

Risks of collective investment undertakings in the context of global capital markets

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Abstract. In the context of globalization, international institutional investors have taken over a significant proportion of global investment assets. Among this group also belong to collective investment undertakings whose primary motive is regulated by collecting funds from indeterminate group of natural persons and legal persons for the purpose of doing business on a global scale. As part of their reporting obligations, these entities are required to report on the risks associated with the investment and how to eliminate them. Investment firms must use risk management methods that allow these risks to be identified at any time. The main risks associated with investments in collective investment funds include global financial risks: interest rate risk, currency risk, equity risk, credit risk, counterparty risk, liquidity risk, operational risk and political risk. This article deals with the definition of specific investment risks and the options for their elimination for collective investment entities. The main goal of the article is to recommend the elimination of these risks based on the identified risks associated with collective investment.

1 Introduction

Institutional investors have gained a dominant position in the financial market since the 1990s, they control a significant portion of global investment assets and execute the vast majority of investment instrument trades. According to [1], an institutional investor is an operator managing large capital goods using professional investment methods. Institutional investors have an impact on the structure of demand for investment instruments and invest in the framework of longer investment horizon. According to [2-4] that fact can have a positive impact on the innovation output of individual companies. This is also confirmed in the contribution by [5], who analyze the impact of institutional ownership on business innovation. The presence of institutional investors with a longer time horizon also, according to [6-7], causes a decrease in the cost of capital. Institutional investors such as banks, insurance companies, pension funds and collective investment undertakings have a positive impact on the development of international investment and the creation of a global market.

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1.1 Collective investment

The basic motive for collective investment is the regulated collection of funds from an indeterminate circle of retail savers and large institutional investors. The purpose is to capitalize the funds, diversify risk and professionally manage savings on the basis of preferred investment strategy. Collective investment according to [8] also means greater fund selection, higher liquidity of invested funds, lower transaction costs and tax benefits. According to [9], collective investment provides investors with the opportunity to acquire diversified investment shares and professional portfolio management. For the existence of collective investment undertakings is important own accounting system, especially according to [10], for venture capital funds. Specific conditions for this type of business are always defined by the relevant legislative standards applicable in the given economy.

In the Czech Republic, the collective investment is regulated by the Act No. 240/2013 Coll. on investment companies and investment funds. This legal standard defined new legal forms of collective investment undertakings that are essential for convergence to the European standard [11]. And also this legal standard by [12] introduced a new systematisation of collective investment undertakings. According to [13], one of the legal information obligations for collective investment funds is the key information document. This document contains brief basic characteristics of the collective investment fund necessary for understanding the nature and risks associated with investing in a specific fund. In terms of the harmonization of European legislation, a uniform form of key information content is essential for the comparability of investment opportunity information. Harmonization within the EU also applies to the tax area. In the case of corporate income tax, which also includes collective investment undertakings, it is possible to observe, in particular, efforts to harmonize the tax base and unify rates. These factors affect the tax burden that is the subject of a number of studies. For example, [14] analyze the effect of the tax burden on corporate income taxes on investments. The basic information needed for the investor includes the definition of the investment objective and the investment policy of the collective investment fund. For funds with active portfolio management, information about risk mitigation methods is also important. Management companies must use such risk management methods that allow specific risks to be identified at any time. At the same time, the extent of the risk impact on investment return must be defined [13]. The main risks associated with investments in collective investment funds include: interest rate risk, foreign currency risk, equity risk, credit risk, counterparty risk, liquidity risk, operational risk and political risk [8].

1.2 Risks of collective investment

Undertakings for collective investment have defined legal obligations according to [13] in relation to [15]. In addition to these legal obligations, they also have their own investment strategy, which affects the composition of investment instruments in the investment fund's portfolio.

According to [15], the open risk positions of collective investment funds must be monitored by the management or investment company. These companies are obliged to apply specific procedures used to eliminate individual investment risks. Background data relevant to the calculation of risk include the present value of the underlying assets, the risk of counterparty default, future movements in the financial market and the time needed to close positions.

