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INSTITUTIONAL INVESTORS IN THE CZECH VOUCHER PRIVATISATION

Institucionální investoři v české kuponové
privatizaci

Master's thesis

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Annotation

Voucher privatisation that proceeded in the Czech Republic in the 1990s was a realisation of a unique experiment which resulted in the transfer of almost half of state-owned enterprises to private hands within two years. A substantial part of these private hands was represented by intermediaries—the investment privatisation funds. Their presence in the privatisation is often criticised as the cause of the extensive tunnelling. The aim of this thesis is to find out how these funds performed after the privatisation, and why. Based on numerous sources, we follow the expectations put on the funds, and the reality of their performance. Our arguments are further supported with the econometric modelling. We conclude that the tunnelling was not as extensive and that the privatisation funds were not as harmful for the privatisation as is believed.

Keywords

Investment privatisation funds, Voucher privatisation, Third wave, Tunnelling.

Declaration

Hereby I declare that this thesis is my authorial work, which I worked out on my own under the supervision of doc. Ing. Libor Židek, Ph.D. All sources, references, and literature are properly cited and listed in complete reference, in accordance with the legislative, as well as with the inner rules of the Masaryk University and the Faculty of Economics and Administration.

Brno, 5th May 2019

Author's signature

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INTRODUCTION

*“Privatisation is the sale of enterprises
that no one owns,
and whose value no one knows,
to buyers who have no money.”*
— Janusz Lewandowski

At the beginning of 1990, after the communist regime had ceased and the new government of national unity was established, the need to remove the structures of the socialist economy was utter. One of the most binding structure, that was at the same time impossible to be removed instantly, was the state ownership. The ownership of property is even considered to be the core difference between socialism and capitalism (Brada, 1996). However bold the statement seems, the privatisation of property was unambiguously among the decisive elements of the transformation. The full scenario of the transformation, called Scenario of economic reform, was put together during the first half of 1990. The Scenario already included the concept of the voucher privatisation: *“The only way to involve the broad population into the mass privatisation relatively quickly is to offer the property ‘undervalued.’ Technically, the solution lies in the method of the so-called investment vouchers”* (FS ČSFR, 1990).

Tríska (2002) writes that the first mentions about the voucher privatisation date back to the negotiations in Koloděje castle in February 1990. The voucher privatisation’s aim, narrowly defined, was simple; to transfer the property rights quickly, with the guarantee that everybody can join. It was, in fact, a simple process; the individuals obtained vouchers and used them instead of money to bid for companies’ shares. Benefits are obvious. First, the vouchers’ purchasing power did not necessarily have to match their price. This feature ensured that the broad population could be involved. And second, sales of the vouchers could be restricted to a preferred group, such as nationals. Moreover, there were side-effects that seem even more important in the long run. The most important aim from this point of view is what Židek (2017, p. 225) writes: *“Establishing a positive relationship of citizens to the market economy and gaining experience in living with it.”* Thus, the voucher privatisation allowed the population to gain experience with the market economy relatively cheaply.

The emergence of the market economy was an aim that was, de facto, fulfilled immediately. For those who wanted to join the privatisation but not the bidding, firms that would do the service for them showed up instantly. These were the investment privatisation funds. They, together with the individual investors, represented the demand side in the voucher privatisation. The general perception of their presence in the privatisation was ambiguous. At first, the funds were suggested; mainly by foreign advisers such as Fischer (1991), that is to say. After the initial rush the funds caused by their advertising campaign, they were praised for advertising not only themselves but the privatisation as such (Young, 1997). As soon as the privatisation was finished, the funds were expected to manage the firms, and they eventually failed to meet the expectations (Myant, 2013). And then, the funds’ attendance was, and still is, deemed to be a failure.

The aim of this thesis is to find out how the funds performed after the privatisation, and why. Specifically, we seek to find out whether the funds were indeed a failure. Throughout the text, we follow the line of the funds’ role in, and most importantly, after the privatisation. The structure of the text is devoted to the declared aim. It proceeds from anchoring the funds as the privatisation actors, via their role in the privatisation as such and in the post-privatisation environment, to the eventual failures, and measurement of their general performance. The thesis is divided into four chapters. In Chapter 1, the legislature that introduced the voucher privatisation, and the funds’ role in the privatisation are discussed. The goal of the chapter is to provide the reader with the rules the funds were to follow, the mechanism of the voucher privatisation, the expectations with which the funds were allowed for, and the channel that led to the eventual failure. This was nicknamed tunnelling; the definition of the term is

provided. Chapter 2 follows the set-up given in the first chapter and chronologically discusses the two waves of the voucher privatisation. It then proceeds to the post-privatisation environment. One section is devoted to the capital market. The core of the second chapter deals with the funds after the privatisation, during the so-called third wave. The general goal is to give a notion of what the tunnelling meant in reality, what were the funds' opportunities, and what was their motivation to meet the expectations identified in the first chapter. The second chapter also provides patterns of tunnelling. Chapter 3 turns the attention to the individual cases of tunnelling. They are discussed in the sense of the definition provided in the first chapter, and the reality described in the second chapter. Selection of the cases is based on the patterns of tunnelling given in the second chapter. The goal is to identify the problems on the funds that were provably problematic, which gives a basis for the final chapter. Lastly, Chapter 4 aims to find the patterns in the hard data, using a simple but efficient model. The results serve in the conclusion where we answer the question whether the tunnelling was a rule or whether it was an exception.

1 INVESTMENT PRIVATISATION FUNDS

Generally, the investment funds are institutional investors whose task is to obtain money from their customers and use it to conduct collective investments, that is, to buy investment instruments, on behalf of their customers. There are several motivations for individual investors to switch to collective investments. As individual investors, people might not be able to reach a sufficiently diversified portfolio and might not even be able to invest in some instruments due to the price being too high. They might also not be professionals and thus might not recognise which instrument is worth buying and which is not. All these struggles potentially diminish in the collective scheme, but others arise: the investment funds charge fees, and the individuals do not have many options to modify the fund's investment strategy. During the Czech¹ privatisation, the investment funds played a slightly different role. They partly resembled the investment funds that are common in the capital markets. Besides, however, they were employed to help concentrate the ownership that some feared would be dispersed after the privatisation. With the increasing number of owners, each of them holding only an undecisive share, the odds that an agreement on a firm's policy would be adopted decline. The fear was that without the investment privatisation funds, the voucher scheme would lead to a situation where the property rights would indeed be held by real owners. Their enforcement, however, would be difficult because the consensus would be arduous to achieve.

In the Czech voucher privatisation, both the individual investors (holders of investment vouchers) and the investment privatisation funds (IPF) represented the demand side. The funds were, therefore, an integral element of the Czech privatisation, whose existence was formally enabled by Privatisation Laws. This chapter serves as an outline of the funds' emergence in the privatisation process. First, we concentrate on the legislation that shaped the funds and their playfield. Second, we give account to the studies that deal with the funds' presence in the privatisation, and the expectations that were raised.

1.1 LEGISLATION

Legislative environment in the Czech Republic at the beginning of the transformation was entirely subordinated to the centrally planned economy. Due to state-owned companies being nearly definitional for that economy, their privatisation was among the most important steps towards the market economy. In this subchapter, we discuss the laws that enabled the changes in property relations. The IPFs could not attend any other form of privatisation but the voucher privatisation, and the focus here is therefore on the laws that shaped the latter. We primarily concentrate on the laws that set and defined the voucher privatisation. Nevertheless, the amendments are discussed as well, to capture the legislative development during the voucher privatisation and up to 1998. There are two reasons to choose this year. First, although the voucher privatisation as such was finished in 1994, the changes in the property rights went on, with the IPFs playing a decisive role in the process. Second, a crucial amendment to the main piece of legislation that formed the IPFs, i.e. the Investment Companies and Investment Funds Act, took place in 1998. Within the laws, the design of the voucher privatisation is embedded. We make use of it and explain the process of the voucher privatisation here. We proceed more or less chronologically; for the exact chronology of the voucher privatisation, see the timeline in Appendix A.

¹ Throughout this text, we will use the name Czech Republic, even though many of the discussed issues proceeded in the Slovak Republic as well. There are three reasons for it. First, the voucher privatization was designed for the federation, which means the procedure was identical in both parts of the federation. Second, the Czech and Slovak Federative Republic lasted from April 1990 until December 1992, and dissolved on 1st January 1993; after the dissolution, the second wave of the voucher privatization continued only in the Czech Republic. And third, this text does not anyhow take into account the geographic location of the actors and issues discussed, meaning that it is only a matter of terms. Replacing the "Czech Republic" with the official "Czech and Slovak Federative Republic" would bring no change to the conclusions.

1.1.1 THE LARGE-SCALE PRIVATISATION ACT

The main legal act that set the privatisation was the Large-Scale Privatisation Act (Law No. 92/1991 Coll., On the Conditions of the State Property Conveyance). Being passed in February and legally effective since April 1991, the act defined the voucher privatisation as one of the methods of the mass privatisation. The voucher privatisation was thus set as an organic part of the privatisation process.

Vouchers and property were the basis for the voucher privatisation. The voucher was described in § 22; it was essentially a registered security which only natural person could buy. The vouchers could not be sold however, they could only be used for the purposes specified within the Large-Scale Privatisation Act.² The property was selected; each state enterprise that was intended to be privatised was first needed to be assigned a privatisation project (§ 6). The project named the part of the enterprise that entered the voucher privatisation. Then, following the approved privatisation project, the state property was transferred to the National Property Fund (NPF). The NPF was in § 12 ordered to transfer the property into joint-stock companies. In § 25 the act allowed the owners of the investment vouchers to use their vouchers to buy shares of either the enterprises or investment funds or both. The IPFs were established and approved by the state for the very purpose. The law, therefore, introduced the IPFs into the voucher privatisation only; they could not attend any other form of privatisation.

The Large-Scale Privatisation Act served as an outline for the privatisation. It bore the decision that the state property will be privatised and that vouchers will serve the purpose. The actual procedure of the voucher privatisation and the funds' rights and responsibilities were elucidated in subsequent acts.

1.1.2 THE INVESTMENT COMPANIES AND INVESTMENT FUNDS ACT

Legal status of the IPFs was enacted by the Investment Companies and Investment Funds Act (Law No. 248/1992 Coll., On the Investment Companies and Investment Funds). It only passed in April 1992 and became legally effective in May 1992, a year after the Large-Scale Privatization Law did. That is, the IPFs somewhat shaped the law which was designed to shape the IPFs.

The law defined the investment companies, investment funds and mutual funds in § 2. These were legal entities which collected money in order to increase its value. An investment company's legal form could be either a joint-stock company or a limited liability company. An investment fund's legal form was restricted to a joint-stock company only. According to § 6, the investment company established mutual funds and raised money by issuing the mutual funds' shares, whereas the investment fund raised money by issuing its shares (§ 7). In both cases, the investment company was its funds' administrator. As for the mutual funds' legal status, according to the § 10, these were not legal entities and could be either open-ended or closed-end. The § 10 also ordered the investment company to accept the open-ended funds' shares back and refund the shareholder. However, it was not obliged to do so in case of the closed-end funds. Hence the closed-end shareholders were, according to the law, able to gain their money back either if they sold their shares to a third person, or after the mutual fund matured.

Besides, the law attempted to protect the funds' shareholders. Firstly, by § 23 it reacted to the malpractice already conducted by some funds and prohibited the funds from untrue or misleading statements that some used for their promotion. Secondly, in § 24, the act sought to limit and diversify risks. It restricted the mutual funds and the investment funds to have more than 10 per cent of their portfolios composed of shares issued by a single enterprise. That is, the simplest portfolio consisted of 10 companies, where each was exactly 10 per cent of the fund's portfolio. It restricted the investment companies, too—they could not hold more than a 20 per cent share of an enterprise. The restriction was

² The reason for making the vouchers untradeable was a fear that if the vouchers were tradeable, the transfers would lead to a higher velocity of money which would increase inflation. That would be a very unpleasant phenomenon in an overall inflationary environment, where the policymakers conducted restrictive policies aimed at lowering inflation.

imposed upon the investment companies and was thus meant that a sum of an enterprise's shares in all funds the investment company managed could not exceed 20 per cent. Furthermore, the funds were restricted to hold any shares of banks and insurance companies, if these were the fund's founder. Thirdly, in § 25 it ordered the investment companies and investment funds to publish their financial statements regularly. Fourthly, in § 27, the fee that could be charged was restricted to 2 per cent of the total equity.

The Investment Companies and Investment Funds Act amendment (Law No. 151/1996 Coll., which changes and adds to the Law No. 248/1992 Coll., On the Investment Companies and Investment Funds, 1996) only passed in April 1996—four years after the original law became effective. More importantly, the amendment became effective in June 1996, i.e., long after the voucher privatisation proceeded. The amendment addressed the issues that emerged during the privatisation. In § 11, it made the closed-end funds' shares tradeable on the stock exchange. In § 17, it imposed a duty of care on the investment companies and investment funds. They were expected to buy the shares to their portfolio only for the lowest price available and sell it only for the highest price possible. Most importantly, however, in § 35 it allowed the investment funds to change their legal form only if two-thirds of all the shareholders agreed. Those shareholders who did not agree were entitled to have their shares redeemed. However, the amendment did not specify the new legal form they were to take, it merely forbade the investment funds to use the notation "investment fund". After the change (typically into holding joint-stock companies) the investment companies were subjects to the appropriate section of the Commercial Code. The Investment Companies and Investment Funds Act no longer applied to them, even though that, *de facto*, they did not change their scope of business.

Regarding the paragraphs directly addressing the funds' activities (which we discuss in the subchapter 2.5 and namely in Chapter 3), the amendment fundamentally reviewed § 37. In the version from 1992, the § 37 was called "Sanctions" and it only briefly considered some suspicious behaviour of the funds. Moreover, it only considered the outcomes of suspicious behaviour. That is, there was virtually no prevention. The amendment from 1996, on the other hand, widened and specified the scope of the problematic behaviour, and it also made the sanctions more costly for the fund. Most importantly, it introduced the possibility to put either the IPF or the investment company under the forced administration in § 37. We must point out that the forced administration was the last resort—the Act allowed for less invasive methods of sanctions, such as superseding the management. The forced administration was imposed upon the IPF or the investment company only in case they *"repeatedly or seriously violated the law, namely in case they acted in a way that was not restricted by the law or they violated the regulation on the risk diversification"* (§ 37d). As we will see later, the forced administration was a tool that was actually utilised.

The most important amendment (Law No. 124/1998 Coll., which changes and adds to the Law No. 248/1992 Coll., On the Investment Companies and Investment Funds, 1998) passed in May 1998. It addressed the most problematic matter that emerged during the privatisation, and in § 24 forbid the investment companies to exercise the voting rights they possibly held in the fund they managed. Furthermore, the up-to-then allowed change of the legal form was forbidden again in § 35, and instead, the § 35 allowed to change the closed-end funds into open-ended funds. In some cases, it ordered the closed-end funds to open.³ All closed-end funds that did not meet the precondition and thus were not yet obliged to change into open-ended could do so anytime, but no later than until 2002.

³ The prerequisite for the obligatory change was rather complicated. In § 26, the act defined the discount as the difference between 100 and the share's market price relative to the fund's equity. The investment companies were ordered to publish the discount weekly for every closed-end fund they managed. In § 35, the act worked with the averages of the discounts and with the date the act became effective, which was July 8th, 1998. If the average of last 18 discounts exceeded 40 per cent in the first 12 months, 30 per cent between the 13th and 21st month, or the average of the last 12 discounts exceeded 20 per cent any time after the 21st month, the investment company or investment fund was obliged to open the fund.

1.1.3 THE JOINT-STOCK COMPANY LAW AND THE COMMERCIAL CODE

The Large-Scale Privatization Act did not determine the funds' legal status and initial equity before the Investment Companies and Investment Funds Act became legally effective. The only piece of legislation that regulated establishing a firm at that time was the Joint-Stock Company Act (Joint Stock Company At. Law No. 104/1990 Coll., On the Joint-Stock Companies, 1990). In § 16, the act set the initial equity of any joint-stock company to be no less than 100,000 CSK. There is to be noted that the joint-stock company was the only legal form of a commercial company until the Commercial Code was introduced.

The Joint-Stock Company Act was repealed by the Commercial Code (Commercial Code. Law No. 513/1991 Coll.), legally effective from January 1992. The Commercial Code increased the obligatory initial equity for a joint-stock company to 1,000,000 CSK (§ 162). It also introduced new legal forms of commercial companies. As was discussed in subchapter 1.1.2, the investment companies' legal form could be either joint-stock or limited liability. The limited liability company had the initial equity set to 100,000 CSK (§ 108).

Thus, until the Commercial Code and the Investment Companies and Investment Funds Act were effective, the only option for was to establish an investment company (a joint-stock) which then founded one or more IPFs (joint-stocks). Recall that the deadline for the IPFs registration was in the mid-February 1992 (Appendix A). For the first wave then, all investment companies were joint-stocks, each with equity 100,000 CSK. As for the second wave, there were more options provided by the Investment Companies and Investment Funds Act (subchapter 1.1.2). According to the act, the founder of an investment company could choose between the joint-stock or limited liability. The funds could be either IPFs or open-ended/closed-end mutual funds. The founders were newly allowed to establish an IPF directly. In that case, the IPF was a self-administered joint-stock company.

The decision making on the legal form did not significantly depend on the obligations that came with the chosen form. The legislature set both the limited liability and the joint-stock the companies to be liable with their entire property. That is, the founders were not liable in either case. The code allowed the limited liability to be established by one natural person only, while the joint-stock company required either two natural persons or one legal person. Choosing the legal form was therefore dependent mainly on the company a founder wished to establish (an investment company or an investment fund), on the number of founders who wanted to establish an IPF, and on the initial equity they wished to provide.

1.1.4 THE LAW ON SECURITIES AND THE LAW ON THE SECURITY MARKET

Inasmuch as the above-discussed laws established the voucher privatisation as the transfers of shares, two additional needs emerged. The legal concept of the share (and the security as such) needed to be introduced, as well as the market in which to trade the shares. The former was enacted in the Acts on Securities (Law No. 591/1992, Coll., On Securities, 1992; Federal Law No. 600/1992, Coll., On Securities, 1992), effective from January 1993 and December 1992, respectively. The stock market was enacted by the Act on the Security Market (Law No. 214/1992 Coll., On the Stock Exchange, 1992), effective from May 1992.

As for the Act on the Security Market, in § 1 it established⁴ the Stock Exchange as the legal person who, at the specified place and time, organises the supply and demand for the securities. Both the shares and the investment vouchers were securities, according to the § 1 of both the republic and federal Act on Securities. However, according to the § 22 of the Large-Scale Privatization Act, the investment vouchers were not transferable, and thus the Act on the Security Market only enabled the trade in shares gained in the voucher privatisation.

⁴ More accurately, the act restored the Prague Stock Exchange, which traded continuously between 1871 and 1938, and not being restored after World War II, it was eventually abolished in 1952.

1.1.5 DECREE ON THE INVESTMENT VOUCHERS' ISSUANCE AND USE

The § 46 of the Large-Scale Privatization Act ordered the Federal Government to determine the design of the vouchers' issuance, their types, prices, and value regarding the shares and their utilisation. The order was embodied in the Federal Government Decree on the Investment Vouchers Issuance and Use (Federal Government Decree No. 383/1991 Coll., 1991) in September 1991.

Apart from the actual vouchers, the whole process of the voucher privatisation was described in the decree. The privatisation was to proceed as follows. First, the citizens bought and registered the vouchers, and by doing so, they became the holders of investment vouchers (§ 7). Second, according to § 11, the Federal Ministry of Finance stated the period during which the vouchers were to be exchanged for the enterprises' shares. One such period was called a privatisation wave. Before the wave was initiated, information about the enterprises and the privatisation funds were to be published. Third, § 13 introduced several privatisation rounds within each wave. A privatisation round was described in § 14. It served for the realisation of the exchange of vouchers for shares; the prices of shares were given, shares were ordered through the RM-system⁵ (RMS), orders were evaluated, and results were acknowledged (§ 25). Fourth, in § 27, the decree ordered the Federal Ministry of Finance to inform the shareholders about their gained property and the way the shares would be distributed. The NPF was to do so within a month after the privatisation wave finished. Finally, within a month after receiving the shares, the IPFs were obliged to inform their shareholders about the quantity and value each shareholder would receive, as well as the way the shares would be transferred.

Concerning the IPFs, in § 17 the decree allowed the holders of the investment vouchers to entrust their vouchers to the funds. They could only do so at the very beginning of the privatisation wave within the so-called zero round. The decision was then binding for the whole wave, and the holders of the investment vouchers became the shareholders of the IPF of their choice. After the IPF bought the shares, it was to use them to increase its equity.⁶ Shares issued by the IPF were then delivered to their shareholders. The number of shares that belonged to a shareholder was proportionally equal to his share in the total bids for the IPF in question.

Later, in January 1992, the decree was amended (Federal Government Decree No. 69/1992 Coll.; the Decree No. 383/1991 amendment). In § 17, the funds were restricted concerning the total value of an enterprise one fund could hold.⁷ This restriction was later echoed in the Investment Companies and Investment Funds Act, as was discussed above.

The decree for the second wave was virtually identical to the one for the first wave. Same is therefore valid for the procedure of the second wave of the voucher privatisation. It was introduced by the Government Decree on the Investment Vouchers Issuance and Use (Government Decree No. 222/1993 Coll., 1993). Apart from a few (technical) differences, there were two more significant aspects of the second wave that made it different from the first wave. First, the IPFs in the first wave could only be established as the IPFs managed by the investment company which was also the founder. This setting was entirely due to the legislation which, for the second wave, introduced the mutual funds, too. And second, it only proceeded in the Czech Republic due to the dissolution of Czechoslovakia.

⁵ The RM-system is an abbreviation of Registrační Místo (registration place). It was a network of offices where the holders of the investment vouchers could register their booklets and order the shares or transfer their vouchers to an IPF.

⁶ Until a fund increased its equity with the shares gained in the privatization, its equity was equal to the funds' initial equity deposited by the funds' founder. The value of the initial equity was specified in the Licensing rules for the IPFs (subchapter 1.1.6).

⁷ In this sense, a government decree stood for an act – the need for legislation manifested itself in many ways.

1.1.6 LICENSING RULES FOR THE IPFS

What emerges from the above is that the legislative environment was not very specific when it came to the establishment of an investment fund. Although the relevant clause was incorporated in the Large-Scale Privatization Act, the funds were not described until the Investment Companies and Investment Funds Act was effective. In the meantime, the funds were being founded with respect to a governmental directive published on 1st October 1991 in a newspaper⁸ (Hospodářské noviny, 1991–10–01). The licence stood for the then non-existent Investment Companies and Investment Funds Act (CKP, 1995). The contents of the “Procedure of founding the investment privatisation funds in the voucher privatisation,” which was the full name of the directive, were as follows.

