide them, and indicates the conditions that must be met by entities providing financial services while performing their activities in the financial market. The financial law contains regulations on the conduct of activities related to the provision of financial services, i.e. each such activity must be conducted on the basis of the obligation to obtain the applicable permits or entries in the relevant registers. In addition, so-called prudential norms have been defined in this law to ensure compliance with prudential norms, which are created by the system of control and supervision of entities providing financial services.

Each sector of the financial market sector is based on a separate system of legal norms contained in the law of the financial market, these include such laws as banking law together with the law of the cooperative savings and credit union sector and the legal regulation of the payment services market sector, capital market law, insurance law, the law of the payment services market sector. Some of the legal regulations are cross-sectoral then do not apply to

individual financial institutions, but to the financial market infrastructure, this is the Law on Financial Market Supervision, the most important law for public Polish financial market law.

Through regulations, standards have been created relating to the trading of financial instruments, these are regulations concerning both the way of concluding transactions and the time of their settlement, as well as allowing some of the types of transactions (that is, for example, short selling) and preventing the manipulation of prices and in the way of transactions that may occur. A particularly important element of regulation is the prevention of insider trading not available to the general investing public.

The most important regulations under which the Polish financial market operates are:

- **The Law of July 29, 2005 on Trading in Financial Instruments** [11] - it contains definitions of financial instruments and securities, requirements for financial instruments to be traded. The law also regulates the way in which the various forms that make up the financial market operate, and imposes requirements and obligations, as well as the way in which the operators of these markets are organized. The Trading Act regulates in detail the organization and rules for the operation of the regulated market, and describes in detail the deposit and settlement system, along with its tasks, functions and methods of its organization and operation. An important aspect of the law is the regulation of the activities of investment companies and their brokerage activities. In this regard, the types of activities that brokerage firms perform, the requirements that they must meet in order to act as an intermediary in the market, have also been regulated in detail. The legislator has specified in detail how the relations of investment firms with their clients should proceed based on mutual rights and obligations, The liability of these firms for their activities has been regulated. In addition, the law also included requirements for two licensed professions related to trading in financial instruments, i.e. securities broker and investment advisor. The provisions of the law specified what are the safeguards for investors' interests.

**The Act of July 29, 2005 on public offering and the conditions for introducing financial instruments into the organized trading system and on companies public** [11] - this act regulates the terms and conditions of making a public offering of securities, as well as conducting a subscription or sale of these securities, applying for the admission and subsequent introduction of securities or other financial instruments to trading on the regulated market. In addition, the Act regulates the obligations imposed on issuers of securities and other entities participating in the trading of these securities or other financial instruments. It also specifies the consequences that are associated with

obtaining the status of a public company, as well as the special rights and obligations arising from holding and trading in shares of such companies. The treatment of information documents such as a prospectus or information memorandum, which are related to a public offering, applying for the admission of securities or other financial instruments to trading on a regulated market, is regulated in detail. It defines these documents and specifies their content.

- **The Act of July 21, 2006 on Financial Market Supervision [10] and the Act of July 29, 2005 on Capital Market Supervision [11]** - these acts define the organization and procedure for exercising supervision over the financial and capital markets. The body that exercises supervision over the entire financial market and capital market - the Financial Supervision Commission - has been identified in them. The principles of the Commission's operation and the mode of its proceedings were outlined in these laws.
- **Law of May 27, 2004 on investment funds and management of alternative investment funds [12]** - this law specifies the rules for the establishment and operation of investment funds, as well as the rules for the operation of entities that manage alternative investment funds.
- **The Law on Bonds of January 15, 2015 [13]** - this act sets out the rules for issuing bonds and changing the terms of their sale, purchase and redemption.

The Polish financial market also operates on the basis of EU legislation, i.e. Directives of the European Parliament and the Council, EU Commission regulations and other acts Legal regulations that are implemented in Polish law. The most important EU regulations from the point of view of the capital market are [19]:

- Directive 2014/65/EU of the European Parliament and of the Council of May 15, 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU (MIFID II),
- Regulation (EU) No. 600/2014 of the European Parliament and of the Council of May 15, 2014 on markets in financial instruments and amending Regulation (EU) No. 648/2012 (MIFIR),
- Regulation (EU) No. 1095/2010 of the European Parliament and of the Council of November 24, 2010 establishing a European Supervisory Authority (European Securities and Markets Authority), amending Decision No. 716/2009/EC and repealing Commission Decision 2009/77/EC,

- Regulation (EU) No. 648/2012 of the European Parliament and of the Council of July 4, 2012 on OTC derivatives, central counterparties and trade repositories (EMIR),
- Directive 2003/71/EC of the European Parliament and of the Council of November 4, 2003 on the prospectus to be published when securities are offered to the public or admitted to trading,
- Directive 2007/36/EC of the European Parliament and of the Council of July 11, 2007 on the exercise of certain rights of shareholders of companies listed on a regulated market.