Collective investment risks can be divided into systematic and unique risks according to the systematisation of investment risks.

1.2.1 Systematic risks of collective investment

Political risk is related to specific investment instruments in their portfolios. If the political situation changes, interest rates may change and this will trigger a change in the price of the investment instrument. There may also be a change in the legislative conditions governing this area, a change in the regulation of collective investment, and these factors will then affect the price of securities issued by investment funds. According to [16], the political risk of investing is mainly related to the share component of the portfolio.

Economic risk is influenced by economic cycles of the given economy. If the investment fund does not have a diversified portfolio into different regions, from a geographic point of view the unit value may fluctuate depending on the economic development in the given area. As a result of the economic slowdown, there may also be a change in the tax mix and pressure on corporate income tax changes. According to [17] there were statistically significant changes in the tax structure of EU Member States in the period after the financial crisis. Corporate income tax rates have changed in some countries.

Currency risk may arise when an investment fund or mutual fund invests in assets denominated in a foreign currency. The performance and riskiness of the funds depend on the development of the exchange rate of the domestic and foreign currency. Cross-border investment growth is according to [18] one of the trends in the global financial market. Foreign currency futures contracts are generally used to eliminate this risk.

Interest rate risk arises when the price of a participation certificate (or other security issued by a collective investment fund) varies due to changing market interest rates if the portfolio contains investment instruments whose price is dependent on movements in market interest rates. According to [8] with the change of market interest rate is also associated risk of reinvesting.

Inflation risk affects the rate of return of individual instruments in the portfolio. As inflation increases, the rate of return may be even negative.

The market liquidity risk is determined by the functioning of the financial market as a whole.

1.2.2 Unique risks of collective investment

According to [1], the unique risks are related to a specific investment instrument, a unit certificate or other security issued by a collective investment fund. This risk can be diversified through the composition of the investment fund portfolio or the investment strategy.

Credit risk arises from the existence of securities in the fund's portfolio. The issuers of these securities will cease to repay their obligations in the case that their situation deteriorates. The quality of securities issuers is assessed by specialized rating agencies. As reports in his study [19] in particular, retail investors make use of the information provided by common funds rating agencies when making investment decisions.

Counterparty risk is defined as the risk of the trading partner's insolvency in direct trading with a security or in trading with a financial derivative. If a counterparty sells an investment instrument, it may not be delivered and will not be redeemed if the investment instrument is sold.

Portfolio manager risk, this risk is due to management errors in active portfolio management. The portfolio manager may make decisions leading to a decline in the performance of the investment fund. Management risk also depends on the length of fund's existence, portfolio managers experience, human error and frauds [8].

The liquidity risk of collective investment funds is defined as a situation when a given collective investment fund will not be able to meet its financial liabilities upon maturity or will not be able to finance its assets. This risk depends on the composition of the fund's assets,

in which assets the fund invests from a liquidity perspective, for example, shares, bonds, real estate. In the event of fluctuations on the capital markets, a collective investment undertaking may not monetize a particular asset at a reasonable price or sell timely capital goods.

The risk of conversion, when the performance of an investment fund may decrease in the event of modification of the investment strategy.

2 Material and methods

In a globalized economy, the collective investment is one way of valorizing free cash over time. As with all investment instruments, certain risks are associated with this form. The aim of this paper is to identify these specific risks and to suggest possible ways of their elimination.

The paper uses a descriptive method for the characteristics of collective investment and characteristics of investment risks associated with this form of investment. Furthermore, a comparison of possible ways of eliminating specific investment risks is performed. Information was drawn mainly from scientific articles, specialized literature, legislative standards and websites dealing with this issue.

3 Results

In the financial market, risk management is associated with the process of identifying individual risks, their analysis and making investment decisions by reducing the degree of uncertainty. As regards collective investment undertakings, risk management can be understood as a situation where the portfolio manager analyzes and quantifies potential losses from the investment and takes measures to reduce them following the chosen investment strategy.