An IPF’s founder, i.e., the investment company, was to be its administrator, and it was required to raise an initial equity 100,000 CSK for each fund it wished to establish.⁹ The investment company was prohibited from raising the fund’s equity in any other way than with the shares it “bought” during the privatisation. The process was described in § 17 of the Federal Government Decree on the Investment Vouchers Issuance and Use (subchapter 1.1.5). The investment company also had to put forward a contract proposal with the IPF being founded, which contained the 2 per cent restriction on the maximum fee that could be charged. After gaining the licence from the Ministry, the investment company was obliged to found the IPF as a joint-stock company. All further steps were to be directed by the Federal Government Decree on the Investment Vouchers Issuance and Use (subchapter 1.1.5).

What results from the above is that the directive only allowed for the investment companies, not the investment funds. These were introduced later in the Investment Companies and Investment Funds Act. In the first wave, therefore, the IPFs could only be established by the investment companies who were their administrators at the same time. The result was that the investment company was a shareholder in each of its funds, not only its administrator, with a share worth of the fund’s initial equity. This feature gave the investment companies the strength to execute virtually any decision they made. This feature is also often pointed out to be the most serious mistake of the voucher privatisation (e.g. Ježek, 2007) because it served the dishonest founders of the IPFs in performing various frauds. This is further discussed below. We will see that in fact, the fact that the investment companies were shareholders in their funds was not decisive for them to tunnel the funds.

1.2 DISCUSSION

Participation of the IPFs was not conditional for the voucher privatisation to be completed. Tříška (1996) mentions that, technically, it was. In the Large-Scale Privatization Act, the government gave the holders of the investment vouchers a right to use services provided by the IPFs. If no IPF had been created, the privatisation wave could not have been initiated. However, this was a legislative requirement, not a vehicle for the voucher privatisation to work. And, as Tříška continues, “*several hundreds of IPFs were established and took part in the process*” (Tříška, 1996, p. 6). This subchapter deals with the disputes about the voucher privatisation.

We do not, however, discuss here whether the voucher privatisation as a method was suitable or not. An exemplary criticism was made by Richter (2005). The author suggests that the voucher method was inappropriate and that the enterprises should had been restructuralised first (the state was to do the task),

⁸ The fact that a governmental directive was published in a newspaper adds to the evidence of the extraordinary climate in the country that was present at that time.

⁹ An investment company could establish as many funds as it wished, provided it raised the equity for each of them. This equity was that which was entered in the company register. The IPF’s founder itself, i.e. the investment company, was a joint-stock company, so it also needed to raise its own equity. The licencing rules required 1,000,000 CSK per fund it controlled. Thus, for example, an investment company which wanted to establish two funds needed 200,000 CSK for their initial equity, and 2,000,000 CSK for its own equity. All in all, setting up an IPF was costly – the average monthly wage in the Czech Republic in 1991 was around 3,800 CSK (Statistická ročenka České a Slovenské Federativní Republiky, 1992).

and then sold directly. We must add two points to the criticism. First, the Large-Scale Privatisation Act set the privatisation to be based on the privatisation projects and allowed for the projects to combine the methods. That is, the enterprise could be divided, and each part could be privatised separately. The restructuralisation was thus to a large extent completed at the very beginning of the privatisation already, with the state's role being reduced to a mere approval of the privatisation project. And second, it is unimaginable to sell each company individually. In total, there were 2,167 companies offered in the voucher privatisation. Even if the government managed to sell one company per month, selling them all would take 180 years. Recall that these were only the companies privatised with vouchers, i.e., some 40 per cent of all property. To sum up, the fact is that the voucher privatisation downgraded the decision-making process from "to whom should the enterprise be sold," to "should the enterprise be sold." It thus made the whole process much easier. Such reasoning is, in our opinion, sufficient to conclude that the method was appropriate. Instead of the privatisation method then, the focus in this subchapter is on the IPFs as these are the main subject of this text.

One of the first authors who considered the mutual funds' participation in the Czech privatization was Fischer (1991). He suggested a method which was more or less applied in Poland, but one thing was echoed in the Czech scheme, too. Along with many other authors (see, for example, Estrin et al., 1995; Fitzsimmons, 2002; Frydman & Rapaczynski, 1993; Hinds, 1991; Savas, 1992; Tomass, 1999), Fischer mentions the threat that shares would be widely dispersed, resulting in corporate governance issues. The authors agree on the outlook that any change in the enterprises would be difficult to push through if there was a large number of owners, each possessing only a tiny, hence indecisive share. Under these circumstances, the owners would, in fact, never be able to execute their rights. In other words, the collective action problem would arise. This rather unfavourable but very likely result was seriously considered and mirrored in the Large-Scale Privatization Act.

On the other hand, as was discussed earlier in the subchapter 1.1.2, the legislation did not permit the funds of one investment company together to own more than 20 per cent of a company.¹⁰ Black (1990, p. 608) considered that "*institutional investors, while large, may not be large enough.*" The author's insight framed what was later criticised in the case of the Czech Republic. That is, even though the funds were incorporated into the privatisation to ensure some concentration at least, they were not permitted to choose the concentration freely. The most obvious criticism came from the authors of the voucher privatization. For example, Klaus (in Tríska et al., 2002, p. 94) regrets the restriction and perhaps the IPFs' existence as such. He claims that together with the standard shareholders' protection measures, the restriction was imposed upon us from abroad. On the other hand, Shleifer and Vishny (1997) discussed two opposite types of corporate governance: the majority and minority ownership. They write that a majority owner can dictate the decisions of the company and does not require the courts to enforce his property rights execution. On the contrary, a minority shareholder needs to make alliances with other shareholders, and the management can interfere with these alliances which enhance its power. Minority shareholdings, therefore, require a more sophisticated legal system. Nonetheless, such legal system was not in place at that time in the Czech Republic. As was discussed in the previous subchapter, some acts passed only after the procedure, which they were supposed to affect, finished. Overall, the final ownership structure did not correspond sufficiently to either model of corporate governance which weakens both the pros and cons of the IPFs.

Although the majority of authors conclude that institutional investors are beneficial for corporate governance, there is a line of literature that proposes the opposite. Black (1990) writes that institutional investors are companies, too. As such, they are run by managers who need supervision and incentives.

¹⁰ The limit, however, was not binding under all circumstances. For example, if the funds decided to merge, they simply did so without changing the composition of their assets, and the concentration thus rose. For the numbers of companies divided by the concentration, see Table 2.7 below.

Moreover, he argues that the funds compete on the basis of investment return. Their incentives are rather short-term, which results in trading in the stocks, not improving the companies. Coffee (1991), whose study compares institutional investors in six developed economies, agrees. It is unrealistic to explain the situation in the Czech Republic in 1990 with the study of developed economies at that time, but the author adds to our point, nonetheless. He suggests that the open-ended mutual funds must stand ready to redeem their shares, being more likely active traders, not owners. According to both the authors, the shareholders' passivity is not inevitable even in case these are institutional investors.

In the Czech voucher privatization, this scenario partially echoed. Ellerman (1999) shows the contradiction the funds faced. He writes that although the funds were restricted in the share they could hold in a company, they were de facto expected to be the vehicles for restructuring the enterprises. The funds were, however, lacking the incentives to do so, because 80 per cent of the capital gains would flow to the rest of the owners, perhaps another IPFs. That is, since a fund could only hold 20 per cent of the shares at maximum, and could only charge 2 per cent fee, its profit was only 0.4 per cent of the eventual gains. Under such circumstances, the funds were more likely motivated to seek different sources of income than gains from restructuring the companies they hold. The fee limit, by some evaluated to be positive (e.g. Anderson, 1994), therefore discouraged the effort to manage the enterprises and make them profitable. Hewer (1997) concludes that most funds were passive investors and had not bothered to replace the managers of the companies they controlled. The author continues that the IPFs found the trading of shares, transfer pricing, and non-transparent equity transactions far more lucrative than striving for profits and dividend payment through efficient corporate governance. Yusupová (2006) argues that the limits on the concentration were counterproductive even to the initial efforts to restructuralise the enterprises. A strategic investor usually concentrates on cheaper investments, with the intention to improve the enterprise within a longer time period. A strategic investor is therefore not concentrated on the short-term gains; he anticipates the investment to be undervalued in present, earning higher gains in the future. Provided there is no concentration limit, the strategic investors would acquire sufficient stakes. The IPFs were, however, prevented from it by the concentration limits. They were thus more concerned not to invest in the most underperforming enterprises, i.e. those that were cheap than to acquire and restructuralise them.

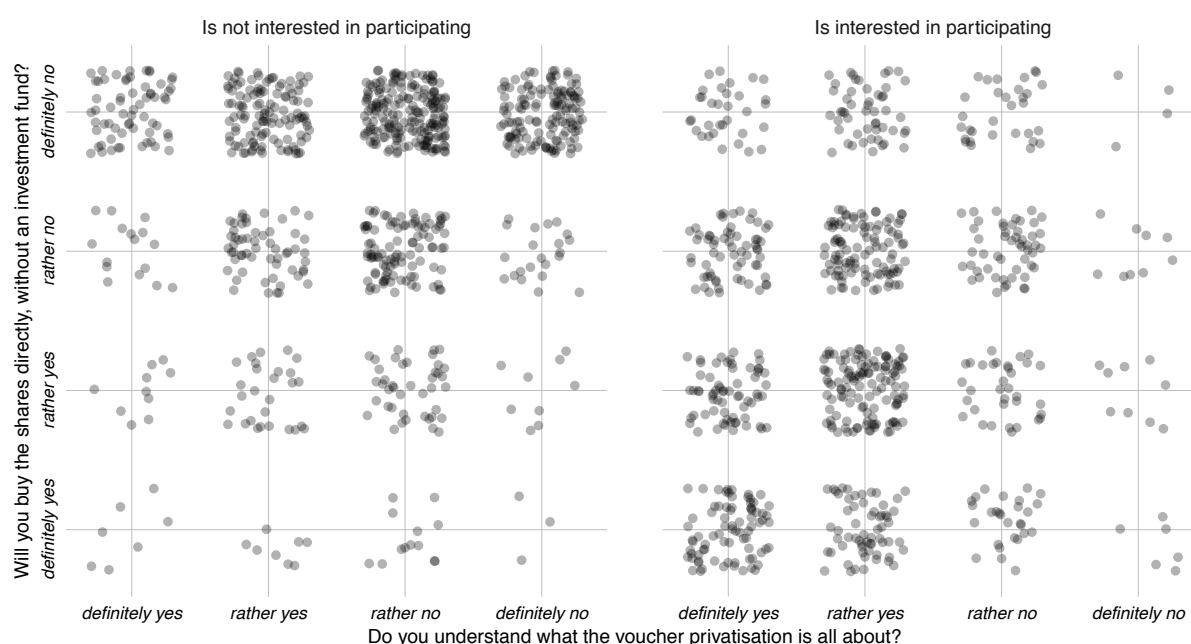
What does not fit in the postulate is that the investment companies often attempted to use up the whole 20 per cent limit they had for one company. This behaviour is somehow confusing—a sufficient share to control a firm is generally deemed to be 10 per cent, namely if the rest of the shareholders are individuals. As was shown above, the funds were not much motivated for restructuralisation, too. However, we can explain the behaviour to be merely defensive. According to Coffee (1999, p. 27), *“each large shareholder essentially realised that if they did not acquire control, someone else would, with resulting injury to them. In short, the fear of loss may have provided a greater incentive to compete for control than the expectation of any synergistic or opportunistic gain.”* The motivation for holding 20 per cent could, therefore, be nothing but fear that the investment companies would find themselves in the position of a minority shareholder.

Be the funds beneficial for the privatization or not, the fact is that they were given a lot of confidence from the holders of investment vouchers. Majority of them entrusted their vouchers to the funds. The funds, therefore, might not had been important for the privatization process as such, but they certainly were important for the people. Most people did not (and could not) understand the process since neither shares nor capital market took place in the centrally planned economy. Tříska (2002) writes that the only people experienced with the market economy were those who were allowed by the communist regime to get into contact with the West, and these were mostly of “inappropriate character.” Majority of people, however, understood that they could realize gains in the process. The IPFs were, therefore, a promising way to attend (and eventually succeed) in the voucher privatization. Egerer (1995) wrote that the funds

were likely to offer a diversified portfolio that could eventually limit risks. He also assumed that people hoped the funds had better access to non-public information and were thus able to select better-performing companies. Such claim was used in the advertisement, too, when Česká pojišťovna attracted the investors with the claim that it “*has detailed information about the companies at its disposal since the companies are their clients*” (‘Ad by Česká pojišťovna’, 1992).

Some holders of investment vouchers surely did consider the above-mentioned advantages of investing via an investment fund. However, we must take into account the fact that the voucher privatisation had been launched two years after the economic transformation begun. Therefore, people who never learned about capital markets or investment before, and never even saw a share, needed to decide what investments they would make. Expectably, the task was not an easy one for a majority of people, provided they did not want to make emotional decisions. For these people, the IPFs could make it possible to participate in the voucher privatisation. In Figure 1.1, we can see that this might be the case. The chart shows data gained in a public opinion poll conducted in December 1991. There are two trackable patterns in the data. First, those who were not interested in participating admitted that they did not understand the whole process. Being asked what they would do in case they decided to participate, they tended to answer they would use an IPFs’ services. And second, those who were interested in participating in the voucher privatisation believed they understood the process and were more conscious to invest individually. We can, therefore, conclude that for some, the IPFs represented a possibility to participate in the voucher privatisation which they would not join otherwise.

FIGURE 1.1 UNDERSTANDING THE VOUCHER PRIVATISATION; DECEMBER 1991



Source: Sociologický ústav ČSAV (1991); author's own construction

The IPFs’ success was nonetheless based on trust that they would do what they say, which is a common problem at the market for professional services, as Waterman and Meier (1998) describe. The authors use the example of a patient (the principal) and a physician (the agent), to show the different goals they possibly have. The patient wants to be healthy and pay as little as possible, whereas the physician wants to maximise his income and he is thus tempted to provide unnecessary services or charge a higher price. The problem here is that the patient is at a disadvantage since he cannot evaluate the services provided. Such information asymmetry is inevitably present in the manager-owner relationship as well. The insight was given by Adam Smith already, who wrote: “*The directors of such [the joint-stock] companies, however, being the managers rather of other peoples’ money than of their own, it cannot well be expected, that they should watch over it with the same anxious villigance with*

which the partners in a private compartnery frequently watch over their own” (Smith, 1904, p. 233). Moreover, as was mentioned above, a considerable part of the population did not understand the market process, which eased the situation for the managers—being dishonest was not a major task for them. This is surely the very reason why the maximum fee a fund could charge was restricted by the law.

Some authors even suggest that the funds, being attractive to the public, promoted the whole voucher privatization. For example, Young (1997, p. 46) wrote that when the booklets went on sale, the demand was disappointing and only thanks to the advertising campaign, people who would otherwise ignore the privatization joined. Similarly, Myant and Drahokoupil (2013) assume that the demand for vouchers was not satisfying at first. The authors even write that only after the former Czechoslovak emigrant Viktor Kožený established his funds and promoted them, the voucher privatisation gained momentum. Laštovička et al. (1994) agree but also point out that the massive scale was unexpected, creating an extreme test of the voucher privatisation’s back office capacity. In this vein, Tříška (2002) stated that the funds’ activity added to the process a dynamics that was not fully desirable. His claim is based on the fact that the voucher booklets were sold out (and restocked) during the registration. However, it only demonstrates that the supply of the vouchers did not meet the demand, i.e., that the government did not estimate the demand correctly. In other words, were we to look for an indisputable problem the funds did, it was the fact that they changed the initial design of the voucher privatisation. Nevertheless, whether or not the funds promoted the privatization is nothing but speculation. In an interview, Tomáš Ježek rejected the statement that the advertising campaign would set the privatisation in motion, saying: *“People were merely postponing the registration until the very last moment. Such behaviour is in our nature”* (Ježek, 1994). What bears witness to people postponing the booklet purchase rather than being lured by the IPFs’ campaign is the course of the second wave. Despite having 10 weeks to register, two-thirds of people only registered within the last four weeks (CKP, 1995). We can hardly expect that the IPFs’ advertising campaign would have the same effect, not to mention that the legislature limiting the advertisement was effective at that time already.

All in all, the fact is that the Large-Scale Privatization Bill (Bill. No. 257, On the State Property Conveyance for the Purpose of Entrepreneurship, 1990), written in 1990, does not consider any other investors apart from the holders of investment vouchers. However, the final Law No. 92/1991 Coll., On the Conditions of the State Property Conveyance allows for them (subchapter 1.1.1). The contrast gives evidence that the IPFs inclusion in the privatization was not planned far ahead. That might have mirrored in the rules that outlined the IPFs’ establishment. Kouba et al. (2005, p. 87) note that the only requirements to establish an IPF were equity (at least 100,000 CSK), supervisory board’s expertise, deposit contract with a bank, and a licence from the Ministry of Finance. The last requirement was more or less formal and was, in fact, no obstacle. This is approved by the authors of the voucher privatization, too. Tříška (1996) admits that the Act’s allowance for funds was somewhat spontaneous and that the entry of an IPF resembled registration rather than genuine licensing. Elsewhere he writes that the government allowed “essentially anyone” to establish an IPF. However, he correctly adds that it was the only possible way because if the state tried to examine the founders, it would only lead to corruption, not to mention that there were no clerks who would be able to conduct the task (Tříška, 2002). The government itself even welcomed the funds’ emergence (Tříška et al., 2002, p. 149). And Ježek (1997, p. 486) explicitly writes that *“[the funds] were essential for the privatization process, but their introduction was improvised and failed to be followed by the corresponding legislation.”* Myant (2013) described the Czech legislative environment as somehow mixed. On one hand, it embodied the effort to minimise specific regulation, which was why the IPFs were treated as common joint-stock companies. On the other hand, the legislation sought to establish the IPFs as regulated collective investment institutions, and so it introduced the limit on the share a fund could hold in a firm. The author concludes that the legislative environment did not correspond to the role the funds were expected to play.

The failure of the corresponding legislation exposed several times. Some issues were meant to be prevented in advance and the respective paragraphs were enacted but ill-conceived.¹¹ Another failure in legislation proved before it was even effective. It was mentioned earlier that the Investment Companies and Investment Funds Act prohibited misleading statements in the promotion. The problem was that the act only became legally effective at the end of the zero-round. The IPFs' advertising campaign which targeted the holders of investment vouchers to entrust their vouchers to the IPFs was already finished at that time, and the funds ended up with some 70 per cent of the investment vouchers. Dědek (1992) mentions a possible moral hazard with regards to the funds' marketing campaign. He recalls the fact that the funds were not obliged to buy their shares back. Therefore, he assumes that more visible advertisement was affordable for them; they knew that they would not meet their obligations, but with aggressive marketing, the profits were more likely.

In this vein, the important feature of the funds' emergence was their legal form. As was discussed earlier, the Large-Scale Privatization Act did not specify the IPFs any further than that they would attend the voucher privatization. Neither did any other Act except the Joint-stock Company Law. The only guidelines the investment companies were to follow when establishing an investment fund were the licensing rules (subchapter 1.1.6). According to these, the IPFs were to be established as the closed-end funds, which is approved by Tríska (2016a). The reason for that, the author says, was that both the legislature and capital market were not established yet. Both are true; the respective laws that governed either investment funds or the security market became legally effective from May 1992, whilst the funds were already needed for the privatization. From these grounds, the most dubious aspect of the whole privatization, the asset stripping, emerged.

Such behaviour is, especially in the Czech Republic, widely known and named by the term tunnelling. Johnson et al. (2000) define the tunnelling as "*expropriation of minority shareholders in the Czech Republic—as in removing assets through an underground tunnel*" (p. 22). In the article, this definition was used to describe the transfer of assets and profits out of firms for the benefit of those who control them. The authors saw the problem partly in the characteristics of the civil law, which emphasizes the predictability of the law. The actors (in our case, the IPFs' managers) were thus invited to seek ways to conform to the letter of the law even though the transactions might be considered as unfair or immoral. In other words, the "*profits were extracted through various channels that would, in most cases, be illegal in any civilised country*" (Kotrba et al., 1999, p. 29). We will discuss individual cases of tunnelling in Chapter 3. As we will see, some IPFs' administrators were eventually found guilty of violating the criminal code.

The above-mentioned definitions of tunnelling are more or less accurate, and they are what we understand under the term tunnelling within this text. There is to be noted that the initial equity of the fund was the decisive power in the fund. The proof is simple. On average, each voucher booklet bought 30 shares in the first wave, and 24 shares in the second wave, each initially worth 1,000 CZK (CKP, 1995). Therefore, on average, each holder of investment vouchers and each IPF shareholder held some 30,000 CZK (or 24,000 CZK, respectively) in shares. As was discussed above, the initial equity to found and IPF was 100,000 CZK at minimum, and it, therefore, outweighed any individual shareholder's vote. The funds' founders were, therefore, able to pass any decision, merely because they held the biggest share in the fund. This is the point which is by some marked to be the biggest mistake of the voucher privatisation. The most severe critique comes from Tomáš Ježek, who was the Minister for Privatisation at the beginning of the transformation, and one of the members of the team which set up the voucher

¹¹ For example, the law forbade the funds to buy their founders' shares, if the founders were banks or insurance companies (subchapter 1.1.2). However, the banks founded the investment companies, not the funds. Thus, the funds were, in fact, restricted from buying their investment companies' shares (these shares were never offered in the privatization). The result was expectable: an IPF owned shares of a bank, who owned the investment company that founded the IPF. Mlčoch (2000) called such knotted structure "recombined ownership."

privatisation. In various articles and studies (Ježek, 2007, 2010, 2015) he criticised the gap in the law that did not oblige the funds to reduce the total equity by the sum of the initial equity. The problem, he claims, is the simple fact that the property of a fund's founder was not separated from the property of the fund's shareholder. The requirement to separate the property was, according to Ježek, in the proposal of the Investment Companies and Investment Funds Act but was not included in the final act. We do not consider this to be the way to the tunnelling. It was surely an easy way to tunnel the funds, and some investment companies surely did abuse it. However, in case the initial equity was separated, the managers who would want to tunnel a fund would find their way. In fact, this is what happened in case of the most serious case which is described in subchapter 3.2—the C.S. Funds. As we will see, the way to the fund was not through the initial equity. It was through individual shareholders who sold their shares to Motoinvest, a.s. Therefore, the Motoinvest, a.s. held the decisive share even though it did not buy the share from the founder. Therefore, the gap was, in our opinion, a possibility that was eventually used, not the very reason that allowed for the tunnelling. One way or another, the funds were able to conduct the tunnelling; the process and methods they used are described in the following chapters.