### **3. Market for transactions of a placement nature**

Participants in the market for transactions of a placement nature use instruments that serve them for day-to-day liquidity management. With the help of the instruments available within the market, temporary surpluses are invested or missing funds are borrowed. It is possible to divide the instruments within this market in terms of credit risk, in which case they are: unhedged deposits and currency hedged deposits (FX SWAP) as well as securities, i.e. contingent operations - repo (repurchase agreement) and SBB (sell/buy/back ) and BSB (buy/sell/back).

Unsecured deposits are the basic instrument of the interbank market, they are elements of instruments quoted on a yield basis, which are made available to the borrower at the nominal value of the instrument, and returned with the accrued interest [Pyka, 2004, p.112]. In the interbank market during deposit transactions, the owner of the instrument is not changed, only the holder of the funds. The dangerous deposit market belongs to the OTC (*over the counter*) unregulated markets. Its participants are dealers - they transact on their own account, *brokers* - open outcry intermediaries (the broker reporting the quotes passes them on to all participants), and *market-makers* - large active banks participating in the quotes. The unsafe deposit market operates on the basis of high efficiency and correct flow of information about quotes and providing participants with the certainty of concluding a contract. Mutual trust between the participants in the transaction is to ensure the proper functioning of the market for unsecured interbank deposits, in addition, methods are used to reduce the risks arising from the course of the transaction.

A method of limiting risk is the use of commitment limits, which are set individually for other participants in this market. Limits of involvement are the maximum amounts of interbank deposits that can be made with a given bank, they depend on the credibility of the

bank, the amount of its own funds, the assessment of market position and rating. With these deposits there is a liquidity risk, as any market disturbance causes a spike in prices, this is due to the fact that they are mostly *overnight* deposits. There is a growing dependence of banks on short-term money as a tool for regulating liquidity [Pietrzak a.o., 2006, p. 197]. Since unsafe deposits depend on interest rates (e.g., 1W WIBOR is used for transactions with a one-week maturity) there is interest rate risk, which affects the rate of return on invested funds.

Deposits hedged with currencies - *fx swaps*, are transactions on the borderline of the foreign exchange and investment markets, and are the most liquid instrument of the Polish interbank market. The risk with hedged transactions is the volatility of the value of the collateral, not the creditworthiness of the counterparty. There is a high foreign exchange risk with *fx swaps*, this is a result of exchange rate volatility. There also appears with *fx swaps* the risk of placing additional collateral, it is the result of market risk, which forces the deposit or replenishment of the amount of collateral, in the absence of such collateral there may be a need for early settlement of transactions. It is the transactions associated with liquidity risk manifested in the inability to close a position, that is, that it is not possible to conclude transactions that have opposite parameters, or with the increase in costs resulting from the closing of transactions. Another risk to which swap transactions are exposed is the risk of leverage, i.e. the possibility of large financial losses, which can result from even small changes in the price of the underlying instrument.

Repo operations, as well as SBB and BSB, are securities-backed transactions, and are elements of a money market that combines the interbank deposit and securities markets. REPO transaction is a conditional purchase transaction or repurchase agreement, its conditionality consists in the fact that the central bank (NBP) buys securities such as treasury bonds from commercial banks for a specified period of time, this allows the replenishment of the funds received, but only on the condition that the commercial bank, after a specified period of time and under specified financial conditions, repurchases these securities back [17].

There is a market risk associated with treasury bond trading operations, which are for a period shorter than the maturity date, which can occur with unfavorable price levels or lack of liquidity in the market. These transactions are subject to the issuer's credit risk, which is that the issuer may default on its obligations under the debt securities issued that are the subject of the transaction. If government bonds have the Treasury as the issuer, they are guaranteed to return the invested capital and the interest due. When Treasury bonds are sold, there may be a risk arising from the level of their prices below previous purchase prices.