The influence of portfolio managers' decisions on the transfer of risks to the performance of equity funds is addressed in an article by [20]. The authors argue that a change in the level of risk for share mutual funds can be achieved by changing the ratio between portfolio shares and cash, by changing exposure to systematic risk or by changing portfolio concentration in specific sectors. If risks are not sufficiently actively managed, the consequences may be felt in individuals, investment firms and the economy as a whole. The main reason for monitoring and identifying specific risks is their relationship to the performance of the investment fund [18].

The basic instruments that can be used to eliminate risk are futures. Futures trades are characterized as a type of contract where the period from the moment of conclusion of the contract to its settlement is contractually determined and can range in the order of several months. This characteristic makes it possible to continue trading with these contracts and make profits through deviations from spot prices. Within the financial market, these contracts are derived from a specific financial asset and cumulatively are defined as financial derivatives. Financial derivatives can be divided according to the underlying asset into commodity, interest or currency [21]. According to [22], the financial derivatives market has developed particularly in the last fifteen years, when the major players in OTC markets are large banks that mediate these trades for other institutional investors.

The issue of hedging interest rate risk is dealt in his study by [23], who recommends the use of interest rate futures contracts and forward contracts to ensure the movement of market interest rates. Interest rate options or interest rate swaps can be used for the bond component of the portfolio. According to [24], analysis of available data, information, reports and recommendations about a specific investment is important for the elimination of investment risks. In terms of political and territorial risk, when setting up an international portfolio, investors choose investment instruments in countries with better legal protection. For

example, [24] claims that the planned Brexit already had a significant negative impact on international financial markets.

3.1 Elimination of currency risk

From the perspective of the creation of the portfolio of a collective investment fund, in addition to the market price of foreign investment instruments, currency risk is also an important factor. As reported by [19] the main trend of the 21st century global financial market is the sharp increase in cross-border investment, which also affects the behaviour of investment fund portfolio managers. The authors believe that precisely the effort to manage currency risk, which will cause an outflow of investments from markets with high currency volatility, may cause a deviation from the chosen mutual fund's investment strategy. The exchange rate dynamics have a significant effect on returns from foreign securities, participation certificates, certificates and possibly other products. The existence of currency risk makes it necessary to hedge investments in foreign instruments, even though these transactions are cost-related. Frequently used currency financial derivatives include forward contracts, futures, swaps and option contracts, which are more expensive. An overview and distribution of possible currency derivatives is shown in Figure 1.

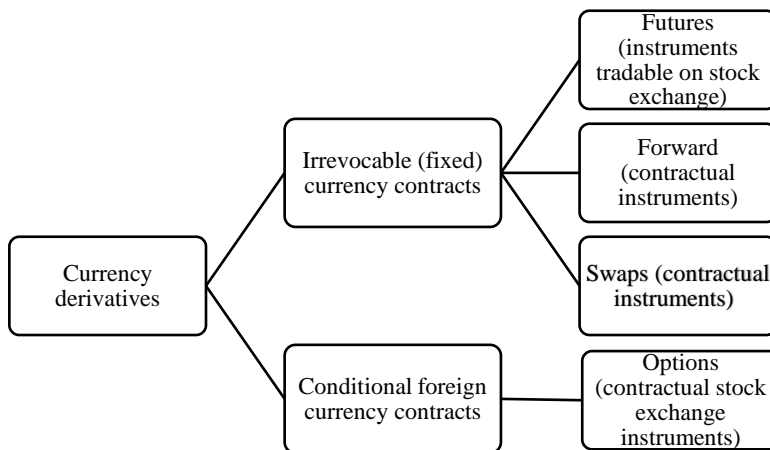


Fig. 1. Breakdown of currency derivatives.
Source: Own processing according to [21]

A currency forward is a contractual term contract for the exchange of a fixed amount in two different currencies at a particular date in the future. The price of this trade is the so-called forward rate [25].