2 INVESTMENT PRIVATISATION FUNDS IN THE VOUCHER PRIVATISATION

Voucher privatisation was an experiment *sui generis*. All aspects of the chosen scheme of privatisation were new, inexperienced, with immense expectations and risky outcomes. Trřska (2002, p. 37) wrote: *“In human history, there will never again happen something so big and yet so libertarian.”* Even though the statement might seem exaggerated, it is undeniably true that the scope of the voucher privatisation and the momentum it gave to the entire transformation was remarkable. So could be the bitterness in case the voucher privatisation failed.

Possession and utilisation of the vouchers to privatise the economy was a literal embodiment of the socialist idea that “everything belongs to everybody.” With the vouchers, people did not buy the property but rather signalled their interest in factual holding a specified share of the property. The outcome was not that they would own the company—no individual investor was able to achieve that in the voucher process. They could, however, achieve the status where they knew exactly how large a stake they own, in which company, and, more importantly, they could choose both the stake and the company. Moreover, they could choose whether they wanted to choose themselves, or whether they prefer to transfer their vouchers to another entity—an IPF—to do the task for them. Peng & Shekshnia (2001) identify four kinds of entrepreneurs in the transition economies: the farmers, the grey individuals, the cadres, and the professionals. As for the farmers, they are of no importance for collective investments. The grey individuals were the unlawful entrepreneurs who operated in the socialist economy that suppressed entrepreneurs, i.e. they accumulated wealth frontier-style violating some laws along the way. The cadres were the exponents of the old regime that was to be abolished. And finally, the professionals were those who held professional positions not related to the party-state, and as such enhanced the technology and professionalism of private firms. In other words, the professionals were those who were credible. Ideally, these people were to establish and manage the investment privatisation funds.

In this chapter, we concentrate on the actual process of the voucher privatisation. The emphasis is put on the IPFs within the respective phases. Divided into six sections, the chapter follows the chronology of the privatisation. First, it briefly starts with the preparation. Second, the first wave is discussed. Third, the second wave is addressed. Fourth, we turn the attention to the stock exchange, as it was the place where the ownership rights transfers continued. Fifth, the main subchapter, i.e. the third wave, is treated. Finally, the sixth section concludes.

2.1 PREPARATION

Before the voucher privatisation could have been launched, the respective laws needed to be prepared. These were discussed in the previous chapter. We showed that the funds were not considered in the Large-Scale Privatization Bill and were only added somewhat ad-hoc through a brief paragraph in the Large-Scale Privatisation Act. The guidelines which the investment companies were supposed to follow if they wanted to establish an IPF were published on 1st October 1991. The content was discussed in subchapter 1.1.6. Since 1st October 1991, the investment companies could have started proposing the licences to establish an IPF. Therefore, 1st October 1991 can be considered the beginning of the first wave in a broad sense (the actual bidding began on 18th May 1992; see the timeline in Appendix A).

2.2 FIRST WAVE

The registration deadline for the funds was not set, but what was set was the zero-round of the first wave. It began on 17th February 1992, and its purpose was to provide the holders of investment vouchers time to decide whether they would entrust their vouchers to the funds, or they would invest individually. Therefore, they needed access to a complete list of funds they could choose from. That rule was also set by Federal Government decree from January 1992 (subchapter 1.1.5), which reads that the zero-round

could not be launched before the list of the IPFs was completed. The list was provided by the ministry of privatisation. For the first wave, as many as 429 IPFs participated, which is an impressive number alone, not to mention that the number of companies that were to be privatised was 1,491. That is, there were only three times more companies to be privatised than the companies which wanted to privatise them. The competition among the IPFs was thus strong, which resulted in an aggressive advertising campaign. As we have already mentioned the first chapter, there was a suspicion some funds tended to mislead the holders of investment vouchers in order to be provided with their vouchers. The malpractices were restricted by the law eventually, but only after the zero-round was finished.

Concerning the IPFs' advertising campaign, Choděra (1992) suggested that the IPFs were obligated to fulfil their promises in case there was no formal contract between the IPF and the holder of investment voucher. Apparently, in the environment where there was not even a law regulating the IPFs yet, one could hardly expect the IPFs to give the holders of investment vouchers any kind of receipts.¹² Therefore, the IPFs were, in theory, required to keep their promises. For example, the famous advertising campaign by the Harvard Funds, the "tenfold security"¹³ aimed to lure the holders into earning ten times the value of the voucher booklet by investing with the Harvard Funds. It may seem inflated, but in fact, the funds were somewhat modest. As was mentioned above, the price of one voucher booklet was 1,000 CSK, but its purchasing power in terms of the nominal value of shares was, on average, around 30,000 CSK.¹⁴ Ex-post, the result was that on average, a fund was nominally earning 20,000 CSK per each voucher booklet. Hypothetically, the funds were able to fulfil their promise and still remain profitable. Ex-ante, the IPFs could not know how many people would join the privatisation, and they could not, therefore, know how much money each booklet would earn. The price of a booklet was known, though, as well as the probable worth of property offered.¹⁵ So was the maximum number of participants since only the nationals could participate. The promise was, perhaps, based on that knowledge and calculation.

For the first wave, the IPFs acquired some 72 per cent of total vouchers and thus found themselves in a very strong position—the total book value of the enterprises offered in the first wave was nearly 300 CSK bil. Needless to say, the distribution was not uniform; ten largest funds acquired 56 per cent of all the IPFs' vouchers (CKP, 1995). The concentration reveals to be even stronger when the vouchers are divided by the investment companies, that is, by the IPFs' administrators. Kotrba et al. (1999) show that the top ten investment companies captured 67 per cent of all vouchers that were entrusted to the IPFs (the table is replicated in Appendix B). The first wave then proceeded in accordance with the rules that were described in the previous chapter. There were five rounds in total, with the fifth being finished in December 1992. The first wave ended one month later, in January 1993.¹⁶ Subsequently, the shares were to be issued, a process that began in May 1993. Next turn was the IPFs', as they were to evaluate their portfolio, issue their shares, and distribute them among their shareholders.

Portfolio evaluation, share issuance and their distribution are consecutive and interdependent steps. For the shares to be distributed, they needed to be issued. The number and value of the shares were based on the value of the portfolio, which was to be evaluated first. To evaluate the portfolio, the IPFs needed prices of the shares in their portfolio. However, the prices were not present yet because the companies were never traded before. They were only traded for the vouchers, but the portfolio was to be evaluated in real money. That is, a rather complicated question arose: how to find the value of each

¹² Some IPFs, however, did so voluntarily.

¹³ "Jistota desetinasobku."

¹⁴ Depending on the situation at the stock-exchange. The initial results were, however, as much as 30,000 CZK.

¹⁵ The final list of property was not known during the zero-round and was only published on 13th May 1992, that is, 5 days (!) before the first round.

¹⁶ There is to be noted that not all the property that was offered in the first wave was also sold in the first wave. As much as 7.2 per cent (21.5 CZK bil.) of the total value of the property offered was left; 8 CSK bil. were Czech companies and 13.5 CSK bil. were Slovak companies. The remaining shares of the Czech companies were eventually shifted to the second wave. Obviously, the remaining shares of the Slovak companies did not enter the second wave in the Czech Republic.

share. The problem was that the IPFs' portfolios differed since their biddings differed, and the market value corresponding to a certain number of vouchers differed among the IPFs. To put it differently, two identical IPFs that intended to buy identical shares ended up with different portfolios in case they bought the shares in different rounds. To resolve the dispute, the Ministry of Finance together with the funds' representatives proposed a method to evaluate the property and published it in the voucher privatisation newsletter. The Guidelines ('Postup investičních fondů po skončení první vlny kuponové privatizace', 1993) suggested that each IPF evaluated its portfolio according to the book value, i.e. 1,000 CSK per share (see an example in Table 2.1). The sum was then used to increase the IPF's equity, in accordance with the Federal Government Decree No. 383/1991 Coll. (subchapter 1.1.5). After that, each IPF was supposed to distribute its shares among its shareholders. The number of shares a shareholder got was derived from the number of vouchers the shareholder invested via the IPF. That is, a shareholder who entrusted all his vouchers to the IPF got twice as many shares as a shareholder who only entrusted half of his vouchers to the IPF. Simultaneously, the companies' shares started to be traded in the capital market. As the official market prices were settled, the IPFs were to enter the differences to their books. For real portfolios of two IPFs, see Appendix C.

A hypothetical example of the final portfolios is presented in Table 2.1. As was described above, the shares were traded for different prices in different rounds. The table starts with two identical IPFs in the first wave who both had 100,000 voucher booklets entrusted. They both were only interested in buying shares of the company Tuzex a.s. We ignore all constraints such as the concentration limit here. We assume that both companies managed to buy all shares in the round they chose, and they spent all their voucher points in this one purchase. The actual prices of Tuzex a.s. shares were 2/100 in the second round ('Výsledky prvního kola a nabídka s kursy akcií pro druhé kolo kuponové privatizace', 1992) and 4/100 in the fifth round ('Výsledky pátého, posledního kola první vlny kuponové privatizace', 1992). That is, each voucher booklet bore 1,000 points and the prices represented the number of shares that could be got for 100 points. In the second round, therefore, the buyer got 20 shares of Tuzex a.s. per one voucher booklet; in the fifth round, however, the buyer got 40 shares of the very same Tuzex a.s. The example shows that even though both funds were initially identical and they both aimed to acquire the same portfolio, the results differed substantially based on the round in which they invested the vouchers.

TABLE 2.1 EXAMPLE OF IPFS' PORTFOLIO EVALUATION

	IPF 1	IPF 2
Number of points allocated	100,000,000	100,000,000
Price of 1 share of Tuzex a.s.	2/100 (2 nd round)	4/100 (5 th round)
Number of shares acquired in the privatisation	2,000,000	4,000,000
Total book value of the shares acquired	2,000,000,000	4,000,000,000
IPF's initial equity	1,000,000	1,000,000
IPF's total equity	2,001,000,000	4,001,000,000
Value of property per 1 voucher booklet	20,000	40,000
Number of IPF's 1,000 CZK shares	2,001,000	4,001,000
Number of IPF's 1,000 CZK shares per 1 voucher booklet	20	40

Source: author's calculation

Evaluation of each share according to its book value is interesting because it nullifies the prices that were set during the respective rounds of the privatisation. The only channel through which the prices were transmitted was the number of shares each IPF held. That is, a relatively more successful IPF was the one which managed to buy a share in the round when the share's price in terms of vouchers was the lowest. Hypothetically, as is clear from the example above, an IPF's shareholders could be endowed with higher book value per share than the shareholders of another, initially identical IPF. Yet, the most valuable enterprises were privatised for the voucher price high above the initial book price. This was, after all, the core of the voucher privatisation mechanism: to find the prices of the companies. Clearly, in these cases, the shareholders were somehow losing from the very beginning even if they held the shares of the relatively most successful IPF. This is simply because the IPFs used more vouchers to buy

a more expensive share than a cheaper share during the privatisation, but both shares were then valued according to their book value, i.e., 1,000 CSK. What the Guidelines relied on was, perhaps, restoration of the prices at the capital market, as soon as the shares started to be traded in a standard way.

In Table 2.2, the values per one voucher booklet of 10 IPFs' portfolios after the first wave are showed. The table is ordered by the second column—the book value. Obviously, the rank by the initial distribution of vouchers did not at all mean that the fund would be the most profitable for the holder of investment vouchers. The book values resulted from the evaluation, the process which was described in Table 2.1. Egerer (1995) explains that the smallest funds (smallest by the number of vouchers, i.e. the first three funds in Table 2.2) invested in relatively cheaper companies merely because they were limited in the number of vouchers. Evaluation the shares by their book value, however, meant that the cheaper the companies a fund invested in, the larger the portfolio. As soon as the companies' shares entered the stock market, their prices were set and the IPFs accounted for the differences in their books.

TABLE 2.2 BOOK VALUE AND NET ASSET VALUE IN CSK, PER VOUCHER BOOKLET (TOP TEN IPFs)

	Rank by vouchers acquired in the 1 st wave	Book value	Net asset value, 30 th June 1994	Rank by net asset value, 30 th June 1994
YSE	10	48,500	47,600	1
PPF	8	41,800	33,000	4
Agrobanka	9	33,600	21,300	9
Komerční banka	4	25,600	26,600	7
HC&C	3	23,800	37,000	2
Česká pojišťovna	5	22,700	20,800	10
Česká spořitelna	1	22,500	23,700	8
Creditanstalt	6	21,800	28,500	6
Investiční banka	2	18,500	34,800	3
Živnostenská banka	7	16,000	29,000	5

Source: Egerer (1995), adjusted

Nevertheless, Egerer (1995, p. 16) also writes that the prices used to calculate the net asset value were somehow dubious due to the situation at the stock market. For now, we will leave the discussion on the capital markets for the subchapter 2.4; what follows is the second wave.

2.3 SECOND WAVE

As was mentioned a couple of times earlier, the second wave was not much different from the first wave. Tríska (2002) even admits that the second wave was somehow a “routine” task, proceeding in the atmosphere which was incomparable with the first wave. The second wave was therefore perceived as a natural conclusion of the voucher privatisation policy. Unlike the first wave, the second wave was easier to prepare because it followed the first wave, and the process was, therefore, familiar to the majority of participants. Also, the laws and rules were set for the first wave already, and all that was required for the second wave was to adjust and reuse them. Lastly, the federation was dissolved, and the second wave proceeded only in the Czech Republic. The number of participants therefore decreased, the organisation was somewhat easier, and each step could be shorter. Consequently, even though the second wave held six rounds in total, it took a month less than the first wave (see Appendix A).

Considering the dissolution of Czechoslovakia, discontinuing the second wave of the voucher privatisation in Slovakia was not an expected outcome. Initially, the intention was to separate the process for each republic. Such solution was suggested and discussed in the Federal Assembly on 4th November 1992 (PSP ČR, 1992); the dissolution measures were proceeding at that time already. The Slovak Republic was subsequently preparing for the second wave. Moreover, Mládek (1995) writes that most of the population supported the second wave—as many as 3.5 million people were registered, a million more than in the first wave. At first, Slovakia was to launch the second wave a year later than the Czech Republic (NR SR, 1993) and the necessary laws were being discussed in the parliament yet in

February 1994 (NR SR, 1994a). The zero-round was even announced and prepared for the launch on 15th December 1994 but was abruptly dismissed by the Slovak Ministry of Finance (NR SR, 1994b). Note that the zero-round served the holders of investment vouchers to entrust their vouchers to the IPFs. That is, the voucher booklets were already sold to the public; selling them earned 2 SKK bil. and the sum was eventually added to the state budget (NR SR, 1995). Also, the IPFs must have been established by the time the zero-round was to be started in the Slovak Republic. During the months that followed, the zero-round was postponed repeatedly. The key legislature was accepted, and the final solution was thus given on 6th September 1995, eight months after the second wave was completed in the Czech Republic. According to the law, each holder of the investment vouchers for the second wave was given a Slovak National Property Fund's (SNPF) obligation in nominal value of 10,000 SKK as a refund ('Large-Scale Privatisation Act Amendment. Law No. 190/1995 Coll., which changes and adds to the law no. 92/1991 Coll., On the Conditions of the State Property Conveyance', 1995). Obviously, the SNPF was an entity separated from the state budget. The earnings from selling the voucher booklets can, therefore, be considered a "privatisation tax." This is because the refund for the unused vouchers must have been yielded from the privatised property since the SNPF did not have any income but from selling the property. Some of the property was eventually privatised using traditional methods. Some were never privatised.

As for the Czech Republic, the IPFs could have started proposing the allowance to join the second wave since 1st October 1993. A total of 349 IPFs registered. In absolute terms, the number was smaller than in the first wave. However, in real terms, the number of IPFs increased considerably in the second wave. This is because out of the 429 IPFs in the first wave, only 265 were Czech; the remaining were Slovak and these could not attend the second wave in the Czech Republic. A limiting factor was also the time the IPFs were given to register. They only had 1.5 months, whereas in the first wave the funds had more than 4 months for the registration. As for the supply side, the second wave proceeded with 861 companies offered for the privatisation. Of these companies, 185 companies were offered in the first wave already. In the second wave, the total value was 155 CZK bil., where 8 CZK bil. was the remainder from the first wave.

Obviously, the ratio of the offered property to the number of funds was lower in the second wave. During the zero-round, the funds eventually captured 63.5 per cent of all vouchers registered by the holders of investment vouchers. What is interesting is that the most successful funds were the open-ended mutual funds. These were not present in the first wave as we have mentioned earlier. Apparently, the holders of investment vouchers tended to choose the funds which were obligated to accept their shares back and redeem the investors. As for the distribution, the top ten IPFs were in a less favourable position, too. These funds acquired 35 per cent of all IPFs' vouchers, which indicates more equal distribution of vouchers among the IPFs. Allocation by the founders shows a higher concentration; Kotrba et al. (1999) calculated that 51.2 per cent of all vouchers entrusted to the IPFs were given to the top ten IPFs' administrators (see Appendix B). We can conclude that in all terms, the IPFs were weaker in the second wave. This was, perhaps, caused by several factors. The first wave gave the investors an opportunity to learn the mechanism, and people were thus more willing to invest individually in the second wave. They might also realise that they could earn more individually than via an IPF. Laštovička (1993) shows empirically that the individual investors were more successful in bidding because they, on average, acquired the same portfolio as the IPFs but for a lesser price.¹⁷ According to the author, it was so because the funds were large and thus had large amounts of vouchers they needed to invest. They were at the same time restricted from buying more than 20 per cent of a company. Perhaps they were forced into buying shares they would not buy otherwise, only to invest all vouchers

¹⁷ The conclusion is only theoretical. No individual investor held as much vouchers to be able to diversify to the extent an IPF could.

they held. This is interesting because Laštovička's analysis suggests that, considering the nominal value of the property, the holders of the investment vouchers would (*ceteris paribus*) be better off had they decided to invest individually. Furthermore, some IPFs were reluctant to issue their shares after the first wave (CKP, 1995), which shed a negative light on the IPFs. The fact is that the individual investors paid less attention to the IPFs in the second wave.

The second wave represented the termination of the official, centralised component of the voucher privatisation. The result of both waves was that the Czech capital market ended up with over 1.5 thousand new issues of shares worth around 350 CZK bil.¹⁸ There is to be added that, on the contrary to the vouchers, these securities were perfectly tradeable, and the transfers could, therefore, increase inflation. That was not the case, however, since the majority of the shares were not traded (see subchapter 2.4 below). After the official part of privatisation, the ownership concentration and general settling down the ownership rights began. It gained a nickname "the third wave" after the Motoinvest, a.s. introduced its campaign with the aim to obtain various IPFs' shares from the individual shareholder (the whole case is dealt with in subchapter 3.2). The third wave occurrence was unsurprising. After all, the transfers of shares were expected, and are a natural part of today's capital markets, too. Since the post-privatisation environment and the IPFs' role within it is the main subject of this text, we will discuss it in detail in this chapter. However, the next subchapter deals with the capital market in the Czech Republic, i.e. the place where the shares were traded. Essentially, it was the place where the third wave was to proceed which is why there is a need to bring the context. The third wave itself is discussed later in subchapter 2.5 which is devoted to the IPFs and their performance after the voucher privatisation.

2.4 INTERMEZZO: THE STOCK EXCHANGE

What played a highly significant role in the third wave was the stock exchange. The voucher privatisation was expected to create the capital market in the Czech Republic. Such expectation was not exaggerated; it was rather natural since the outcome of the privatisation was the redistribution of shares, and their owners needed a place to trade them. Hrubý and Rudlovčák (2002) write that the expectation was partly based on the fact that the modern, computerised method of privatisation set the scene for the standard capital market. The market was supposed to resemble the markets in the developed countries, where the trades are processed automatically based on the buying and selling orders. In fact, Ježek (in Husák, 1997) revealed that the Prague Stock Exchange was re-established as an exact copy of the Paris Stock Exchange, which was already fully automated.

To allow for an opposing opinion, Kogut and Spicer (2002) put it that the mass privatisation and capital market development are logical contradictions. The authors write that the financial market creation is based on the interpersonal trust among the participants, who are also required to believe in the institution of the market. That is, they are required to believe that if they invest, they would gain a future return. According to the authors, this was not the case; individuals were fearful of having their property represented by a symbolic share with a set of rights. However, the outcome of the privatisation was that there were millions of such individuals who held the shares. The authors believe that theoretically, the desired outcome of the privatisation is that the assets are purchased by those who value them the most. Since the shares were distributed to poorly informed individuals who could not utilise efficient financial markets, a "class of entrepreneurs" attempted to acquire the assets by extra-legal means. The authors, therefore, suggest that the mass privatisation endangered the incentives for dishonest behaviour. We may accept the view but at the same time, we must ask what the alternative is. The authors provide a clue to the answer, too. They write that the privatisation created an opportunity to identify the so-called "ownership class"—these are simply the final, strategic owners of the

¹⁸ The sum of the total value of property that was offered in both waves was 450 CSK bil., out of which 100 CSK bil. was the value of Slovak companies.

companies. That means there is not a viable alternative to identify the owners. Since no serious ownership class was present before the privatisation, the issue was there from the very beginning. The privatisation could do nothing about it. What could be modified, e.g. through laws, was only the extent to which the problem would arise, not the problem itself.

The main stock exchange, i.e. the Prague Stock Exchange (PSE), was restored by the Security Market Act (subchapter 1.1.4), and the first trades took place on 6th April 1993. The bourse was organised as a standard stock exchange, where only members were allowed to trade. Typically, these were banks, investment companies, or other financial intermediaries. The reason was that the PSE charged a membership fee for the registration, which was costly (Mejstřík et al., 1997). On average, there were around 100 members at the PSE. The main index, PX-50, was introduced on the first anniversary of the trading, and the basic value was set to 1,000 points. The index was calculated backwards to 7th September 1993. The values of the index from September 1993 up to the end of 1999 are depicted in Figure 2.1.

FIGURE 2.1 INDEX PX-50 DURING AND AFTER THE THIRD WAVE, 1993–1999



Source: Quandl Inc. (2018)

As the base of the index, 50 shares were selected, and none of them was an IPF's share. The first year of trading was characteristic of very unsettled prices, with a peak in March 1994. Such development was unambiguously caused by several factors combined together, such as the restoration of trading, share issuance from the first wave of the voucher privatisation in May 1993 or new actors on the capital market. On the other hand, the decline that began already in 1994 was, according to the IMF, due to the market being *“plagued with fairly low liquidity, opaqueness, and inadequate regulation, all of which discourage investors (foreign and domestic)”* (IMF, 1998, p. 59).