With BSB and SBB transactions, there is an interest rate risk arising from the volatility of interest rates adversely affecting the rate of return on investment in some cases. As with government bond transactions, there is a credit risk for the issuer if it defaults on its obligations of the issued debt securities that are the subject of buy/sell/back and reverse repo transactions [17]. With BSB transactions, risk can arise from the formation of the occur at different levels of yields on government bonds that are traded below the yield that was set in the terms of the transaction for the resale of government bonds [17]. On the other hand, with SBB and repo transactions, the risk will occur at the level of yields on government bonds above the yield that was set in the terms of the transaction to repurchase government bonds [17].

In 2020, there was a significant decrease in turnover in the market for transactions of a placement nature compared to the previous year, the decrease was mainly in the repo and SBB market, while unsafe deposits and repos recorded an increase. Domestic banks primarily used unsafe deposits to manage their liquidity, despite the fact that the number of transactions fell and overnight deposits dominated - 92% of all turnover.

Fx swaps were mainly entered into by domestic banks seeking to reduce market risk resulting from mismatches between their asset and liability structures. On the other hand, the counterparties in these transactions were mainly foreign banks financing their investments in the domestic market with the help of renewing PLN deposits.

Currency swaps were transactions that increased their share in the structure of transactions of a placement nature, this was an increase of 8% from 2016 to 2020. According to data from the National Bank of Poland, in 2020 the average daily value of fx swap transactions involving the zloty in the domestic client market amounted to PLN 1.3 billion, while the average daily value of transactions that were concluded by domestic banks with other banks (mainly foreign) amounted to PLN 14.6 billion [6].

In the case of repo and SBB transactions, their value in 2020 fell by 34% compared to 2019 and amounted to PLN 11.2 billion. At the beginning of 2020. The NBP reduced operations supplying the banking sector with long-term liquidity, there was also a reduction in investor involvement in the domestic government bond market.

#### **4. Capital market**

The year 2020 in the domestic capital market differed significantly from previous years, as it was due to high uncertainty due to the economic impact of the outbreak of the Covid-19 pandemic. This can be seen in the volumes of individual segments in the domestic capital

market, the most important segments of which are the WSE Main Market, which provides trading in stocks, and the government bond market.

The pandemic influenced a significant downturn in the country's economy and translated into a global increase in risk aversion, this became apparent in the high volatility of financial instrument prices, as well as a decline in the liquidity of individual financial instruments, there was also a reduction in the value of new corporate bond issues [6]. All changes in the stock markets, especially stock exchanges, reflect the trends that are taking place in the global economy. (Autonomy has a trace character).

Capital markets are influenced by globalization and national markets are increasingly stripped of autonomy, transforming into something like relays of investment impulses locally [18]. The pandemic has revitalized the capital market and helped it by increasing investor activism.

The rate of return for 2020 for the WIG index was 45%. This shows the scale of change. Volatility, however, favors the capital market and the stock market. There was also a reduction in interest rates, this contributed to the situation that individual investors returned interest in the stock market. This effect was seen in the turnover on the stock exchange in 2020, the share of individual investors was 25%, compared to 12% in 2019.

On the Warsaw Stock Exchange, equity instruments such as shares, rights to shares (PDA), subscription rights, ETF titles and investment certificates are traded. On the regulated market that is part of the WSE's Main Market, two segments are organized - primary and parallel, and there is also a NewConnect market (ATS) on the exchange.

More than 95 percent of the value of all share transactions that are concluded on the organized markets take place on the regular market, and in 2020 there was a very large increase in the liquidity of the ATS. The Polish regulated market and the ATS are among the average EU exchanges in terms of capitalization of the value of WSE transactions. The market valuation of companies that are listed on the stock exchange, as well as the turnover of shares of these entities on the WSE, were several dozen times smaller than the largest European exchanges - Euronext, Deutsche Boerse, and larger than the exchanges of Central and Eastern Europe.

The number of IPOs on the NewConnect market and the WSE's Main Market has been declining since 2017, and the total capitalization for these markets at the end of 2020 was PLN 1,088.4 billion, down 2.3% compared to 2019.