According to [21], currency futures are characterized as stock exchange standardized instruments for the future exchange of a fixed amount denominated in one currency and from a predetermined amount of the other currency. The most traded currency on derivative exchanges is the US dollar.

Foreign exchange swaps are characterized as futures swap contracts, which oblige the contracting parties to exchange their agreed interest payments denominated in two different currencies. At the beginning and at the end of the contract the nominal values of the underlying currencies are exchanged for the agreed exchange rate [21]. These standardized types of swap transactions are based on international agreements and have a uniform nomenclature. **Currency options** can be defined as contracts that give the option holder the right but not the obligation to either buy or sell the underlying asset at a predetermined price.

3.2 Example of the calculation of the cost of detecting currency risk using a currency swap

Due to lower costs, investment companies are using to hedge currency swaps. A model foreign exchange swap is an agreement for the simultaneous purchase or sale of a foreign currency at a spot rate and the resale or purchase of the same amount of the same foreign currency with a deferred settlement at a forward rate calculated from the spot rate and short-term interest rates of the domestic and foreign currencies. This model example (Table 1) is based on the data of executed trades, which were provided to the author in 2015 [25]. Unfortunately, due to the reluctance of investment companies to provide new data, it is not possible to report actual values.

Table 1. Example of a swap contract.

Date of conclusion of the trade	Date of settlement of the trade	Currency 1	Currency 2	Direction of 1. currency in USD	Amount of 1. currency in USD	Rate of CZK/CZK	Amount of 2. currency in CZK
21. 5. 2015	24. 7. 2015	USD	CZK	Sale 1. currency	-27 000 000	24,5110	661 797 000
21. 5. 2015	26. 5. 2015	USD	CZK	Purchase 1. currency	27 000 000	24,5278	- 662 250 600

Source: Own processing according to [25]

The first column shows the closing date of the futures transaction, the length of the contract is in the model example in the period from May 26, 2015 to July 24, 2015, ie 59 days according to the convention for calculating the ACT / 365 interest period.

On 26 May 2015, the Mutual Fund purchased the required amount of currency to be hedged, in this case 27,000,000 USD (column amount of the 1st currency) for the exchange rate of 24.5278 CZK / USD. Conversely, this is the resulting volume of CZK 662,250,600 (column volume 2nd currency).

Subsequently, at the time of currency sale on July 24, 2015, the purchased USD 27,000,000, which is CZK 661,797,000, will be sold. In this particular example, the collateral cost can be calculated as a percentage by:

$$\text{cost \% p. a.} = \frac{661\,797\,000 - 662\,250\,600}{|-662\,250\,600| \times \frac{59}{365}} \times 100 = -0,42\%$$

The resulting value depends on the current value of the USD exchange rate against the CZK. In this particular example, the negative value was -0.42%, which is the cost of the hedging transaction. If the cost is to be expressed in absolute terms, we add the volume of the 2nd currency at the end of the hedging and the volume of the 2nd currency at the beginning of the hedging. Negative values represent the cost of the hedging, positive values indicate the profit from the hedging transaction. The hidden cost of collateral is lost profit if the cash volume in CZK would be deposited for this period in the form of a short-term deposit [25].

4 Conclusion

Institutional investors are important players in the global financial markets, as identified by studying previous contributions. In addition to banks, insurance companies and large brokers, they may also include collective investment undertakings, where mutual funds represent a very significant part. This area (like other types of investment instruments) is associated with

the specific risks identified in this paper. Some risks can be reduced in the context of global diversification, but in particular some systematic risks cannot be completely eliminated. The area of collective investment is regulated within the Czech Republic as well as within the European Union. Regulatory requirements include the obligation to identify risks associated with specific investment strategies, to inform their clients about these risks and how to eliminate them, in their statutes and key information. The authors focused on currency risk, which is mainly hedged by currency forwards and currency swaps. These instruments are also associated with certain costs. In the model example, the cost of a particular hedging transaction was calculated as a percentage. The value of the cost of hedging may be useful for comparison with the performance of the mutual fund.

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