As for the volume, the PSE did not provide the data for the index at that time. However, we can deduce a notion of the development from the total volumes traded in respective years. The numbers are provided in Table 2.3.

TABLE 2.3 VOLUME OF SHARES TRADED AT THE PSE, 1994–1999

	1994	1995	1996	1997	1998	1999
<i>values in CZK</i>						
Total trade value (bil. CZK)	42.594	125.643	249.935	246.301	172.594	163.457
Daily average (mil. CZK)	264.559	536.936	1,003.756	985.204	687.623	643.531
Of which:						
– Main + Secondary markets	172.994	337.303	748.623	868.164	625.100	622.689
– Free Market	91.565	199.633	255.133	117.040	62.523	20.842
<i>volumes in pieces</i>						
Daily average (mil. pieces)	30.113	164.157	326.323	311.653	428.734	772.661
Of which:						
– Main Market	15.466	82.264	148.510	181.235	328.519	703.818
– Secondary Market	–	0.632	35.935	55.482	68.838	56.237
– Free Market	14.647	81.261	141.878	74.936	31.377	12.606

Source: BCPP (2000)

We can see that until 1996, the trade grew extensively in both value and volume. Since 1997 however, the values started to decline. The straightforward explanation undoubtedly lies in the economic crisis that began in 1997. While the values reacted expectably to the upcoming crisis, the volumes measured in pieces slightly reduced at first but increased in the next year. Expectably, the crisis exaggerated the trading activity and the deals were made at lower prices.

In 1995, the PSE recorded two important moments. First, the shares from the second wave begun to be traded on 1st March 1995, which brought 682 new issues to the market. The PSE had thus over 1,700 titles registered, which, according to the bourse, led to a need to restructure the trading (BCPP, 1996). At the beginning of the year, there were two markets at the PSE: the Listed Market and the Unlisted Market. The Listed Market was the regulated market and the issues traded there must have been approved for trading by the PSE. They must have been of a greater quality; being listed at the superior Listed Market played a signalling role. The Unlisted Market, on the other hand, was less demanding in terms of accepting the issues for trading. All that was required was to register the issue for trading. New segmentation was introduced on 1st September 1995, when the trading was divided into three markets: the Main, the Secondary, and the Free Market, respectively. The titles from the Listed Market were since then traded on the Main Market, and the Free Market contained the titles from the Unlisted Market. The Secondary Market was newly established and was there for the less liquid titles from the Main Market. The market segmentation was conducted with the objective to make the process of selecting the issues for trading more transparent (BCPP, 1996).

The decision to further divide the markets was reasonable at that time because, as was mentioned above, the issues traded at the PSE were numerous. Unsurprisingly, it was due to the completion of the two voucher privatisation waves, whose result was the issuance of the shares. Table 2.4 shows the numbers of titles traded at the PSE. It shows that by 1997, the bourse significantly reduced the number of securities registered for trading. Despite the reduction, the volume of pieces traded did not decline, as was shown in Table 2.3. Clearly, the titles that were excluded from trading were illiquid. Another interesting phenomenon is that the IPFs' shares, that were traded at the PSE, were traded predominantly at the Free Market. The Free Market, as was described above, traded the least distinguished issues. These, at the same time, were required to fulfil the least demanding criteria to be accepted to the market. Lastly, the World Bank (1999) mentions 2,179 titles traded both inside and outside the Prague Stock Exchange in 1996/1997. Out of the total number, 1,700 were shares of companies privatised through the voucher scheme, and the rest were the IPFs. We can, therefore, see that most of the IPFs were not traded at the PSE. The World Bank also provides numbers of titles traded on foreign stock-exchanges for comparison. For example, in Poland there were 83 titles, in Germany, 700 titles; in the Netherlands, 185 titles; or in the USA, 2,271 titles. Clearly, the Czech market could not handle the same number of titles as the USA. The oversupply eventually earned the necessity to reduce the numbers of traded titles.

TABLE 2.4 NUMBERS OF TITLES TRADED AT THE PSE, 1994–1999

Market	1994	1995	1996	1997	1998	1999
<i>companies' shares</i>						
Main	34	62	42	43	10	8
Secondary	—	6	51	58	94	79
Free	990	1,630	1,535	199	179	94
<i>investment funds' shares</i>						
Main	0	0	2	2	0	0
Secondary	—	0	1	0	2	2
Free	4	18	39	18	19	12

Source: BCPP (1996, 1997, 1998, 1999, 2000)

What played an important role in the trading at the PSE were the types of trades that were offered. These were numerous and differed in rather technical details that are not important for this text. What is important is the division of the types of trading into two groups. The first group contained the trades that were conducted at the central market, and which created the official prices of the shares. The second

group contained the rest, that is, the direct trades that were ex-post registered in the trading system. These trades were not anyhow regulated or tied to the official price of the security but were at the same time not anyhow guaranteed by the PSE. It means that the bourse did not block any direct trades that were significantly different from the official price. At the same time, the bourse did not (and still does not) take the direct trade prices into the official price setting.

The trade value broken down by the central market trades and the direct trades is shown in Table 2.5. The numbers give us a very different notion of how the Czech capital market worked in the 1990s. Throughout the entire period of the third wave, the majority of securities were traded off-market. That means that the official market price of a title was based on a mere fraction of the trade with the title. This is because, as was mentioned in the previous paragraph, the direct trades were not regulated or tied to the official price. As a result, the official prices did not reflect the actual prices. Only in 1998 the situation changed substantially. The change was initiated by the bourse, perhaps as a reaction to the situation in 1997, when 90 per cent of all trades were conducted off-market. Even though the traders could still trade directly on the free market, since 1st August 1997 they were obligated to trade listed issues in the public market exclusively (BCPP, 1998). The Main and the Secondary market shares could therefore not be traded directly anymore. At the same time, the PSE made the fees at the Main market more favourable. With this step, the PSE endeavoured to strengthen the pricing mechanisms. The new regulation, in conjunction with slashing the number of unmarketable securities, made the trading more transparent. The bourse also intended to proceed with harmonising the exchange rules with the regulations that were standard in developed countries. Lastly, recall that the Investment Companies and Investment Funds was amended in 1998. That is, the overall environment was gradually tightening its rules, and the traders might simply lose incentives to trade directly.

TABLE 2.5 VALUES OF TRADE AT THE PSE BROKEN DOWN BY THE TYPE OF TRADE, 1994–1999

Market	1994	1995	1996	1997	1998	1999
<i>values in CZK</i>						
Total trade value (CZK bil.)	42.594	125.643	249.935	246.301	172.594	163.457
Central market	15.552	21.832	28.680	22.030	72.019	142.227
Direct trades	27.042	103.811	221.255	224.271	100.575	21.230
<i>shares in per cent</i>						
Central market	36.5	17.4	11.5	8.9	41.7	87.0
Direct trades	63.5	82.6	88.5	91.1	58.3	13.0

Source: BCPP (2000)

The Prague Stock Exchange was the standard stock market organiser in the Czech Republic. Apart from the PSE, the traders could trade their shares within the RM-system (RMS), which entered the company register as an off-exchange intermediary on 28th January 1993. First trades took place on 24th May 1993. The continuation of the RMS as an intermediary was quite natural; every participant of the voucher privatisation must have had an account at the RMS that registered their shares. Moreover, the RMS had plenty of offices all over the country and the voucher privatisation participants were familiar with them. Given all these facts, it is not surprising that it aimed mainly on small investors.¹⁹ Its main competitive advantage was that the investors did not need to be a member of the stock exchange. Therefore, any small investor (the then-holder of investment vouchers) could trade directly through the RMS. Nonetheless, in terms of traded volumes, the RMS was a smaller market in comparison to the PSE. In its annual report (RM-system, 1999), the RMS stated that the total value of shares traded in 1999 was around 90 billion CZK. That was around 35 per cent market share (see Table 2.3). On the other hand, considering the number of titles traded at the RMS, it exceeded the PSE tenfold. There is to be noted that the RMS traded with foreign titles, too.

¹⁹ Regardless of the fact it concentrated on small trades, the fees were rather high—see below.

Concerning the domestic titles, Mejstřík et al. (1997) write that the Czech capital market was peculiar because there was a consistent and substantial discrepancy between the prices at the PSE and the RMS. The authors claim that the RMS tended to undervalue the stocks, whereas the PSE tended to overvalue them. In a cluster analysis, they show that there was an interdependence between pricing at the two markets. The conclusion shows that a consistent and substantial gap between the prices at the two markets existed. An example of ten companies in one trading day is provided in Table 2.6. The companies were all offered in the first wave and were chosen arbitrarily. Except for one company, the trading day was 31st January 1997, also chosen arbitrarily. As for the calculation per one voucher booklet, we took the prices from the rounds where the companies were the cheapest, i.e. the rounds where one voucher booklet bought the maximal number of the company's shares. The resulting value of the portfolio is, apparently, quite different based on the market where the shares were traded. Generally, the prices at the PSE were higher—only two companies from our list were traded for a higher price at the RMS than the PSE.

TABLE 2.6 ONE TRADING DAY AT THE PSE AND THE RMS

Share	PSE price	RMS price	Calculation per one voucher booklet		
			Maximal number of shares	Value of property at the PSE	Value of property at the RMS
Komerční banka, a.s.	2,490.0	2,438.7	6	14,940.0	14,632.2
Čokoládovny Praha, a.s.	4,250.0	4,200.0	10	42,500.0	42,000.0
Hotel Forum Praha, a.s.	255.0	226.0	10	2,550.0	2,260.0
KOH-I-NOOR Hartmuth, a.s.	93.0	108.5	20	1,860.0	2,170.0
Česká zbrojovka, a.s.	1,869.0	1,841.1	25	46,725.0	46,027.5
Škoda Praha, a.s.	1,005.0	992.1	30	30,150.0	29,763.0
Sellier & Bellot, a.s.	300.0	302.0	30	9,000.0	9,060.0
Setuza, a.s.	1,850.0	1,750.0	40	74,000.0	70,000.0
Vodní stavby Praha, a.s.	1,505.0	1,460.0	140	210,700.0	204,400.0
ČKD Praha, a.s.*	485.0	451.9	360	174,600.0	162,684.0

*29.1.1997

Source: kurzy.cz, 2019; author's calculation

Variation of the spot prices at one market (i.e. the Czech capital market) is, according to the law of one price, a reason for arbitrage. Technically, buying the shares on RMS and selling them on PSE (and vice versa) was possible because the shares were not physically present at the markets. They were recorded in book-entry form at the Securities Centre—an institution which held the register of securities and their holders. Both markets, i.e. PSE and RMS, were connected to the Securities Centre, and the arbitrage was therefore technically possible. However, there is some reasoning to the price distortion. First, the PSE was the main stock exchange, we can, therefore, assume that there was a “premium” for trading there. Second, as we have argued above, the PSE official prices were not based on all trades with the respective title—the direct trades did not influence the price. Third, the World Bank (1999) provides some reasoning; a somehow technical obstacle was the different settlement at the PSE and the RMS, where the PSE operated on the T+3 settlement, whereas the RMS on the same day settlement. Therefore, the trader could buy on the RMS and sell on the PSE promptly; in the opposite direction, however, it took three days until the PSE settled the trade. The liquidity was lower in that case, which lowered the resulting price as well. And fourth, what created an obstacle were the fees that were charged for trading at the respective markets. As for the PSE, there was no direct way to come to the market and trade. The bourse only allowed its members to trade at the PSE, and the members were needed to fulfil a set of criteria. The criteria were stated in the Rules and regulations of the PSE (1995). They had to pay various fees specified in the price list (‘Stock-exchange fees for 1995’, 1995). To be able to trade at the PSE, its member was required to pay the enrolment fee (800,000 CZK), the annual membership fee (300,000 CZK), and the fees for trading (0.125 per cent of the order value for the listed securities, 0.25 per cent of the order value for the unlisted securities, and flat fee 200 CZK per order for the direct trades). Clearly, the fees (and their sum) were substantial. The fees acted as a deterrent with the

intention to restrict the number of members, who were, in effect, financial corporations only. For example, the PSE had in all 88 members in 1997, while 23 of them were banks and 65 were brokers (BCPP, 1998). Expectably, the members of the PSE charged their own fees for the trading services they provided to their customers, who were, for instance, the shareholders who wanted to trade their shares. The alternative for the shareholders was using the RMS's services, which was not based on the membership as the PSE was. That is, the shareholders could sell or buy the shares directly at the RMS, which, however, charged fees for the services as well. Mejstřík et al. (1997) write that the RMS charged a flat fee 35 CZK for placing an order. On top of that, it charged 2 per cent fee of the value of the contract if the value was less than 1000 CZK. The additional percentage eventually declined with the value of the order. To sum up, the prices at PSE and the RMS only represented the price of the share but not the price of the trade. The fees worked somehow as a tax, which modifies the market price according to the elasticity. All the reasons provided here accounted for the discrepancy between the prices at the PSE and the RMS.

To conclude this subchapter, one more interesting thing from the study by Mejstřík et al. (1997) is worth referring to. Based on a regression analysis, the authors conclude that the relative share prices established in the voucher scheme correlate strongly with the subsequent prices on the stock exchange. Therefore, they show that the artificial voucher market was a very realistic simulation of the standard trading at a stock exchange. Same results are reported by Hingorani et al. (1997). These findings confirm that the voucher privatisation was, indeed, well designed. It also confirms that the initial evaluation according to the book value, as was discussed in subchapter 2.2, was not a problem because the price differences were to be accounted for later.

2.5 THIRD WAVE

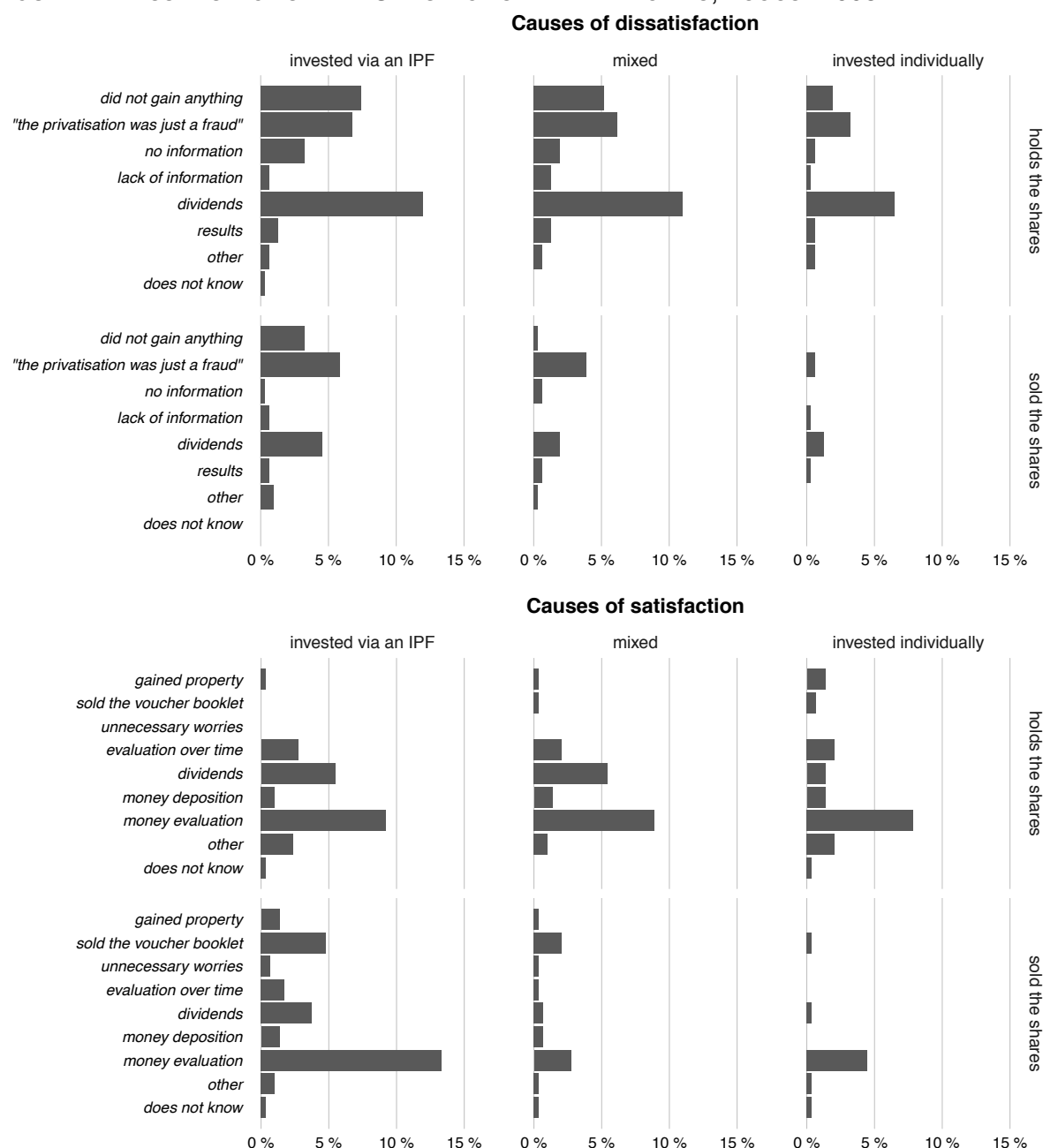
As was shortly mentioned in the first chapter, the voucher privatisation, as is perceived, did not finish after the second wave. The so-called third wave was a process that started immediately after the official part, i.e. the first and the second wave, ended. It can be summarised as a reallocation of the shares gained during the privatisation. This subchapter deals with the third wave and the way it proceeded. The discussed time period is mainly between 1994 and 1998. However, the before and after periods are taken into account as well to bring the context. The reasoning for the chosen years is straightforward. As for the lower bound, the year 1994 is the final year of the second wave. Although the shares from the second wave were only issued in February 1995, the shares from the first wave were already traded at the capital markets at that time. The upper bound, 1998, was chosen because the legislative environment changed. The Investment Companies and Investment Funds Act was amended, the stock-exchange aimed to adjust the trading rules, and the voucher privatisation was not a contemporary topic as it was before.

Why had the third wave ever occurred? Myant (2013) gives several reasons for it. First, individual investors sold their shares because they were disappointed with the dividends. Second, funds sold their assets because they could have intended to do so from the very beginning. The buyer could (perhaps) be another firm which belonged to the managers, and which did not pay for the shares. This was, according to the author, the reason why the funds were not much interested in being paid dividends from the firms they held, i.e. in holding the shares with the hope to earn profits conventionally. Instead, the author claims that they transferred the shares to themselves and reported a loss or zero earnings. And third, large funds traded the shares among themselves in order to gain the majority in fewer firms. However, they were not allowed to hold more than 20 per cent share. Therefore, they were forced to create coalitions; otherwise, their own shares would be priceless. That is, simply because a fund would hold a (minor) share in a firm but would not be a part of the coalition, its vote would be insignificant.

The first point can be illustrated with the public opinion polls. In a poll that was carried out in August 1995 (Sociologický ústav AVČR, 1995b), people were asked whether or not they still held the

shares they gained in the voucher privatisation. As much as 34 per cent of those who held the shares from the first wave had already sold them by that time. Out of those who held the shares from the second wave, 15 per cent had sold them (recall they were only given the shares in February 1995). As for the satisfaction with the outcomes, the answers were evenly distributed—51 per cent of the answers read “very dissatisfied” or “dissatisfied” and 49 per cent were “satisfied” or “very satisfied”. The different reasons for the dissatisfaction and satisfaction with the gains from the first wave are depicted in Figure 2.2. We do not depict the second wave here because the timespan between the issuance of the shares and the poll was only 6 months—from February to August 1995. Since the accounting books are usually closed by the end of the year, the companies were unlikely to announce their profits between February and August. The answers from the second wave are therefore not reliable in this case.

FIGURE 2.2 DISSATISFACTION AND SATISFACTION WITH THE GAINS; AUGUST 1995



Source: Sociologický ústav, AVČR (1995b)

Nonetheless, the results from the first wave are perfectly fine and are straightforward—the majority of people who were dissatisfied complained about the dividends. The expectation that the dividends

would be paid was probably raised by the definition of a share: a share is a security which gives its holder a right to vote at the General Meeting, a right to receive the dividends, and a right to share in any surplus in the event of liquidation of the company. Despite the shareholders' right to receive the dividends does not imply the companies' obligation to pay the dividend, the shareholders, perhaps, expected them anyway. What is apparent is that the causes of dissatisfaction did not differ too much between the individual investors and those who invested with an IPF. It is, however, easy to clarify why the dividends were paid by neither the companies nor the IPFs. As for the companies, they necessarily needed to be restructuralised to be able to stand in the market economy. On top of that, they faced foreign competition after the foreign trade liberalisation. Therefore, they needed investments; reinvesting the profits was a straightforward option. As for the IPFs, they were in a somehow similar situation as the companies. Their founders had to deposit the initial equity to be able to establish the IPF. The sum was rather significant—see footnote 9. Furthermore, the funds needed to pay other expenses such as advertisement, staff, etc. Had they received any dividends from their portfolio companies, they would hardly distribute the money to their shareholders.²⁰ To put it differently, the shareholders' right to receive the dividends does not imply the companies' obligation to pay the dividends. The shareholders, perhaps, expected them anyway. Overall, the dissatisfaction with the dividends once again shows the somehow idealised opinion on the companies' condition.

On the other hand, those who were satisfied linked their satisfaction to the money evaluation. An interesting result shows up when we compare the answers given by people who invested individually with the answers given by those who invested via an IPF. As we can see, the dissatisfied people were, again, dissatisfied mainly because of the dividends, regardless of investing individually or with an IPF. However, the people who invested via an IPF and sold their shares by the time the poll was taken were satisfied mainly because of the money evaluation. We can assume that the evaluation came from the IPFs which paid their shareholders off within a year after the privatisation, that is, from the “tenfold security.”²¹

The second point suggests that the IPFs were from the very beginning meant to be the vehicles to conduct the tunnelling. Clearly, the suggestion is counterintuitive for two reasons. First, it is simply impossible to prove the intention, and the presumption of innocence applies to the IPFs as well as to any other entity. And second, many IPFs were established by banks. Kotrba et al. (1999, p. 17) write that the IPFs established by banks, insurance companies and their sisters acquired 35 per cent of the vouchers that were entrusted to the IPFs in the first wave, and 24 per cent in the second wave. The IMF, however, writes that these funds acquired 67 per cent of all vouchers that were given to all IPFs (IMF, 1999).²² One way or another, the fact is that unlike all the other founders, the banks had two good reasons to behave correctly. First, the bank-funds were promoted based on their mother bank reputation, which the banks needed to keep. And second, the banks were supervised by the central bank (‘The Czechoslovak State Bank Act. Law No. 22/1992 Coll., on the State Bank of Czechoslovakia’, 1992), and were therefore very unlikely to establish an IPF dishonestly. Yet, the then-director of the Czech capital market supervision J. Veverka explains some of the unpleasant IPFs' behaviour that was present at the capital markets. He mentions numerous issues, such as selling the shares to an allied company who trade them

²⁰ For example, the sum of dividend received by IPF Beta, a.s. in 1996 was 11,000 CZK and the paid dividends were zero (justice.cz, 1996m). Obviously, the received dividends were not a substantial amount of money since the IPF's total assets were 5,045,000 CZK. The paid dividends were, however, none.