Changes in share prices varied greatly depending on the size of the companies, with the WIG20 index falling 7.7% in 2020 and the sWIG80 index rising 33.6%. The stock prices of large companies declined due to the economic and financial situation, while the increase in the



shares of small entities was the result of an increase in interest in trading in financial instruments by individual investors, who took the risk of buying shares hoping for a higher rate of return on the shares of small entities. Due to the possibility of legal risk, the market valuation of banks declined - the WIG-banks index recorded a 29.6% decline. The WIG-mining index rose by as much as 82.1% as coal and copper prices rose on global commodity markets.

Annual net turnover of shares on the WSE's Main Market in 2020. (PLN 311.1 billion) increased compared to 2016. (PLN 202.3 billion) by more than 53%, the average session in million PLN. was in 2016. 805.9 million zlotys, and already in 2020. - PLN 1,234.6 million.

The domestic and global situation has shown how strongly it is able to affect financial markets, especially with regard to the rate of economic growth, the amount of inflation or interest rates. All this has translated into greater interest among individual investors in financial instruments, especially stocks and bonds. The decline in interest rates contributed to a decrease in the attractiveness of bank deposits and debt securities, with investors expecting high investment returns after the decline that occurred in early 2020. In 2020, financial and business risks of companies related to the economic and business situation of many listed companies emerged, many industries were closed, financial performance deteriorated. Gains were made by gaming companies.

Against the background of Europe, the Polish government bond market is the largest in Central and Eastern Europe and eighth in the European Union (in 2016-2019 it was ranked ninth). The face value of domestic government bonds outstanding increased by 14.3% in 2020 compared to the previous year and amounted to PLN 770.1 billion.

In 2016, the value of domestic long-term Treasury securities outstanding was PLN 587.9 billion, an increase of 31% by 2020. In 2020, the increase was a result of the Covid-19 pandemic, while net borrowing needs increased - meeting them was possible through the issuance of government bonds in the domestic wholesale market [6].

The value of fixed-rate market bonds in 2016 was PLN 427.5 billion, while in 2020 it was already PLN 531.9 billion, an increase of 24%. According to the guidelines of the Ministry of Finance, the value of a single series of bonds was at least PLN 25 billion was dictated by hedging against the occurrence of liquidity risk. In contrast, the floating-rate bond market in the debt structure of domestic government bonds in 2020 recorded a decline of 24.9% over the previous year - a 9.6% decline in the eurozone during this period.

In 2020, compared to 2019, there was a significant decrease in the average daily net turnover in the domestic government bond market (almost 50%) from PLN 28.1 billion to PLN 18.8 billion, and the market liquidity index decreased from 0.35 to 0.22.

Treasury bonds are a low credit risk instrument because they are guaranteed by the Treasury. In the case of bonds that are not guaranteed by the Treasury, there is a risk that the issuer of the bonds will not fulfill its obligations, which were specified in the terms of issue. Bond prices are sensitive to changes in market interest rates and the issuer's rating. There is also a risk that the issuer, which is a debtor to the bondholder, may for various reasons fail to return the face value of the bond with interest due or other benefits, or that the deadlines specified in the terms of issue will not be met.

The degree of risk depends on the credibility of the issuer, in which case the rating is taken into account (Treasury debt securities are rated highly, while corporate bonds with a high degree of financial risk are rated lowest). In the case of bonds, there is a risk arising from changes in market interest rates, which directly affect the valuation and profitability of these debt securities. Another type of risk that occurs with bonds is reinvestment risk. When buying this instrument, a measure of the yield on the bonds being purchased is taken into account, that is, the yield to maturity (YTM- Yield To Maturity). Since market interest rates fluctuate, therefore the risk that the investor will not be able to reinvest the coupons received while holding the bond at the originally assumed interest rate - this is reinvestment risk [2]. Bond prices are characterized by greater stability than, for example, stock prices.

## **5. Systemic risk assessment**

Short-term risk can be modeled relatively easily because it is based on statistical measurements, it is much more difficult to measure long-term risk. Systemic risk is constantly monitored because it is a requirement to maintain the stability of the entire financial system and its environment, this means measures to eliminate or reduce risk. According to Article 4 (15) of the Law on Macroprudential Supervision of the Financial System and Crisis Management in the Financial System, systemic risk is "the risk of such a disruption in the functioning of the financial system that, if materialized, disrupts the operation of the financial system and the national economy as a whole" [14]. In order to ensure long-term sustainable economic development, the financial system must function stably. In Poland, 75% of the total financial system is the banking sector, so this sector is of particular importance for maintaining the stability of the financial system.