²¹ The advertising campaign by the Harvard Funds read that “*a year and a day after a holder of investment vouchers became the Harvard Funds' shareholder, he would, if he wished so, be entitled to receive ten times the value of the voucher booklet*” (‘Ad by HC&C’, 1992). KIS (investment company established by Česká pojišťovna) offered 15 times the value after roughly one and a half year (‘Ad by Česká pojišťovna’, 1992).

²² We assume that the IMF was right because Kotrba et al. (1999, pp. 22–23) further write that “*among the nine most successful, only one fund was not connected to a major financial institution: the Harvard Capital & Consulting.*” The table in Appendix B is the one the authors referred to; we can see that the nine most successful funds, minus the HC&C, held some 56 per cent market share. The authors, perhaps, meant the entire sum of vouchers, not only those given to the IPFs.

further despite it did not pay for them in the first place; we will get back to the methods later in this subchapter. He argues that such behaviour is somehow expectable for an emerging market. According to the author, the intention was to earn wealth quickly and leave the scene. What he concluded with was that the overall attitude was not mature yet to be comparable with the developed countries (Veverka, 1996). Obviously, the author had the insight into the situation, but no solution to it. The question is, however, whether or not a solution existed. As King (2001) puts it, the quick privatisation created owners with little or no experience. There must be added that there could hardly be expected that the ownership created by quick privatisation would be any different; the other option, i.e. slow privatisation, would be, perhaps, much worse.

The third point essentially meant that the price of the shares only reflected the price of the decisive shareholding. Mejstřík et al. (1997) provide a simple yet powerful explanation for why it should be the case. The authors divide the shareholders into three groups: the largest shareholder (i.e., an IPF or a coalition of IPFs), the individual shareholders, and the residual shareholders (i.e., an IPF that did not join the coalition). The key is that the individual shareholders hold so large a stake that the residual shareholder holds a lower stake than the largest one. That is, the individual shareholders' votes are insignificant despite them holding majority together because they do not cooperate. They are therefore excluded from any decision-making. The real competition was thus between the largest and the residual shareholder, where the largest shareholder prevails. What reflected the price of the shares was only this decisive share because acquiring less was worthless in terms of governing the company.

The three points described above surely do account for the third wave occurrence. Finding a catch-all reason for it is, however, not as difficult. Generally, as soon as the second wave ended, the ownership structures began to settle down. This was advocated by the authors of the voucher privatisation, too. The privatisation was not there to find the final, strategic owners. It was rather a mechanism to find some owners, who would then decide for themselves whether or not they want to retain the ownership. What the owners were accommodated with was the possibility to enter the capital market, which was described in the previous subchapter. These markets were meant to reallocate the companies' shares so that they were held by the final owners. The third wave was a natural continuation of the process that partly begun during the privatisation already.

What seems very interesting is that the patterns of the third wave started to show up during the first and second wave already, when the IPFs often used up the concentration limit. We can, therefore, assume that were there not for the limit, the concentration would be higher from the beginning already. Egerer (1995, p. 21) moreover writes that the IPFs' predominant activity between end-1992 and mid-1994 was the "portfolio clearing." That is, they sold the shares of companies at which they only held a small stake. Their aim was to hold the largest stakes allowed (20 per cent) in fewer firms rather than tiny stakes in lots of firms. The reasoning was that higher concentration allowed for better corporate governance because the large shareholder had the executive power. In consequence, the price of the firm should have increased with the ownership concentration. Claessens (1997) conducted a study which approves the logic. That is, the author concludes that ownership concentration was positively related to the firm value. Claessens points out that the absolute majority of strategic investors expected the price to be even higher; they relied on the concentration to increase the value of the company. Empirical studies even show that not only do the companies with concentrated ownership perform better but also that the companies privatised through vouchers experience substantial corporate governance problems due to the ownership dispersion. King (2001) argues so, however, his claims are based on four selected case-studies. A more sophisticated method was used by Claessens and Djankov (1999) who estimated the influence of ownership dispersion on labour productivity and the company's profitability on a sample of 706 Czech companies over several years. Their analysis shows a negative correlation between ownership dispersion and labour productivity, as well as between ownership dispersion and the profitability of the companies. The authors argue in favour of the IPFs in the sense that the dispersion

is brought down. Frydman et al. (1999) provide results that are akin—the revenues of the firms owned by privatisation funds grew faster. Similarly, Hamm et al. (2012) show that mass-privatised firms were less likely to be successful in the business. They were less likely to have invested, less likely to increase sales or develop new products. Again, the authors name the corporate governance to be blamed. On the other hand, Weiss and Nikitin (1998) find that the ownership concentrated in an IPF does not improve the companies' performance, as opposed to large shareholders other than IPFs. All the authors discussed here agree, to some extent, that the concentrated ownership implies better performance of the company. However, there were better and worse companies, better and worse managers, different privatisation methods resulting in different ownership, etc. Therefore, the causality might be simply opposite—that the IPFs aimed to concentrate the ownership in better-performing companies, i.e. better companies lured the investors. Overall, we can conclude that the effect of the concentrated ownership on the companies' performance was ambiguous, if not unprovable. The results are, moreover, based on the ex-post study of the companies. The fact is that right after the end of the privatisation, the portfolio clearing took place.

The portfolio clearing described in the previous paragraph suggests that the IPFs intended to hold high stakes in the companies. Perhaps, that was because they wanted to manage the companies in their portfolio, at least initially. In an interview which was held after the third round of the first wave, two IPF representatives approved they were prepared to conduct their ownership rights actively. They openly stated that they were ready to cooperate with other funds who held shares in the companies to ensure fair corporate governance. Also, they claimed that they were willing to cooperate on detailed business plan preparation, as well as to attend the general meeting of shareholders (CKP, 1992). The intention to manage the companies is approved by Egerer (1995) who studied 10 strongest funds. Out of the studied IPFs, 9 held a seat (or more seats) in at least 50 per cent of the companies in their portfolio. One of the IPFs studied was YSE whose portfolio is showed in Appendix C. The fund had 120 companies in its portfolio. Only 17 of them represent more than 1 per cent of the value of the IPF's portfolio, and only 3 of them represent more than 10 per cent. Nonetheless, according to Egerer's study, the YSE held a seat in 67 per cent of its companies, i.e. 80 companies in total. In its memorandum of association, the fund proclaimed its intention to *"effectively intervene in the management of the joint-stock companies"* (justice.cz, 1991, p. 3). There are two things to take into consideration when evaluating the initiative. First, active management must have been costly. Note that the joint-stock companies in the Czech Republic were set up in line with the German-type corporate governance model. It means that there are separate management and supervisory boards in the company, each being appointed by the shareholders at the general meeting. This dual board model is characteristic with the management board carrying out day-to-day decisions. That is, playing an active role in the management required possessing information, monitoring the company, screening both the public and non-public information, decision-making etc. And second, active management could not be exceptionally profitable. Recall that the IPFs could only charge from their shareholders 2 per cent fee of the fund's value for managing the fund. Evaluating the costs and profits, the YSE's case (and eventually any other IPF's case) is obvious. Performing active management in 80 companies, only a few of which being significant for the IPF, does not seem to be sustainable in the long run.

On a side note, the IPFs, despite being designed and regulated as normal investment funds, were obviously very unique. Based on this fact, there is another channel of the lack of motivation to administer the companies in their portfolio. The uniqueness is characterised by the source of their investment capital—the vouchers. Typically, a normal investment fund collects money from the public, which it later uses for investments at the capital markets. To be able to collect the money, it needs to encourage its eventual shareholders to deposit their money at the fund, that is, to buy the fund's newly issued shares. This process makes the fund grow in both the value and size. Perhaps, the most convincing way to do it is the growing value of the fund's portfolio. The fund, therefore, is interested in holding prosperous companies. Contrary to that, the IPF is different. This is apparent from its name already: the

investment *privatisation* fund. An IPF only collects the “money” at the beginning, in the form of vouchers. After the privatisation, the funds could hardly expect that they could successfully endeavour to issue new shares and sell them for the real money. After all, the voucher scheme was chosen for the very reason that there was a lack of savings in the economy. As a result, improving the portfolio did not seem profitable.

The unsustainability of the anticipated IPF’s active management was not favourable for the companies that were to be managed. This is because, as we have seen in subchapters 2.2 and 2.3, the IPFs got 72 per cent of all investment vouchers in the first wave and 63.5 per cent of all investment vouchers in the second wave. Clearly, since the majority of vouchers ended up in the IPFs, the funds held the majority of the companies as a result. This is illustrated in Table 2.7, which shows the cumulative numbers of companies held by different shareholders. The authors calculated the numbers for 949 Czech companies which were sold in the first wave. The first row (“Total share offered for vouchers”) renders the total numbers of companies distinguished by the stakes offered for vouchers. That is, the table shows that in 842 companies, more than 50 per cent of their shares were sold for vouchers. The top part of the table represents the absolute power of investors, i.e. the power according to the actual share they held in the company. Despite the fact that the numbers in the table are not for all companies offered in the whole voucher privatisation, the message is apparent. First, a third of the companies were held by the IPFs effectively, i.e. in 334 companies, the IPFs together held more than 50 per cent of the stakes. And second, the overall involvement of the IPFs in the ownership structure was strong; unsurprisingly, since they were entrusted some two-thirds of all vouchers. On a side note, what is noticeable is the violation of the rules. A single fund (the largest or the second largest) held more than 20 per cent in 109 companies. In 9 of them, the largest fund even held more than 30 per cent. Note that the numbers are for the IPFs whereas the 20 per cent limit was for the investment companies. In case the IPF was a singleton, nothing would change. However, in case the investment company held more IPFs, each holding, say, 12 per cent in a firm, the investment company would be breaking the law but is not captured in Table 2.7.

Holding 50 per cent in a company is an effective stake under all circumstances. In some cases, though, a significantly lower stake is sufficient. The calculation of relative power sheds a different light on the privatisation outcomes. We have already touched the issue above. The context we discussed was the motivation for the IPFs to create coalitions, suggested in a study by Mejstřík et al. (1997). The same concept was used by Laštovička et al. (1994), too, and the findings are presented in the bottom part of Table 2.7 (recall the numbers are cumulative).

TABLE 2.7 NUMBERS OF COMPANIES HELD BY DIFFERENT SHAREHOLDERS, BY STAKES

Stakes in per cent	> 10	> 20	> 30	> 40	> 50
Total share offered for vouchers	946	939	920	897	842
<i>absolute power of investors</i>					
Individual investors	911	739	559	411	272
IPFs	876	787	631	498	334
First largest fund	747	102	9	0	0
Second largest fund	482	7	0	0	0
Third largest fund	217	0	0	0	0
Two largest funds	860	673	319	25	2
Three largest funds	870	753	543	279	85
Four largest funds	873	769	605	408	196
Five largest funds	875	782	622	470	272
<i>relative power of investors</i>					
Single largest fund	895	737	442	231	146
Two largest funds	916	974 (sic; 794)	782	644	473
Three largest funds	918	892	847	760	669
Four largest funds	918	897	860	790	727
Five largest funds	918	900	867	809	754

Source: Laštovička et al. (1994), adjusted

The reasoning behind Table 2.7 is as follows. The authors assumed that the individual shareholders were unable to use their voting power in unison, and so their relative importance was negligible. Their voting power was virtually transferred to the other shareholders, making them relatively more influential than they were according to their stakes.²³ As a result, 146 companies could be effectively controlled by one single fund, and a coalition of five funds was able to control 754 companies. Such outcome might be deemed positive in terms of the corporate governance—there was a dominant owner who had the power for the active management. However, as we have argued above, the incentives for the IPFs to do so were limited. The legislature designed the IPFs to be merely intermediaries who would manage the fund and charge fees from their shareholders for it.

Using the portfolios of the two IPFs that are in Appendix C, the difference between the absolute and relative power can be illustrated. We can see that both funds held the shares of the company *Desta Děčín, a.s.* For both IPFs, the shares they held represented slightly more than 1 per cent of each portfolio.²⁴ In May 1997, a general meeting was held, and the notary's acknowledgement (*justice.cz*, 1997b) provides an overview of the shareholders who attended the meeting. In total, *Desta Děčín, a.s.* issued 737,371 shares. There were 598,822 shares (81.21 per cent) present at the general meeting, held by 82 shareholders. Of the number of shareholders, only two held more than 10 per cent of the company (one of them was the NPF with 203,610 shares). More than 10,000 shares were held by 9 shareholders; IPFs and the NPF. Both IPFs from Appendix C were present. As for the changes in the boards, both management and supervisory boards were removed from office. The new boards were appointed; two members in the supervisory board and four in the management board. One new member of the supervisory board was proposed by the NPF, all the others by the IPFs. What is interesting is that the investment company that held *Rentiérský IF 1. IN* (portfolio in Appendix C), held one more IPF which invested in *Desta Děčín, a.s.* Together, the investment company held 45,000 shares via its IPFs, which was 6 per cent voting power—nominally. However, the investment company was able to nominate and eventually appoint two out of six newly appointed people. Apparently, its relative voting power was significantly higher.

Consequently, a large portion of the enterprises was held by shareholders who were prone to lose motivation to be involved in the decision-making. What creates a problem here is that the quorum at the general meeting of shareholders was at least 30 per cent of the shareholders ('Commercial Code. Law No. 513/1991 Coll.', 1991). In case the quorum was not met, a substitute general meeting was to take place within 3 days, i.e. it could take place immediately. Despite the fact that no quorum was required at the substitute general meeting, it could appoint the management. The same was, obviously, true for a higher level of ownership, i.e. for the investment company holding the shares of an IPF. The case is very well described in the notary's acknowledgement from the general meeting of shareholders of the *IF Čermák a Plevač Invest, a.s.* (*justice.cz*, 1995a). The general meeting was to take place on 10th March 1995 at noon. Since the shareholders were not present at that time, a substitute general meeting was set to 10th March 1995 at 1 p.m.—one hour later. The IPF had 5,636 shares issued, out of which 1,786 (31.5 per cent) were present. The largest shareholder (1,694 shares), an investment company *MORAVA FOND, s.r.o.*, was present, too. At the substitutive meeting, new management and supervisory boards were appointed. Interestingly enough, Mr Plevač was originally supposed to present the annual report at the general meeting. Unfortunately, he was not present at the meeting, and he also

²³ The authors provide an example, too. Suppose a company is owned by four groups of shareholders; three IPFs and many individual shareholders. The first and the second IPFs hold 10 per cent each, the third IPF holds 20 per cent, and the individuals hold 60 per cent together. Since the individual shareholders do not vote, the first IPF's relative power is 25 per cent, the second IPF's relative power is 25 per cent, and the third IPF's relative power is 50 per cent.

²⁴ Perhaps, the shares represented more of the IPFs' portfolios. The general meeting which we discussed was held on 13th May 1997. Three days later, YSE decreased its equity to half due to losses after reflecting the market prices of their portfolio (*justice.cz*, 1997d). Previously, the IPF evaluated its portfolio according to the Ministry of Finance guidelines that were discussed and illustrated in subchapter 2.2. Either way, decreasing the portfolio to half of its previous value suggests that the company represented 2 per cent of the portfolio, provided the price of the company's shares did not change.

lost his seat in the management board. Mr Čermák switched from the management board to the supervisory board. Lastly, the name of the IPF was changed from IF Čermák a Plevač Invest, a.s., to IF PK Invest, a.s. Obviously, the corporate governance issues that were to be prevented by the ownership concentration, were not inevitable.

Moreover, Laštovička et al. (1994) assumed that had the IPFs resigned from exercising their ownership rights, the remaining organised group of owners were the pre-voucher privatisation owners such as the NPF. In this case, the pre-voucher privatisation owners would most likely appoint the original management, i.e. they would do no changes in the company whatsoever. Brom and Orenstein (1994) provide an example. Tesla Karlín was owned by individual shareholders (43 per cent), IPFs (37 per cent) and the state (20 per cent). There were seven seats in the management board. Three were taken by the representatives of the investment funds, one by the NPF, and three by the former management. We can see two things here. First, the IPFs were not passive, they held roughly as many seats as their share in the company was. However, the profit sharing for the board was, perhaps, not too tempting. In 1996, the sum that was to be distributed as the profit sharing in Tesla Karlín was 250,000 CZK (justice.cz, 1998a). Supposing the sum was meant only for the management board, and the board had seven members, each member would receive 3,125 CZK per month. Since the average wage in 1996 was 9,825 CZK (Statistická ročenka České republiky, 1997), we cannot assume that the people in the board would work full-time and exclusively for the company. As a result, they could either hold a seat in more companies' boards and, eventually, be overwhelmed with the responsibilities. Or, they could do nothing but attend the general meeting. Apparently, holding a seat in a company, as the arrangements were designed, was not exceptionally profitable per se; neither for the IPFs as we have seen above nor for the managers personally. Unfortunately, the eventual passivity of the shareholders was likely to hurt a significant part of the economy. Recall that as much as 40 per cent of all previously state-owned companies were sold in the voucher; IPFs held some 65 per cent of it. To put it differently, the companies were not as crucial for the IPFs as the IPFs were for the companies.

Overall, the conclusion is that the IPFs lacked the incentives and capacity to administer the companies in their portfolios. Myant (2013) writes that the IPFs were expected to play a role which was unacceptable for the regulated western funds. The companies, in effect, lacked control by either the state or the IPFs. That is, the state withdrew from the companies and did not intend to manage them, and the IPFs were designed so that they manage themselves,²⁵ i.e. their portfolios, not the companies in the portfolios. Myant (2013) further writes that the IPFs were insufficient for the restructuring, only slightly sufficient for controlling the companies' management (prevention of the worst cases of abuse of power only), fairly sufficient for the ownership concentration (but not necessarily into the "right hands"), but extremely useful for enrichment of a few individuals in the IPFs' managements. The statement is bold, but the author provides two cases to support his claims—the case of C.S. Funds, and the case of Harvard Funds. We discuss both in Chapter 3 and will see that the case of Harvard Funds is not as clear as the author suggests.

What the above-quoted author suggests is that a second option existed, which consisted of managing the companies dishonestly. In this case, the incentives were inverse—the IPFs needed to control the company actively. Libnar (1993) was concerned about the behaviour of the IPFs' management, i.e. the investment companies that founded and managed the IPFs. The author writes that the economic power which was concentrated in the hands of a few entities was, in some cases, abused by these entities. His claims were based on the fact that the investment companies appointed people of their choice into the companies' boards. These people were instructed to act in accordance with the needs of the investment company, not the managed company. Libnar further writes that by appointing their candidates into the

²⁵ More accurately, the IPFs were managed by their management company which was their founder—the investment company.

management boards, the investment companies were breaking the law. There is to be noted that already the original version of the Investment Companies and Investment Funds Act imposed the obligation of confidentiality upon the members of the boards in § 28. It was known, however, that the managers were informing their investment companies about the situation in the company. What Libnar suggests is that the investment companies should not at all be meant to be active managers in the companies—the role belongs to a strategic investor. Palda (1997) adds that the “incestuous relationship” between the IPFs, the banks that founded them, and the companies whose creditors the banks are, provide excellent asymmetric information advantages to the insiders. The problem was that the insider information was later used by the investment company either at the stock-market or in direct trades.

Concerning the previous paragraph, there are three things here. First, Libnar was right that the managers who were appointed to serve the investment company were powerful enough to hurt the managed company. For instance, they could approve paying dividends, which, as we have argued above, could be opposed to what the companies actually needed. We can see that in fact, the IPFs had the power to decapitalise the companies. Second, some investment companies behaved doubtfully. At the same time, they had access not only to their IPFs but also to the companies that were in the IPFs’ portfolios. Nevertheless, we must distinguish between the bank and non-bank funds. As for the banks, their investment companies were more likely to be beneficial for the companies. This is because the banks were the companies’ creditors and therefore, it was in their own interest not to “exploit” them. More likely, they wanted to monitor them; Egerer (1995) writes that the bank funds often relied on employees not from their investment company but from the mother bank. Apparently, the knotted structure of ownership and influence was remarkably complex, and the role of banks in corporate governance was criticised by some authors (e.g. Dittus & Prowse, 1995). And third, note that Libnar’s article was written in December 1993; at that time, the second wave was just about to launch. The problems, therefore, started to show up as soon as the first wave was completed, i.e. the shares were issued. As we have seen in subchapter 1.1 however, the legislature did not react promptly. The non-introduction of the proper institutions to oversee the capital market was mentioned in several studies (e.g. Ježek, 1997; Claessens & Djankov, 1999; The World Bank, 1999).

The undesirable behaviour of the IPFs’ managements was earlier described by Anderson (1994). The author was concerned about self-dealing, that is, the IPFs’ managers using their control over the fund to enrich themselves. Recall that abusing the managers’ control over the companies was one of the threats that were supposed to be solved with the privatisation. It was meant to solve the agent-principal problem which was in all probability about to occur as soon as the state’s grip on the firms loosens up. There was a need to find strong owners who would stop the managers from such activities. The issue was that the IPFs were owned as well—by their shareholders, the then-holders of investment vouchers. Therefore, the agent-principal problem was not prevailed over. What changed were the roles and levels of the agents and principals. As for the companies, the agents were now the managers of both the companies and the IPFs; the principals were the companies’ shareholders. And as for the IPFs, the agent was the IPFs’ management (the investment company), and the principals were the IPFs’ shareholders. Overall, passing the management to a higher level, i.e. from the companies to the IPFs (and eventually the investment companies), did not automatically imply that the managers would not exercise the same type of behaviour. Or, as Ellerman puts it: *“The funds had an even greater ‘corporate governance’ problem than do the corporations whose ‘corporate governance problem’ the funds were supposed to remedy”* (Ellerman, 1999, p. 7). Lastly, Richter (2005) considers the corporate governance to be an even larger problem in the IPFs than in the corporations themselves, for which he gives two explanations. First, the IPF’s assets were more liquid than the corporate assets because the IPFs simply held shares of the corporations, whose assets were composed of physical property. Therefore, the assets sell-off (or tunnelling) was easier for the IPFs. And second, the closed-end funds did not have to compulsorily redeem their shareholders, which meant they were not forced to hold liquidity for the refunds, and it

remained at their disposal. The only remaining defence was regulation, which was, according to the author, poor. As for the necessity to hold liquidity, the fact that the closed-end IPFs were not required to hold sufficient liquidity was, however, by some deemed to be positive. Hagopian (1994) writes that the economy undergoing a transformation is not likely to be liquid enough for the open-ended funds to be operating effectively. The note was not far from the truth, as we have seen in subchapter 2.4—the capital market was illiquid in terms of the official trades, i.e. those that were used for setting up the official prices.

Eventually, the government implemented a series of measures that addressed the problems with the IPFs. The measures were implemented in the Investment Companies and Investment Funds Act amendments, as we have discussed in subchapter 1.1.2. The first amendment aimed to restrict the IPFs' conversions into a standard joint-stock company. The possibility to convert made them no longer the subjects to the Investment Companies and Investment Funds Act. What it meant in reality was that the investment fund needed to fulfil the criteria we discussed so far to be allowed to retain the business licence. However, it could merely change its field of operation from “collective investments” into “buying and selling goods.” The change was very effective. What it did was that the then-IPF could still buy and sell shares, but without the need to follow the rules that were set for the investment funds. Since 1996 though, the IPFs could only change their legal status if two-thirds of the shareholders agreed. Also, they had to redeem the shares of those shareholders who did not agree with the conversion. Previously, the conversion only required a simple majority of votes and the redemption was not obligatory. The eventual struggle an IPF could face when attempting to convert the fund after the end of June 1996 is well illustrated in a notary's acknowledgement from the general meeting of AGB, investiční fond II, a.s., held on 6th December 1996. The chairman's statement reads: *“The right time for the conversion was missed, and now, after the amendments, the desired result would not be reached. Redemption of the individual shareholders' shares would be unfavourable for the individual shareholders since the fund does not possess enough liquidity to redeem the shares”* (justice.cz, 1996a). The IPF was put under the forced administration²⁶ 10 days later. We will return to the case in subchapter 3.2.2 where we deal with the entities related to the C.S. Funds.

Kotrba et al. (1999) provide the numbers: of the IPFs that attended the first wave, 28 per cent were transformed. As for the second wave, 21 per cent of the IPFs changed their legal form. Table 2.8 shows an interesting pattern in the numbers of conversions. The amendment was effective since July 1996, which explains the very uneven distribution of conversions in 1996.

TABLE 2.8 NUMBER OF IPFS CONVERTED INTO HOLDING COMPANIES, 1994–1998

1994	1995	1996 (1 st half)	1996 (2 nd half)	1997	1998 (1 st quarter)	Total
1	10	77	9	29	5	131

Source: *The World Bank* (1999)

In fact, the last day the funds could change their legal form was 28th June 1996, and, according to Ježek (2007, p. 185), many converted funds have this date entered in the company register. “Many” is a subjective term, however, there were 9 IPFs converted on 28th June 1996 (see Appendix D). This is just as much as in the whole second half of the year 1996. Furthermore, Table 2.9 shows the distribution of conversions in the respective months of 1996.

TABLE 2.9 NUMBER OF IPFS CONVERTED INTO HOLDING COMPANIES IN 1996

1996	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Dec	Total
First wave	0	0	3	1	3	13	1	1	0	0	0	22
Second wave	2	1	3	1	6	43	4	1	1	1	1	64
Total	2	1	6	2	9	56	5	2	1	1	1	86

Source: *author's calculation based on individual entries in the company register (MŠCR, 2012-2015)*

²⁶ The nature of the forced administration in general is discussed below.

We can indeed see that the absolute majority of funds which converted in 1996 did so in June.²⁷ The wave of conversions is somehow confusing. As long as the IPFs were operating under the Investment Companies and Investment Funds Act until then, it is hardly the case that they would, all of a sudden, need to escape the legislature. More likely, they were worried that the law would gradually restrict their business field. When the amendment was being proceeded, Tomáš Ježek openly stated in the parliamentary discussion from 8th February 1996 that *“the most important is the minority investors’ protection in the cases when the IPF is converted into a different legal form, which is ensured by compulsory redemption of the shares of those shareholders who disagree with the conversion. Furthermore, there is a wide range of sanction introduced, which strengthens the supervision”* (PSP ČR, 1996). Therefore, the introduction of the amendment was followed by a discussion that stressed the importance of the regulation. Some of the converted IPFs were eventually connected to fraudulent activities, as we will see in the next chapter. This was, however, only a fraction of them. The conversions were, perhaps, crowd psychology to some degree.

According to the World Bank, the conversion was generally perceived as a prelude to tunnelling and fraud (in the sense we defined it in subchapter 1.2). This was why the IPFs that converted were not associated with banks—the banking sector did not want to lose reputation. On the other hand, the proponents of the IPFs’ conversion argued that as soon as the fund is not a subject to the Investment Companies and Investment Funds Act, it could hold larger shares in the companies (Liška & Gazda, 2004). That is, it no longer had to follow the portfolio diversification rules. Being able to concentrate the ownership in a company was to lead to the ability to manage the companies efficiently. However, as we have discussed above, the concentration limit was ambiguous in terms of corporate governance. The total assets of the converted IPFs were as much as 25 per cent of all investment funds assets (The World Bank, 1999). That is, a significant volume of assets was managed without any regulatory oversight but the general Commercial Code.

The second Investment Companies and Investment Funds Act amendment from 1998 was even lesser in favour of the IPFs. It set a series of prerequisites which, were they met by an IPF, imposed upon the fund an obligation to change into an open-ended mutual fund (see footnote 3). All the prerequisites worked with discounts of the closed-end IPFs. That is, with the ratio of the IPF’s share market value to the IPF’s net asset value per share. As we have explained in the first chapter, the investment funds could be either open-ended or closed-end. What is expectable is that the closed-end funds are riskier for the shareholders and their shares are thus discounted when compared to the open-ended funds. Mejstřík (1997) pointed out that there was a systematic gap between the prices of the IPFs’ shares and the weighted price of their respective portfolios on the capital markets. The author does not explicitly write that the gap was the IPFs’ discounts. However, since the study was written in 1997, he was certainly referring to the then-current environment where the IPFs were discounted. The World Bank provides an overview of the discounts; they amounted up to 80 per cent, as is shown in table 2.10. Such discounts are, clearly, substantial. However, to frame the discounts, a comparison is useful; Lee et al. (1990) calculated the average discount on a portfolio of the closed-end funds in the U.S. to only 10 per cent for the period 1965–1985. In a report which is further discussed below, the Ministry of Finance also gave an example of the foreign closed-end funds’ discounts—less than 20 per cent. Furthermore, the ministry divided the discounted IPFs into two categories. Funds that ranked in the first one, which the Analysis deemed to be trustworthy, recorded the discount around 40 per cent, whereas the remaining funds’ discounts were around 70–80 per cent. This was, according to the Analysis, caused by the tunnelling, but also by the supply exceeding the demand (Ministry of Finance, 1997).

²⁷ Note that the IPFs that attended both waves are among the second wave IPFs. There were 130 IPFs that attended the first but not the second wave, and 197 IPFs that attended the second wave as an investment fund. The rest of the funds that attended the second wave were mutual funds, which were not legal entities and thus could not change their legal status. For the list of funds that changed their legal status, and the date which is recorded in the company register, see Appendix D.

TABLE 2.10 AVERAGE DISCOUNTS OF CLOSED-END IPFs, 1994–1997

	1994	1995	1996	1997
All IPFs in total	82	73	79	67
Larger IPFs	–	–	63	53

Source: *The World Bank (1999)*

What is further apparent from Table 2.10 is that the larger funds' discounts were much lower than all funds' discounts in total. That is, the average was pulled up by the smaller funds. This is surely because the larger funds were the bank funds which were subjects to tougher regulation merely because they were connected to banks. Also, the banks alone had the incentives to make their IPFs trustworthy because the reputation of an IPF was easily transferred to the reputation of its founder. All in all, the bank IPFs' advertising campaign was built on the very fact that they are bank funds. The issue was discussed by Egerer (1995). The author, too, wrote that the discounts to the net asset value of the IPFs amounted to between 20–80 per cent. That was, according to the author, far larger than Western or even emerging markets closed-end funds. The author also notes that the lowest discounts were recorded for the IPFs that were sponsored by a foreign bank—Creditanstalt (Austria), and Živnostenská banka (Germany). Oppositely, the non-bank funds had the highest discounts. The domestic banks stood somewhere between. Interestingly enough, the Creditanstalt was one of the funds that were later associated with the dishonest practises and was eventually put into forced administration—see Table 2.12; for the details, see subchapter 3.2.2.

A more tangible perspective is given in 2.11. We can see that the funds that would first be forced to open,²⁸ i.e. to redeem their shareholders due to the discount exceeding 40 per cent, accounted for 25 per cent of the total closed-end IPFs' assets in 1997. More interestingly, a year earlier, the share would be 46 per cent. It is hardly the case that the IPFs improved as much as they would no longer be obligated to open. More likely, these were the funds that simply changed their legal form in 1996, and which were, therefore, not touchable by the tougher regulations anymore.

TABLE 2.11 LEVELS OF DISCOUNTS AND SHARE IN TOTAL ASSETS FOR A SAMPLE OF IPFs

Discounts (per cent)	1996			1997		
	Number of IPFs	Share in total assets of the sample	Cumulative share in total assets	Number of IPFs	Share in total assets of the sample	Cumulative share in total assets
80–100	18	7.7	7.7	1	0.0	0.0
60–80	27	15.7	23.4	14	5.2	5.2
40–60	19	22.7	46.1	7	19.4	24.6
20–40	7	40.2	86.3	6	75.3	99.9
0–20	5	13.7	100.0	1	0.1	100.0
Total sample	76	100.0		29	100.0	

Source: *The World Bank (1999)*

However, the enforced opening of the closed-end IPFs was not the only punishment of a poorly performing IPF. The IPFs and investment companies that were managed faultily ended up in the forced administration. The forced administration meant that the fund was managed by an administrator, i.e. a person who took over control of the property from then on (see subchapter 1.1.2). Indeed, some investment companies were eventually put into the forced administration. That automatically put their IPFs into the forced administration as well because the investment companies were the IPFs' administrators. Kotrba et al. (1999) provide an overview of these investment companies; see their findings in Table 2.12.

We report Table 2.12 as is, nevertheless, there is some confusion we must address. First, the subjects in the table do not correspond to those in Appendix B despite being quoted from the same source. The reason is that the authors did not distinguish between the investment companies and investment funds here, contrary to what they did in the table that is in Appendix B. Therefore, Table 2.12 contains, for

²⁸ Provided the amendment was effective in 1997 already, which was not.

example, C.S. Fond, a.s. (investment company), Investiční fond AGB (mutual fund), or CA-český infrastrukt. IF, a.s. (investment privatisation fund). Second, the subjects in the table were not independent. We will discuss the details in Chapter 3; for now, we will get along with an additional column “Group” with which we indicate the relations among the subjects in Table 2.12. Third, the two entities that belong to the ČNIS group were not put under the forced administration for tunnelling as we understand the term in this text. That is, although the investment company did establish an IPF and attended the second wave, it also established standard mutual funds. These funds were the reason to put the investment company under the forced administration. Since we only concentrate on the privatisation funds, we will not discuss the ČNIS case any further. And fourth, the same subject is reported for both waves in case it attended both waves; the C.S. Funds were put under the forced administration at once, not separately after each wave. Overall, Table 2.12 reports many individual cases. What was more accurate was that there was, in total, one far-reaching case (C.S. Funds), and three rather minor cases.

TABLE 2.12 PRIVATISATION ENTITIES PUT INTO FORCED ADMINISTRATION

Founder	Market share (per cent)	Cumulative market share (per cent)	Group
<i>first wave</i>			
Investiční společnost BOHEMIA	1.39	1.39	IS Bohemia
C.S. Fond, a.s.	0.75	2.14	C. S. Funds
ČNIS, spol. s r.o.	0.33	2.47	ČNIS
Montované stavby Praha, a.s.	0.22	2.69	VIF Trend
Mercia spol. s r.o.	0.01	2.70	VIF Trend
<i>second wave</i>			
A-INVEST, investiční společnost a.s.	7.90	7.90	C.S. Funds
C.S. Fond, a.s., investiční společnost	2.40	10.30	C.S. Funds
Investiční fond AGB	2.27	12.57	C.S. Funds
Creditanstalt investiční společnost, a.s.	2.00	14.57	C.S. Funds
CA-český infrastrukt. IF, a.s.	2.00	16.57	C.S. Funds
TREND-VIF, a.s.	1.65	18.22	VIF Trend
Moravskočeská investiční společnost, a.s.	1.17	19.39	–
Investiční společnost Bohemia, a.s.	0.82	20.21	IS Bohemia
IF Mercia, a.s.	0.76	20.97	VIF Trend
NIS Litoměřice	0.19	21.16	ČNIS

Source: Kotrba et al. (1999), adjusted

There are two things at minimum that result from the table. First, the IPFs from the second wave that were put into the forced administration were larger. And second, the cumulative market share of these IPFs from the first wave reaches less than 3 per cent. Kotrba et al. (1999) conclude that the forced administration could be simply due to mismanagement or competition, i.e. the IPFs could go bankrupt naturally. However, for the second wave, the share of the IPFs in the forced administration was one-fifth of the whole market. The authors assume that these IPFs were those which were tunnelled. They suggest that the forced administration was a result of the tunnelling, i.e. that fraud was the prerequisite for the forced administration. We must agree that the tunnelled-out IPFs were “candidates” for the forced administration. The assumption that those which were put into forced administration were tunnelled is, however, reckless. To be put into the forced administration, the investment company or the investment fund was to fulfil at least one criterion specified in § 37d of the Investment Company and Investment Funds Act amendment (Law No. 151/1996 Coll.). The criteria were either carrying out actions that were either contravening the actions the Act allowed or violating the regulation on the risk reduction and diversification. The first criterion could eventually lead to the business licence revocation, which could surely be the consequence of tunnelling. That is, the Investment Companies and Investment Funds Act required a series of conditions to be fulfilled, to allow the investment funds to keep their business. For example, as we have previously seen, the investment company (the manager of the investment fund) could not charge more than 2 per cent fee for their services. Or, as the second criterion suggests, the IPFs were not allowed to hold more than 20 per cent of a company in their portfolio. Both actions could be—but did not have to be—connected to tunnelling. We can see, however, that there were cases that

were sufficient justification for the forced administration. In other words, it was sufficient to violate “only” some provision of the Act; the fund did not necessarily have to be tunnelled.

The forced administration, as was described above, was an effective way to push the management back from the undesired governance of the fund. This is because as soon as the administrator was appointed, the management of the company was fully in his competence as he acted on the company’s behalf. The problem here is, however, that some IPFs changed their legal status as was shown above. As we have seen in Table 2.11, in 1996 there were substantially more closed-end IPFs ready to be opened than in 1997. Luckily for them, they were allowed to change their legal form and escape the particular regulation for the financial institutions. The remaining question therefore is, whether or not these funds would have been put into the forced administration, too, were there not for the conversion.

In November 1997, the Ministry of Finance decided to remedy the capital market in the Czech Republic. It conducted a throughout Analysis of the Czech capital market (Ministry of Finance, 1997). The document was presented to the government with the goal “*to be an impulse to the rectification and a signal for the foreign investors*” (ibid). In its first paragraphs, the analysis mapped two critical spots that were present in the Czech capital market—the IPFs, and the market’s opaqueness. According to the analysis, the Investment Companies and Investment Funds Act from 1991 was extremely liberal. The rules that were set, such as the limited fee an IPF could charge or the closed-end type of the investment funds, were inadequate for the “almost standard” (read non-standard) environment. As a result, the analysis continues, the IPFs were not motivated to be honest; for some, honesty was not the most profitable policy. As we have argued in the previous text, this was very likely the truth. The analysis offers a list of undesirable conduct of the IPFs, which the Ministry of Finance intended to banish. They all at some point utilised the concept of related parties, i.e. where the transactions only proceeded so that they covered up the true intention. In fact, what the fraudulent activity exactly was, did not matter since the result was always the same—the fund was tunnelled out. To provide a slight notion on the activities, we list some of them below:

- i. Informal coalitions of several firms, typically of an investment company, investment fund and a share-trader. These were utilised with extensive contractual fines if one of the contractors fail to fulfil the contractual terms. The fine can even exceed the price set in the contract and failing to fulfil the terms is ensured through the informal joins.
- ii. An IPF’s administrator establishes a worthless enterprise (e.g. with assets made up of financial claims) and buys its shares on the IPFs’ account.
- iii. Circular trading with shares, where an IPF sells a share and buys it back sometime later for a higher price, with various modifications.
- iv. Depositing the money gained from share trades at banks, i.e. holding liquid assets. This method was used by the investment company C. S. Fond, a.s. to tunnel its IPFs—as soon as it managed to make all assets liquid, it collected the deposits and transferred it to foreign bank accounts.

In any of these cases, there was hardly a way to prove the intention before the manoeuvre was carried out. For instance, concerning the third point, identifying the intention is almost impossible. The Ministry of Finance, however, intended to prevent the activities with the Investment Companies and Investment Funds Act amendment from 1996. The duty of care, on which basis the intention and coincidence to sell cheaply and buy expensively are distinguished, uses the term “admissible price.” The admissible price is such at which the shares are traded, employing the duty of care (‘The approach of Ministry of Finance n. 101/57 114/1996 to applying §17 par. 4 of the amended Act no. 248/1992 Coll.’, 1995).²⁹ Although the previous statement is a circular definition, the Ministry of Finance explains the method in the quoted

²⁹ The § 17 of the Investment Companies and Investment Funds Act amendment from 1996 was treated in subchapter 1.1.2.

regulation n. 101/57 114/1996. The Ministry of Finance was authorised to question any deal that had been made, with the suspicion that the IPF did not employ the duty of care. The investment company or the IPF was then obliged to disprove the suspicion (!), presenting reliable documents that approve the employment of the duty of care. That means that the IFP was obliged to show that it used all possibilities available to reach the most advantageous price. Otherwise, the fund broke the law. Moreover, the Ministry of Finance pointed out that the market price at the stock-exchange may had not been considered a reliable document that the duty of care was employed, namely in cases when the number of shares traded at the bourse was too little. Apparently, the conditions under which the Ministry of Finance wanted to supervise the duty of care employment was ambiguous. First, it is not clear what an unreasonably low or unreasonably high price is. Second, funds' managements always make decisions on buying or selling, and these decisions simply cannot be always right. And third, the entire approach was somehow dubious—as if all funds were guilty per se. Nevertheless, the undesirable behaviour that was addressed is obvious here. The Ministry of Finance wanted to prevent the cases when the management traded with the favoured subject at a price which is disadvantageous in comparison to what could had been achieved with another subject.

2.6 OVERVIEW

To sum up, the fact that the investment companies had all the property of “their” fund at their disposal is generally deemed and criticised as the main mistake of not only the voucher privatisation but the entire transformation. We have explained the legislation in Chapter 1, and to the question “*How was the tunnelling ever possible?*” was thus given an answer. In this chapter, to the question “*Why would the IPFs’ managers ever wanted to commit the tunnelling?*” was provided an answer, too. We have explained the way which led to fraudulent behaviour. As we have argued above, the IPFs were not very much motivated to behave honestly. In our view, the opportunities to behave dishonestly were numerous, and those who wanted found the way relatively easily.³⁰ If we are to name one reason for why the phenomenon occurred, it would be the heritage of communism that led to corporate governance issues. Based on the observation of the questionable practices that were conducted (not only but also) in the Czech Republic, the OECD (1999) produced guidelines and standards for corporate governance. According to the guidelines, good corporate governance ensures the following five principles:

- i. The shareholders’ rights protection (e.g. the right to obtain information; participation at the general shareholder meeting).
- ii. The equitable treatment of majority and minority shareholders (e.g. prohibition of self-dealing).
- iii. The stakeholders’ rights recognition (e.g. effective redress for violation of rights).
- iv. Disclosure and transparency (e.g. audited financial results of the company).
- v. The board’s responsibility for the company (e.g. acting in the best interest of the company and its shareholders; fair treatment of all shareholders).

Even though the guidelines by the OECD are intangible and idealised to a certain degree, we can clearly see that many of the requirements were violated in the Czech Republic. However, some of the principles are a matter of development of the economy. For example, the effective redress for violation of rights is dependent on the judiciary. After 40 years of socialism, there can hardly be expected that the legal system would be perfectly ready for the new economic environment. Avoiding all possible problems that could occur in a transaction of such a large scope is simply out of the question. What could be achieved was a diminishment of the problematic issues. This leads us to the next chapter, where we deal with the individual cases.

³⁰ We do not, in any way, justify the crimes that were committed and that we discuss below. The statement is simply a fact.

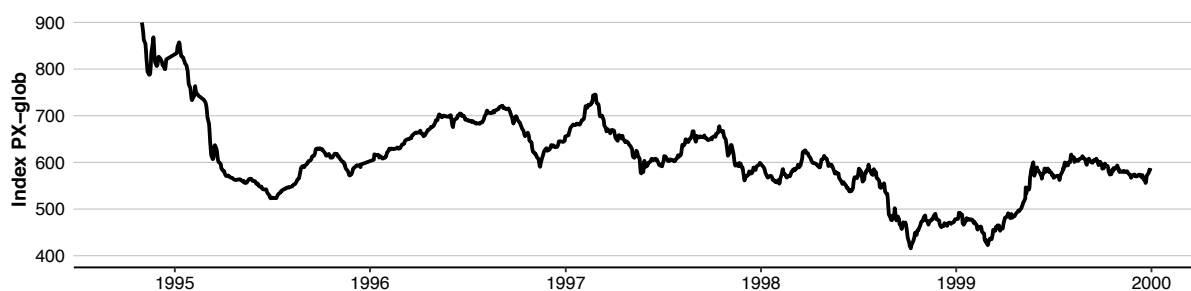
3 TUNNELLING OF THE INVESTMENT PRIVATISATION FUNDS

So far, we discussed the general environment that was present during and after the privatisation. The emphasis was put on the third wave as it is the main period in which we follow the performance of the IPFs in the Czech Republic. The conclusions were clear—those who wanted to commit the tunnelling did not have struggles seeking the opportunities. In this chapter, we will see that indeed, there were a few people who did want to commit the tunnelling, and who found their way. The attention is paid to the known and proved cases of tunnelling.

Some of the funds we discuss here, despite being widely medialised and investigated, were not punished from the point of view of the Investment Companies and Investment Funds Act. The punishment was, predominantly, the possibility to put the fund under the forced administration. That is, to prevent a fund's management from disposing of the assets. As we have seen above, some funds changed their legal status and were no longer subjects to the Act. Nevertheless, they still were joint-stock companies who needed to be audited, to hold general meetings, and to prepare the financial statements. Therefore, even though they were not the investment funds anymore, their operation was not completely hidden. In fact, what the conversion did was rather an enlargement of their rights than concealment of their activities. Luckily, some of the documents such as the financial statements are available. The sources are not complete; they are rather illustrative. We are, however, still able to track the patterns of tunnelling. This is what this chapter is devoted to—we attempt to find a unifying viewpoint on the tunnelling. Each subchapter concentrates on one case. As we will see, the patterns of tunnelling do not remarkably differ one from another.