Supervision over the stability of the financial system is exercised by the National Bank of Poland, it takes measures to reduce systemic risk or eliminate it -art. 3(2)(6), (6a) and (6b) of the NBP Act , thus the NBP [15] participates in the exercise of macro-prudential supervision

of the financial system, and in the event of a direct threat to the stability of the financial system - may also participate in crisis management activities [5]. Macroprudential supervision involves strengthening the resilience of the financial system in the event that a systemic risk were to occur, the NBP supports the country's long-term sustainable economic growth in accordance with Article 1 (2) of the Law on Macroprudential Supervision of the Financial System and Crisis Management in the Financial System. Stabilizing the financial system allows the NBP to achieve its goal of maintaining price stability. The overall identification of systemic risk consists of analyses of situations that occur in the financial system and includes not only sectoral analysis, but also internal processes and phenomena. It is also intra-system linkages and the impact of the financial system on the environment and vice versa.

The Financial Stability Committee, acting in accordance with the recommendations of the European Systemic Risk Board, takes into account the specifics of the Polish financial system and the structure of the analyzed systemic risk, so that it is possible for him to set intermediate objectives of macroprudential supervision. The intermediate objectives of macroprudential supervision are [1]:

- 1) to reduce risks that result from excessive growth or size of debt or leverage,
- 2) to reduce risks that result from excessive asset-liability mismatches or the risk of illiquidity in financial markets,
- 3) limitation of risks that result from excessive concentrations of exposures to entities or risk factors and related relationships between entities in the financial system,
- 4) to reduce risks originating in inadequate incentives affecting the behavior of financial institutions or their customers,
- 5) ensuring adequate resilience of the financial infrastructure.

Until 2019, the Polish financial system was assessed overall as stable. Elevated systemic risk was only in the area of (3) risks resulting from excessive concentration of exposures and links between financial system entities. The reason for this, was that some credit institutions were in a difficult financial situation, including some commercial banks. There was also legal risk, which resulted from the foreign currency loan portfolio and the high share of Treasury bonds in banks' assets. By the end of 2019, other areas of risk were assessed as having moderate or low possible consequences. But special attention was paid to the steadily increasing share of consumer loans with high amounts and the growing role of the government sector in the financial system. During this period, it was assessed that the source of shocks could be the

country's external environment and uncertainty, which was still at a high level. It was assessed that Poland's external environment could be a trigger or amplify the impact of risks identified at the national level [5].

In 2020, the Covid-19 pandemic increased the level of risk in the Polish financial system, previously unknown risks appeared and existing risks intensified.

It was assessed that the intensification of negative phenomena resulting from the pandemic should not threaten the Polish financial system because there was a high level of involvement on the part of the States to limit the effects of Covid-19 on the economy. The pandemic exacerbated weaknesses in the financial system that were already there before the pandemic. Exposure to Treasury and Treasury-guaranteed bonds has increased, which has further strengthened the relationship between the public finance sector and the banking sector. Strengthens the relationship between the situation of the public finance sector and that of the banking sector.

In the global financial markets at the end of 2020, the valuation of risk decreased compared to the situation in March of this year. A limited impact of the Covid-19 pandemic on the global economic and financial situation was observed, despite a significant decrease in price volatility and high valuation of some assets (primarily equities). Demand for risky assets was driven primarily by low interest rates.

## **6. Conclusion**

From the point of view of the stability of the financial system, risk refers to any phenomena or characteristics that can lead to disruptions in its functioning. More specifically, financial system risk refers to changes in the state of the financial system that affect its level of stability. Therefore, risk is not recognized as a source of obtaining worse-than-expected results, but rather as the possibility of realization of adverse events that cause instability, and these events are often associated with extreme risks.

Theoretical and empirical studies prior to the global financial crisis point to such sources that amplify business cycles - and thus increase the level of systemic risk - as lack of transparency, information asymmetry, incomplete markets or moral hazard. Studies also signal that the accumulation of highly secured loans can reinforce the propagation of shocks. Nevertheless, many aspects of systemic risk, such as the role of the interbank market or direct and indirect international channels of contagion, remained undescribed.

An important feature of the financial system identified through the crises is the interdependencies (both linear and non-linear) that exist between institutions and market participants, and between related financial and macroeconomic indicators. Moreover, as recent studies have shown, the feedback between the financial and real sectors intensifies during (and strictly after) a crisis, significantly increasing systemic risk and the scale of its materialization.

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