Before we turn to the individual cases of tunnelling, we must address one more thing. The investment funds we mention within this chapter, i.e. the funds that were tunnelled, were joint-stock companies whose shares were tradable. Apart from the first and the last cases, all these funds' shares were traded at the public market, either on the PSE or the RMS. Since, as we have discussed in subchapter 2.4, most IPFs were not traded at the PSE, we will use the RMS prices exclusively here. Nevertheless, their connection to the PSE was still strong: an investment or a mutual fund is virtually nothing but a portfolio of shares of some value, adjusted to the risks. The portfolios were a collection of shares of different firms, all of which were, at least initially, traded at the PSE. Therefore, the global index of the PSE represents a portfolio composed of all possible shares, but not burdened with the risks connected to the IPFs. That is, a global index of the market can serve as a benchmark to compare the funds' performance with. This is more reasonable than using the branch index of the investment funds, which was issued by the PSE, too; the index is of no use for us since most funds would not be included as we have seen in subchapter 2.4. We will depict the discussed funds' share prices within the chapter. For this reason, we depict the global index in Figure 3.1. This serves as a comparison to see the individual funds' performance compared to a “global fund” performance; we add the PX-glob line into the figures below, too. In this chapter, the comparison is merely visual; it serves as a basis for Chapter 4, where we attempt to capture the effects in the hard data.

FIGURE 3.1 INDEX PX-GLOB DURING AND AFTER THE THIRD WAVE, 1994–1999



Source: BCPP (2019)

3.1 INVESTIČNÍ SPOLEČNOST BOHEMIA, A.S.: THE SMALL-SCALE TUNNELLING

Being entered into the company register on 22nd November 1991, the investment company was allowed to participate in both waves. We can see from Appendix B that the investment company was not one of the largest—neither in the first wave nor in the second wave. It established eight privatisation funds in total. The six IPFs that were set up for the first wave merged and/or were sold, as the documents we discuss in this subchapter mention only five funds. All of these were mutual funds, two of which attended the second wave (these were the Česká koruna, podílový fond; and the Vltava, podílový fond). The other three were standard mutual funds whose shares were sold for money. None of them all were traded at the PSE or the RMS though. That is, they did issue their shares, but these were not traded at the stock exchange.³¹ We thus do not possess any data that could eventually mirror the questionable activities that were committed in the investment company. What we do possess, however, is the decision of the Ministry of Finance on putting the investment company into the forced administration (justice.cz, 1997e). Luckily, the Ministry of Finance provided detailed reasons for the decision. We will thus use the document to illustrate the circumstances of an investment company being put into the forced administration.

The Ministry's source of information was the IPFs' depository. Each IPF had to have its depository, who had to be a financial institution—obviously a bank. The bank had the records from all transactions made by the investment company on behalf of the IPFs. Therefore, as soon as the bank (ČSOB) indicated questionable transactions, it alarmed the Ministry of Finance. The Ministry's decision was executed on 28th March 1997, and it appointed one person to administer the investment company from then on. The investment company was only allowed to change the structure of the IPFs' portfolios in order to conform to the letter of the law that restricted the share an investment company could hold in an enterprise. We can clearly see the skills required to tunnel an IPF:

- i. Between 1st January 1997 and 18th March 1997, the investment company completed transactions which were recorded only within the IPFs' books, not at the bank accounts. That is, the shares were sold from the IPF's portfolio, but the money was not received at the IPF's bank account. There was a representative of the investment company Bohemia, Mr Nový. On 6th February 1997, he allegedly accepted 20 mil. CZK for selling shares held by one of the IPFs but did not deposit the money in the bank.
- ii. Mr Nový provably withdrew 36 mil. CZK in total. He advocated himself claiming that he would use the money to advertise the funds so that they would lure new shareholders. The Ministry, however, counter-argued, recalling the 2 per cent fee bounds. The promotion costs were supposed to be covered with the fee. Since the overall property that was allocated in the IPFs allowed the investment company to charge only 10 mil. CZK per year, Mr Nový's withdrawal significantly exceeded the boundary. What is interesting is the Ministry's rather cynical attitude to Mr Nový's expectation of the advertisement effect. The Ministry deemed that it was *"unsound due to the overall view of the public on the collective investments, and the manners of the investment company."*
- iii. By holding shares of one particular firm (Cifin a.s.), the investment company was breaking the law two-fold. The firm's shares were not publicly traded, and holding such shares was restricted for the IPFs. Moreover, these shares accounted for nearly 80 per cent of the total nominal value of the issuer. As we have previously seen, the investment companies were given a limit on the share of one firm. What is interesting is that Cifin a.s. was, according to the company register, established only on 10th December 1996 (justice.cz, 2019b). There were two founders;

³¹ The investment company was not violating the law however, because the shares were tradable; they could be traded over-the-counter.

Investiční společnost Bohemia, a.s., and Investkonzult spol. s r.o.—a member of the PSE (BCPP, 1998).

- iv. One of the closed-end funds was set to be opened on 1st March 1997. The investment company, however, abruptly stopped the process due to the IPF being “too unprepared for the opening.” That means, the shares held by the IPFs were virtually unsellable, and the property was not valued realistically, which resulted in an unrealistic value of the fund’s shares. There would not be enough money in the funds to redeem the shares in case the shareholders wanted to. The overall situation bore witness to the IPFs being managed unprofessionally.
- v. The investment company appointed a new management board in November 1996. However, the Ministry of Finance did not recognise the new representatives since they were not professionally suitable for managing an investment company. Despite the Ministry’s measure, the unrecognised management board gave a power of attorney to Mr Nový. There was nobody left to represent the investment company but a procurator who, however, lived in Austria at that time. The investment company did nothing to change the situation from then on.

As the Ministry of Finance concludes, the investment company violated the law seriously. It did not allow the depository to watch over the flows of money and property in the funds. It did not manage the entrusted property so that the shareholders could redeem their shares. The management was unprofessional, and the investment company was not respecting either the law or the IPFs shareholders. The forced administration was deemed to be the only effective measure in such situation.

Each IPFs’ business licence was revoked by 10th June 1997. The shares held in the portfolios were sold so that the shareholders could receive the eventual surplus after the liquidation of the company. We can see the summary of each IPFs’ total nominal value of their issued shares, the nominal value per one share and the redemption value in Table 3.1. Unfortunately, we do not have complete information. The message is clear, nevertheless. The shareholders received considerably less than was the value of their shares. An interesting ending occurred in the IPF Česká koruna. Its portfolio was sold and converted into money just like the other IPFs’ portfolios. However, not all money was used for redemption. Some of the surpluses were to be used for measures that would lead to the defrauded money retrieval (justice.cz, 2001). Therefore, some of the surpluses that would otherwise be paid to the shareholders, were most likely paid to the IPF managers. They were in charge to retrieve the money, i.e. earn them back. The funds’ sum of assets was 1,8 mil. CZK by 31st December 2001 (justice.cz, 2002). Obviously, it was not sufficient to stand for the losses (up to 36 mil. CZK, see above), and the shareholders simply lost. Technically, in the case of the privatisation funds, the shareholders only lost the money they paid for their vouchers. Nevertheless, we must take into consideration the indirect costs, such as losing trust in collective investments. Of course, as for the remaining three funds, the investors lost real money.

TABLE 3.1 IPFS OF THE BOHEMIA, A.S.; VALUES OF THEIR LIQUIDATION SURPLUSES (IN CZK)

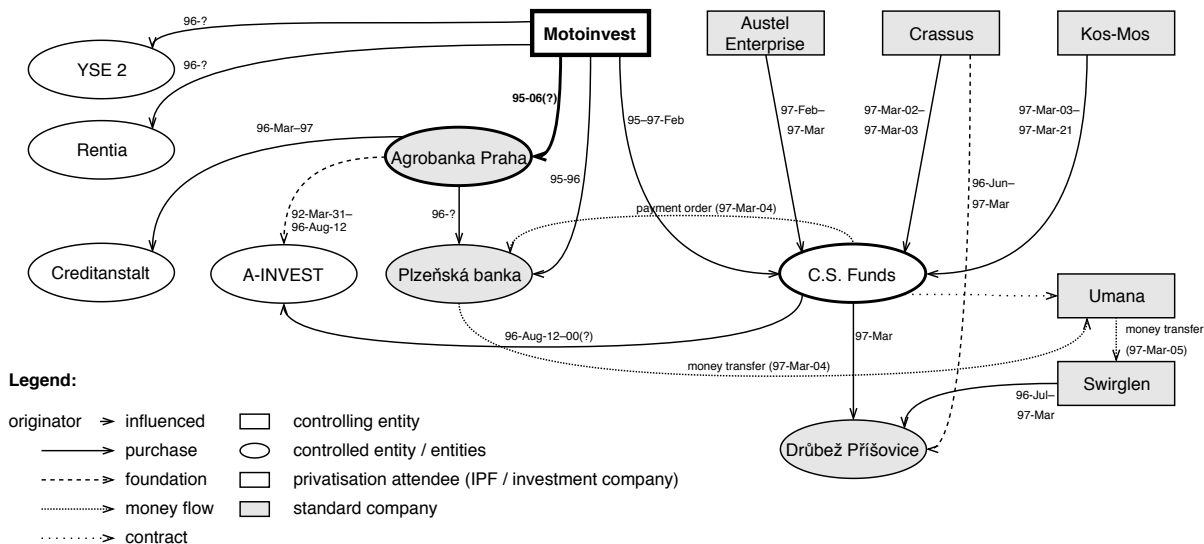
Fund	Nominal value of the share issue	Nominal value of a share	Redemption value, per share	Per cent of shares redeemed by 31 st Dec. 1998
<i>privatisation mutual funds</i>				
Česká Koruna (open-ended)	—	—	—	—
Vltava (closed-end)	—	—	0.1745	—
<i>standard mutual funds</i>				
Palcát (open-ended)	81,170	1	0.5163	100.00
Karlštejn (open-ended)	980,000	10,000	—	—
Vyšehrad (open-ended)	53,919	1	0.3038	99.98

Source: justice.cz (2002)

3.2 C.S. FUNDS

Being (one of) the most widely medialised case of the tunnelling, C.S. Fund, a.s. (the investment company) and the entities connected to it (C.S. Funds hereafter) must not be omitted in the discussion. The investment company C.S. Fond, a.s. was established on 18th October 1991 and, as can be seen in Appendix B, it attended both waves of privatisation. It set up seven funds in total; four investment funds and three mutual funds. All funds held the name C.S. Fond, and a specification of their preferred industry of which they wanted to hold shares.³² The case of the C.S. Funds fulfilled virtually all indicators of tunnelling as defined above. The modus operandi was selling the shares from the portfolio and transferring the money abroad. The overall case was, however, extremely complicated as we will see below. We divide the subchapter into two parts—the case of the C.S. Fond, a.s., and the cases of the investment companies and IPFs that were related to the C.S. Funds. The unifying element was the presence of a company Motoinvest, a.s. For the state of affairs being highly chaotic, what we discuss within the chapter is also visualised in Diagram 3.1 to help the reader grasp the interconnections better. The dates and the relations correspond to those mentioned in the text. Therefore, the diagram works together with what is described below and is suggested to be used accordingly.

DIAGRAM 3.1 INTERCONNECTIONS AMONG ENTITIES IN THE C.S. FUNDS' CASE



Source: author's construction

The key people in Motoinvest, a.s. were Pavel Tykač and Jan Dienstl. Motoinvest, a.s. was an investment company that set up one IPF (MOTOFOND Investiční fond, a.s.) and attended both waves. Right after the end of the voucher privatisation, Motoinvest, a.s. aimed to gain influence over various companies. Therefore, it started buying and selling shares directly, not only through its IPF. One of the companies it bought was Plzeňská banka, a.s., a small bank that became the depository of the C.S. Funds. According to Myant (2013), holding the shares of Plzeňská banka, a.s. was the starting point for Motoinvest, a.s. These shares served as warranties on new purchases, such as the purchase of C.S. Fond, a.s. By depositing the shares, and borrowing money from banks, it could start buying large IPFs' shares. Myant (2013) further writes that Motoinvest, a.s. never claimed that it would manage the funds. Their presumption was that the large IPFs (i.e. the bank IPFs) were managed very well since they were managed by banks. They were, however, undervalued because the individual shareholders were selling their shares.

³² Some IPFs could be concentrated on a specific industry, on paying dividends, etc. In this case, there was, for example, C.S. Fond pivovarnického a sladovnického průmyslu, a.s. (brewing and malting industry). As for the concentration on paying dividends, there was the C.S. Fond pravidelných výplat, a.s. (regular payments). The funds' specialisation is, however, of no importance for us which is why we do not discuss it any further.

The initiative to buy the IPFs was widely medialised with the slogan “*Weep, individual shareholders.*”³³ Plzeňská banka, a.s. was the vehicle of the initiative, offering the funds’ shareholders redemption of their shares. Vojtěch (1995) writes that the bank (instructed by the Motoinvest, a.s.) sought to acquire sufficient share in several IPFs to be able to administer them. The author named several IPFs which were aimed: YSE, Kvant, Creditanstalt, CEIF, Rentia, Panok, C.S. Fond, and KB.

In 1996, Motoinvest, a.s. sold the shares of Plzeňská banka, a.s. to another bank, Agrobanka Praha, a.s. (Jílek, 2009). However, the transfer was merely a formal act. That is, Agrobanka Praha, a.s. was undoubtedly connected to Motoinvest, a.s.—Pavel Tykač was a chairman of its supervisory board from December 1995 to April 2006 (justice.cz, 2019a). What is further symptomatic is that Agrobanka Praha, a.s. was under the forced administration between 17th September 1996 and 16th September 1998.

3.2.1 C.S. FOND, A.S.

In 1995, the C.S. Fond, a.s. was taken over by the company Motoinvest, a.s. (Baloun, 2004). We can regard this acquisition as a starting point of the fraudulent activities connected to the C.S. Fond, a.s. As soon as the C.S. Fond, a.s. was effectively controlled by Motoinvest, a.s., it started, allegedly with the intention to redeem the shareholders, to sell-off the shares from the IPFs’ portfolios (Baloun, 2004). In other words, it started to make the assets liquid.³⁴ Motoinvest, a.s. sold the C.S. Fond, a.s. in February 1997; the funds’ assets were all liquid at that time, and the buyer was a Cyprus-based company Austel Enterprise. The new owner held the C.S. Fond, a.s. for some two weeks, after which it was sold two more times within only a few days. At first, a company Crassus, s.r.o., a member of the PSE (BCPP, 1997), which acted as an intermediary and sold the C.S. Fond, a.s. to a Russian company Kos-Mos. The transaction was completed on 3rd March, and the new owner immediately superseded the management board. The new management board consisted of three people who were, according to Jílek (2009) not recognised by the Ministry of Finance. They obviously were not, because there was no change in the statutory authorities in the company register in March 1997 (justice.cz, 2019c). Nonetheless, it did not stop the representatives of the owner (i.e. the representatives of Kos-Mos) to give a power of attorney to one of the new members of the management board, 20-year-old Václav Franta. On the next day, 4th March 1997, Mr Franta gave a payment order at Plzeňská banka, a.s. which was the IPFs’ depository. The bank was ordered to transfer 1.3 bil. CZK to a company Umana, s.r.o. Baloun (2004) wrote that the bank was assured that the transaction was contractual, that is, Umana s.r.o. was supposed to buy valuable shares into the funds. Therefore, Plzeňská banka, a.s. did not notify the regulators and transferred the money.

In reality, the “valuable shares,” that Umana, s.r.o bought for the funds, were shares of the company Drůbež Příšovice, a.s. The market value of the shares is unclear since they were not publicly traded. Jílek (2009) writes that it was significantly lower than 1.3 bil. CZK but does not provide any further calculation. What is clear, however, is that the IPFs were restricted to buy shares that were not publicly tradable, as we have argued previously. Baloun (2004) further notes that the short-time owner of the C.S. Fond, a.s., the company Crassus, s.r.o. was personally connected to the company Drůbež Příšovice, a.s.³⁵ Finally, the shares of Drůbež Příšovice, a.s. were bought from a foreign company Swirglen, and the money was transferred to the Swirglen’s account with the Austrian bank GiroCredit. As soon as Swirglen ordered the bank to transfer the money abroad, GiroCredit notified the regulators. They, however, did not find anything wrong about the transaction, the bank, therefore,

³³ “Drobní akcionáři, plačte.”

³⁴ This approves what we have discussed above—that is, the relative, not the absolute power was decisive.

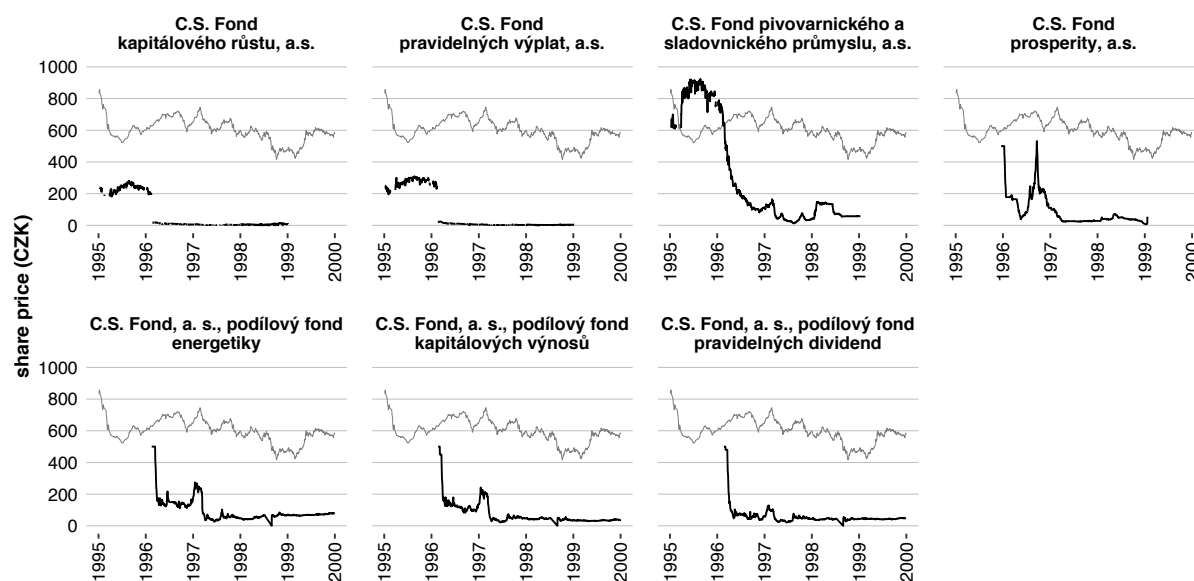
³⁵ This is easily verifiable by looking into the company register: the management board member in Drůbež Příšovice, a.s., Petr Müller, was a member of the statutory authority in Crassus, s.r.o. It is also not without interest that the company Drůbež Příšovice, a.s. was established as late as in June 1996.

fulfilled the order and sent the money abroad. On 21st March 1997, the C.S. Fond, a.s. was put under the forced administration.³⁶

Overall, the situation is reflected in the share prices of the C.S. Funds' IPFs and mutual funds. In Figure 3.2 these are depicted, bearing the original names that were used in the zero-round. The investment and the mutual funds are depicted in the upper, and the lower row, respectively. We can see that what all of them have in common is the fact that by March 1997, the share prices were at their absolute low. This partly corresponds to the global share index. However, the losses were obviously much sharper and much more persistent than on the whole market. Furthermore, there are three patterns in the data. First, as for the investment funds, their stock corresponded with the above-mentioned initiative of the Motoinvest, a.s. Its effort to acquire the C.S. Funds shares might hold the price during 1995. Perhaps, the decline since the beginning of 1996 accounts for the large share which was redeemed from the market.

Second, the C.S. Fond prosperity, a.s. differs from the other three funds. The prices of its shares rose between June and September 1996, only to fall sharply at the end of 1996. We do not have an explanation of the initial gains, namely because the fund converted into a holding company on 17th June 1996. As we have discussed in subchapter 2.5, the conversion was not perceived well since it meant that the IPF was not supervised as closely. The curve, however, partly correspond to the stock prices of the mutual funds. Since the C.S. Fond prosperity, a.s., and the three mutual funds were all set up for the second wave, we can assume that they were perceived as similar and were thus traded for similar prices.

FIGURE 3.2 C.S. FUNDS' PRICES AT THE RMS



Source: kurzy.cz (2019)

And third, moving to the mutual funds, they had a very similar development. After the initial drop immediately after their introduction to the market, they held their prices until December 1996. The short-time gain, which followed, was sharply erased at the beginning of March 1997. The reason is obvious: since the mutual funds were not legal entities, they were an “integral part” of the investment company.

³⁶ Interestingly enough, the general meeting of shareholders of Drůbež Příšovice, a.s., that was held on 8th September 1997, shows that there were further “transactions” of the shares. The meeting was attended by the C.S. Fond, a.s. representative; at that time, the person appointed by court to represent the C.S. Fond, a.s. under the forced administration. The notary’s acknowledgement informs us that the C.S. Fond, a.s. representative complained that the funds are unable to exercise their ownership rights because 540 shares of nominal value 500.000 CZK each were (physically) stolen. The C.S. Fond, a.s. representative demanded replacing the stolen shares with one share of nominal value that would be equal to the sum that was stolen. Also, the new share was to be graphically different (justice.cz, 1997c).

Therefore, they mirrored the trust the investment company enjoyed. It was, obviously, severely broken around the time when the tunnelling loomed; at the beginning of March 1997.

What we have described so far is the known case of the C.S. Fond, a.s. After the above-described transactions, the case was investigated as a crime and the criminal activities were eventually proved. There is even a record in the company register that states: “*C.S. Fond, a.s. was established in 1991 as an investment company, whose property was ‘tunnelled’ in 1997*” (justice.cz, 2019c). We do not seek to discuss the judgements here since they are out of the scope of this text. However, what is further interesting are the fractions of evidence of the group around C.S. Fond, a.s., and its execution in the related subjects. This is what we discuss in the next section.

3.2.2 ENTITIES RELATED TO THE C.S. FUNDS

Despite the fact that the case was not restricted only to what we described above, the discussion is predominantly concentrated on the C.S. Fund, a.s. This is understandable because the sum of money that was tunnelled was enormous. Nonetheless, as we have mentioned earlier, the case was complicated due to the ownership structure. Therefore, the individual companies under the forced administration presented in Table 2.12 were not isolated. In fact, as we will see in this section, A-INVEST, a.s., Investiční fond AGB, Creditanstalt investiční společnost, a.s., and YSE, a.s., were linked together with the C.S. Fond, a.s.

1) A-INVEST, A.S.

The investment company A-INVEST, a.s. was set up on 31st March 1992 by Agrobanka, a.s. It founded two IPFs for the second wave and was successful enough to end up as the largest investment company for the second wave (Appendix B). On 12th August 1996, A-INVEST, a.s. (the investment company) was bought by 4. C.S. HOLDING, a.s. (justice.cz, 1997f)—formerly, the C.S. Fond pivovarnického a sladovnického průmyslu, a.s. It means that the investment company was held by an IPF.³⁷ However strange this seems, it was perfectly possible since the 4. C.S. HOLDING, a.s. was converted into a holding company on 14th June 1996. The forced administration was imposed upon the investment company A-INVEST, a.s. on 22nd January 1997 and lasted until 5th June 1997.

A-INVEST, a.s. managed, according to its annual report, four funds by the end of 1996 (justice.cz, 1997j). Two of them were mutual funds set up after the privatisation, i.e. they were standard mutual funds that did not attend the privatisation. We consider these funds only as much as they were involved in transactions with the privatisation funds. The third—AGB, podílový fond— was a mutual fund that attended the second wave. The fourth—AGB, investiční fond I, a.s.—was an investment fund. This IPF was a merger that evolved from 14 IPFs that attended the first wave. Most of these funds were originally set up by Agrobanka, a.s. (we can see the position of Agrobanka Praha, a.s. among the other investment companies in Appendix B). AGB, investiční fond I, a.s. was converted into a holding company on 13th June 1996. Moreover, for most of the year 1996 the investment company administered one more IPF—the AGB, investiční fond II, a.s. Initially, this fund attempted to be converted as well but the conversion did not proceed (justice.cz, 1996a). Due to this fact, the investment fund remained the subject of the Investment Companies and Investment Funds Act. Consequently, it was put under the forced administration on 16th December 1996 (we have already touched this case in subchapter 2.5). Perhaps, were the AGB, investiční fond I, a.s. not converted, it would have ended up under the forced administration, too. In the following paragraphs, we discuss individual funds.

As for the AGB, investiční fond I, a.s., we do not have much information. In 1996, its net loss was 1.4 bil. CZK (justice.cz, 1996f). The financial statement for 1996, however, does not give any details on how the loss evolved. Nonetheless, the AGB, investiční fond II, a.s., provides significantly more

³⁷ The overall situation at that point was rather complicated; see Diagram 3.1 for a better orientation.

information. In the first half of 1997, the IPF sued its former investment company for causing loss, demanding restoration up to 764 mil. CZK (justice.cz, 1997j). The sum was calculated on the forced administrator's request, and the report was attached to a notary's acknowledgement of a general meeting (justice.cz, 1997a). There were three estimates of the IPF's portfolio market value by the end of December 1996—916 mil. CZK were it administered well; 801 mil. CZK were it administered averagely; and 535 mil. CZK, were it not administered at all, i.e. had it the same portfolio as in September 1995. In reality, the market value of the IPF's portfolio was -211 mil. CZK. The fund's property was, therefore, devalued by 746 mil. CZK during the 15 months, which served as a floor for the sum the IPF demanded back from the investment company. What is further interesting is that the report roughly drafts the transactions. According to it, the IPF *"bought 892 mil. CZK more expensively but sold 674 mil. CZK more expensively than were the spot market prices, which means that it intentionally caused a net loss as high as 218 mil. CZK. [...] Suspicious and, with regard to the volume, significant transfers were made with the mutual fund AGB, podílový fond"* (justice.cz, 1997a).

Now, we can track some deals among the three mutual funds administered by A-INVEST, a.s. The AGB, podílový fond, it was not a legal entity (see subchapter 1.1.2), and the report on its performance was attached to the financial statement of the investment company. In 1996, it reported a net loss 1.05 bil. CZK (justice.cz, 1997j). The financial statement further notes that the total purchases from the "important related subjects inside and outside the A-INVEST, a.s. group" amounted up to 1.2 bil. CZK and the sales to these subjects amounted up to 878 mil. CZK. These important related subjects are to be found in the very same financial statement. During 1996, the first of the standard mutual funds, AG-KLAS, made deals with the related subjects that did not reflect the spot market prices. The total profit from the deals with AGB, podílový fond was 4.8 mil. CZK. It also made deals with the second of the standard mutual funds, OPF Prosperita, where the total profit for the AG-KLAS was 620,000 CZK. Lastly, the OPF Prosperita shows the same pattern as AG-KLAS. During 1996, the deals with AGB, podílový fond earned the OPF Prosperita 8.8 mil. CZK in profits. The deals with AG-KLAS earned the OPF Prosperita 147,000 CZK in profits. Both standard mutual funds were profitable in 1996; AG-KLAS' net profit was 11.5 mil. CZK, OPF Prosperita's net profit was 12.4 mil. CZK. This is despite the fact that they were administered by the same investment company who administered the loss-making AGB, podílový fond.

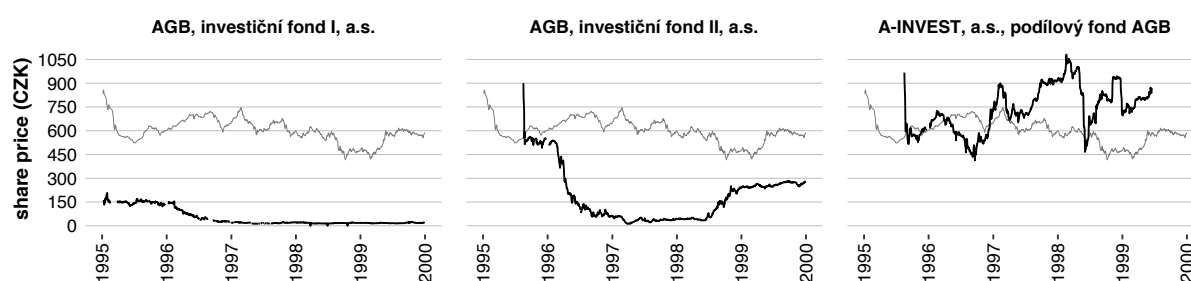
The loss-making continued in 1997 as well. AGB, podílový fond reported a net loss 614 mil. CZK. Both standard mutual funds were closed by the end of 1997, and the proceeds were distributed among the shareholders. As for the AG-KLAS, the net asset value per one share (nominal value 1,000 CZK) was 1,700 CZK. The OPF Prosperita earned its shareholders 12,000 CZK per one share with nominal value 10,000 CZK (justice.cz, 1997j). Lastly, the AGB, podílový fond was closed in June 1999, and the remaining property was distributed among the shareholders. Unfortunately, we do not know the net asset value per share. However, we can roughly deduce the value. By the end of 1997 (i.e. at the same time the other two mutual funds were redeemed), the net asset value per share was 978 CZK, and the number of shares at that time was 2,174,396 (justice.cz, 1997j). That is, the net asset value was roughly 2.1 bil. CZK. The fee that the investment company charge from its funds was the maximum, i.e. 2 per cent per year, which is roughly 42.5 mil. CZK. This number corresponds to what the investment company presents in its 1998 financial statement (justice.cz, 2000b). It means that the fee was indeed calculated from the net asset value. In 1999, the investment company charged 2,4 mil. CZK from the AGB, podílový fond (justice.cz, 2000b). This was charged from January until June 1999, i.e. until the fund was closed. The net asset value that corresponds to this fee must had been around 240 mil. CZK. We do not have the information about the number of shares that were still to be redeemed by that time. However, we can see that if the net asset value per share was to be kept at the 1997 level, the number of shares left for redemption would have to be some 10 per cent of what it was in 1997. Perhaps this was true, as imply the fund's share prices in Figure 3.3. The AGB, podílový fond was taken off the market

in June 1999, when the price was hitting 900 CZK. Since the mutual funds are nothing more than a portfolio whose net asset value is virtually divided into shares, the share price must reflect the net asset value adjusted for the risks.

Finally, the general meeting of shareholders of the company A-INVEST, a.s. that was held on 15th June 2000 shows that the investment company was sold. There were new entities on the list of shareholders. In 2000, the 4. C.S. HOLDING, a.s. was not a shareholder anymore (justice.cz, 2000a).

To sum up, the development is well-mirrored in the stock prices of the three privatisation funds we discussed; these are depicted in Figure 3.3. The prices of both investment funds reacted to the losses and the mostly negative performance of the funds and their investment companies in 1996. This is even more convincing when we compare the performance with the global share index which was growing in the same period. The AGB, investiční fond II, a.s., as we have mentioned above, was not converted and was eventually put under the forced administration. Its gains in 1998 are, perhaps, a positive view on the changes introduced in 1998. There were new management and new investment company appointed, and the IPF was converted into an open-ended mutual fund.

FIGURE 3.3 A-INVEST FUNDS' PRICES AT THE RMS



Source: kurzy.cz (2019)

II) CREDITANSTALT, A.S.

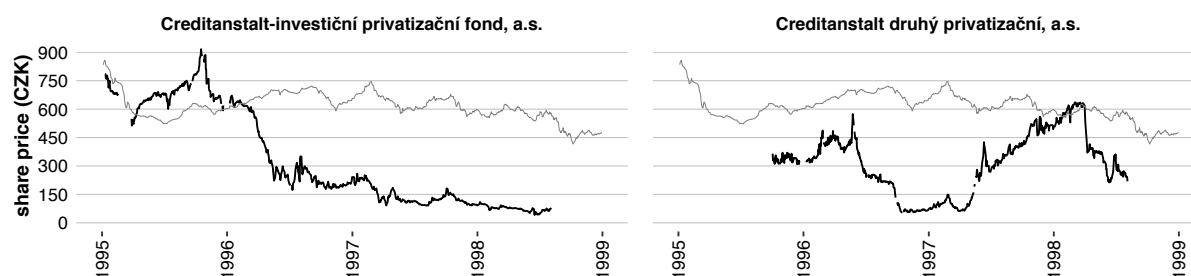
Another investment company that was connected to the C.S. Funds, and whose IPF is among the companies in Table 2.12, was Creditanstalt, a.s. The investment company was set up by an Austrian bank that operated in the Czech Republic, and it established one IPF for each wave. It was eventually taken over by Agrobanka Praha, a.s. (controlled by Motoinvest, a.s.), most likely in 1996. In 1997, Agrobanka Praha, a.s. certainly held the investment company Creditanstalt, a.s., which we can find in its financial statement for 1997 (justice.cz, 1998b). The bank held the investment company under a new name—Optimus investiční společnost, a.s. It was, however, re-named and had its management superseded in 1996 already. This leads us to the assumption that Creditanstalt, a.s. was under the control of Agrobanka Praha, a.s. earlier than in 1997. One way or another, the important thing is that the acquisition of the investment company brought access to its two IPFs. One of them, which attended the second wave with the name Creditanstalt druhý privatizační, a.s., was undoubtedly under the control of Agrobanka Praha, a.s., Motoinvest, a.s., and people connected to the C.S. Funds as soon as in May 1996 (justice.cz, 1996c). The fund was eventually re-named; the new name was C.S. Infrastrukturní investiční fond, a.s. In 1996, it also became a self-administered IPF, that is, it had its own management and did not need an investment company anymore. Between 30th April 1997 and 21st July 1997, the fund was put under the forced administration. The reason was, as the audit report states, jeopardy of the individual investors' interests, resulting from the violation of the portfolio composition limits (justice.cz, 1997h). Nothing was proved, however, and the forced administration was thus ended.

As for the Creditanstalt's IPF established for the first wave, the Creditanstalt-investiční privatizační fond, a.s., its name was changed to 1. C.S. Holding, a.s. This is apparent from the Articles of Association as on 17th December 1996 (justice.cz, 1996e). In fact, the fund was held by Agrobanka Praha, a.s. at the beginning of 1996 already, as implies an article in Hospodářské noviny. Moreover, the article informs

that the general meeting voted for the conversion of the fund on 29th April 1996, which added to the negative perception (Hospodářské noviny, 1996). The fund changed its name once more, in November 1997; since then, its name was Český investiční holding, a.s. The company's representatives were superseded as well, which indicates that the company was sold sometimes in November 1997. We possess no documents that would indicate any case of fraud or tunnelling. There is, however, a note in the Annual report from 1997 which is worthwhile to mention since it brings us to the next case, the VIF Trend (see below). It reads that in December 1997, Český investiční holding, a.s. bought a 13 per cent share of the company Kotva, a.s., and a call option to buy another 56 per cent share. To buy the call option, it deposited 734 mil. CZK to a company Formister Enterprises Limited. Nevertheless, the right to handle the shares (the very 56 per cent share) was blocked by the Security Centre, and the call option was, therefore, worthless (justice.cz, 1997k).

Overall, Liška & Gazda (2004) write that the Creditanstalt funds had the most miserable end. According to the authors, the funds seemed promising at first, and for a short time, they were even traded for more than was the net asset value per share. However, in autumn 1995, after revealing that Motoinvest, a.s. held a significant share in the investment company, the shares reacted promptly. This leads us, again, to the conclusion with the stock prices of the discussed funds (Figure 3.4). We can see two things here. First, the first-wave IPF (in the left panel) seemed very promising during the first year. Significant losses were recorded in October 1995, and then since March 1996. The losses in March 1996 followed the acquisition of the IPF by Agrobanka, a.s., which we mentioned above. Moreover, none of these downfalls corresponds to the global index of shares. And second, the prices of both IPFs were decreasing during the second half of 1996. Nonetheless, the second-wave IPF (right panel) started gaining the value back since the end of April 1997. This is exactly the date when the fund was put under the forced administration which eventually found no fraudulent activities. The gains were, perhaps, a consequence of this positive development.

FIGURE 3.4 CREDITANSTALT'S PRICES AT THE RMS



Source: kurzy.cz (2019)

III) YSE 2, A.S., AND RENTIA, A.S.

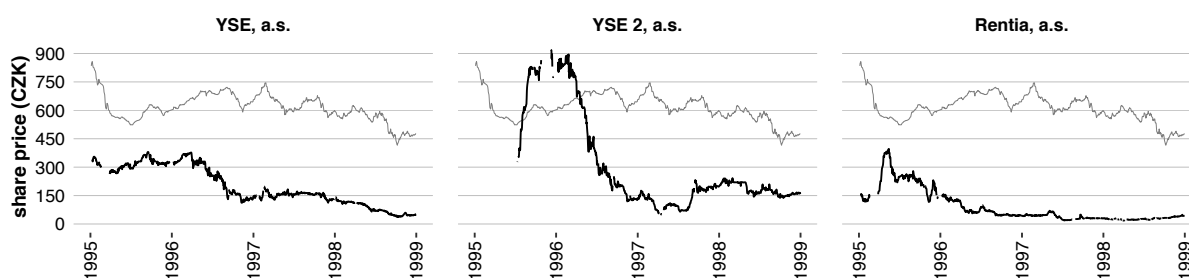
Finally, as for the remaining funds that were among those targeted by Motoinvest, a.s. and that we mentioned at the beginning of the subchapter 3.2, we did not find any direct evidence of tunnelling. The only notion is the fact that another two IPFs—the YSE 2, a.s., and the Rentia, a.s.—were eventually taken over and administered by Motoinvest, a.s. for a short while. The YSE 2, a.s. was an IPF set up for the second wave. Its investment company Linh Art, a.s. managed a first-wave fund (named YSE, a.s.), too. We did not, however, find any evidence of the YSE, a.s. being controlled by Motoinvest, a.s. or any other entity related to it. It did not change its name or the seat of the company, which was, as we have seen, typical for the funds taken over by Motoinvest, a.s. Thus, we disregard the YSE, a.s. For the same reason, we pay no attention to the investment company Linh Art, a.s.—nothing indicates that it was controlled by Motoinvest, a.s.

As for the YSE 2, a.s., it was eventually taken over by Motoinvest, a.s. and related companies. The takeover proceeded sometime between January and May 1996—the general meeting on 27th December

1995 was not attended by any shareholder from the Motoinvest group (justice.cz, 1995b). On the general meeting on 22nd May 1996 however, Motoinvest, a.s. held as much as 19.4 per cent of all shares (justice.cz, 1996d). Since the general meeting was attended by 20.97 per cent of the shareholders, Motoinvest, a.s. held the decisive power. The general meeting converted the fund into a holding company. A similar scenario is true for the Rentia, a.s.; the fund was taken over by Motoinvest, a.s. most likely in the first months of 1996. We possess no further documents that would point to the tunnelling, i.e. a financial statement that would show trading with related subjects. Therefore, we must presume that these activities were present neither in the YSE funds nor in Rentia, a.s.

Nonetheless, we can see that the YSE funds stock prices (in Figure 3.5), i.e. the YSE's shareholders and investors, did react to the news that Motoinvest, a.s. became a shareholder. Both funds were established by the same investment company but only the YSE 2, a.s. was taken over by Motoinvest, a.s. Moreover, we can see that around March 1997, the prices of the YSE 2, a.s. were lower than those of the YSE, a.s. This is despite the fact that at the beginning of 1996, the YSE 2, a.s. was traded for three times its initial value. Therefore, the second fund was once evaluated well. This quickly changed in the first quarter of 1996 and the shares lost over 80 per cent of their value within only a year. Again, the performance does not resemble the global share index which was steadily growing at that time. However, the development of the Rentia, a.s. stock prices do not show any visible breaks or changes. In this case, the takeover by Motoinvest, a.s. is not visibly mirrored in the stock prices.

FIGURE 3.5 YSE FUNDS' AND RENTIA'S PRICES AT THE RMS



Source: kurzy.cz (2019)

3.3 VIF TREND

Established in January 1992, the Trend—Všeobecný investiční fond, a.s. (VIF Trend hereafter) attended both waves. Its investment company Montované stavby Praha, a.s. was a construction company, and thus its role was, perhaps, the mere provision of the necessary equity to establish an IPF. The administration was later transferred to the Trend, investiční společnost, a.s. The two main founders and faces of the fund—Michael Kocáb and Martin Kratochvíl, were two famous Czech musicians. Their execution in the fund is not marked with any suspicious activities. The very end of their execution was, however, odd. The problems started at the beginning of August 1995 when the Trend, investiční společnost, a.s. (i.e. the right to administer the VIF Trend) was sold to Královéhradecká brokerská, a.s. There were two things here. First, according to Jílek (2009), this transfer was paid from the IPF's property. This was accomplished by offering the companies from the VIF Trend's portfolio to other subjects. Miroslav Hálek, who was the key person behind the questionable activities, made these offering before Královéhradecká brokerská, a.s. held the investment company. Despite, he accepted the advance payments from the companies. This way, Královéhradecká brokerská a.s. gained the money to buy the Trend, investment company, a.s. After the payment to the previous owners, it had access to the shares in the VIF Trend portfolio, and thus transferred the promised shares. And second, Jílek (2009) continues, the price for the investment company was exaggerated. That is, the investment company administered and IPF whose asset value was around 1.3 bil. CZK. Nevertheless, it was sold for 318 mil. CZK, i.e. some 24 per cent of the net asset value of the administered fund. Since the administration fee

was restricted to 2 per cent, the buyer would have to wait 10 years until it would be earned back—provided the net asset value would remain the same. The author, therefore, assumes that Kocáb and Kratochvíl sold investment company, being aware that the price would be paid from the IPF's property. On the other hand, there are two things here. First, we do not have access to the prices of any other IPF or investment company that was sold to be able to tell whether the price for VIF Trend was too high or not. And second, in Chapter 1 we have discussed the required initial equity that the investment company needed to deposit. Recall that this was 1,000,000 CZK for the joint-stock investment company, and additional 100,000 CZK per each IPF it established. The shareholder structure of the investment company is not available; however, we can see that the total initial equity exceeded the price considerably. Therefore, the conclusion that the price was too high is reckless.

Above, we have hinted that the case of the VIF Trend was entangled with the C.S. Funds through the company Kotva, a.s. Unfortunately, we do not have access to the notary's acknowledgements (but one which we mention below) or financial statements of the VIF Trend. However, Liška & Gazda (2004) mention that the same scenario was used for Kotva, a.s. and for other companies from the VIF Trend's portfolio, too. It is therefore sufficient to outline the case of Kotva, a.s. here. The annual report from Kotva, a.s. shows the structure of its owners as on 31st December 1995. The VIF Trend held, according to the report, almost 32 per cent share of the company. Apparently, this exceeded the 20 per cent limit on the share that an IPF could hold in a company. Moreover, Investiční fond Mercia, a.s. (see below) owned another 12 per cent. Significant shares were in the portfolios of AGB funds (discussed in subchapter 3.2.2), too.³⁸ And lastly, 5.8 per cent of the shares were held by company Firex, a.s. where Miroslav Hálek held a seat in the management board (justice.cz, 2019d). Moreover, he chaired the management board of Kotva, a.s. (justice.cz, 2019g), and the management board of VIF Trend, as well. Apparently, his stakes and influence were sufficient. Consequently, the shares of Kotva, a.s. were gradually transferred to the Cyprus-based company Formister Enterprises Limited. This proceeded during 1996; in April 1997, the company Formister Enterprises Limited held 55 per cent of the shares (justice.cz, 1997l).

On 31st October 1996, the VIF Trend was put under the forced administration and was investigated by the police which eventually proved the crimes. Again, discussing the judgements is out of the scope of this text. Nevertheless, the Ministry of Finance restricted the tradability of the shares in the IPF's portfolio. This measure was, obviously, aimed at the trades with the shares of Kotva, a.s. and other companies. Jílek (2009) writes that the fund was “gradually being tunnelled” after it was sold to Královéhradecká brokerská, a.s. We can see that the method was generally simple—the VIF Trend was sold to a company, which made such transactions with the fund's shares that were causing the fund losses. In a newspaper article, Macháček (1997) illustrates the procedure. The VIF Trend sold 150,000 shares of Kotva, a.s. to Královéhradecká brokerská, a.s., each for 400 CZK. Within minutes, the VIF Trend bought the shares back for 952 CZK. Right after that, the shares were sold again to another company, again for 400 CZK each. This last company was IFM, a.s. which was chaired by Miroslav Hálek. After that, the shares were transferred to the above-mentioned company based in Cyprus, the Formister Enterprises Limited.

Eventually, new boards of the VIF Trend were installed on the general meeting on 1st November 1996, and the abdication letters of the old management were attached to the notary's acknowledgement. There we learn that due to the measures adopted by the Ministry of Finance, the members of boards were unable to manage the fund and, therefore, did not want to stay in the boards (justice.cz, 1996b). Furthermore, Mr Hálek sent a letter to the IPF's shareholders, which was also attached to the notary's

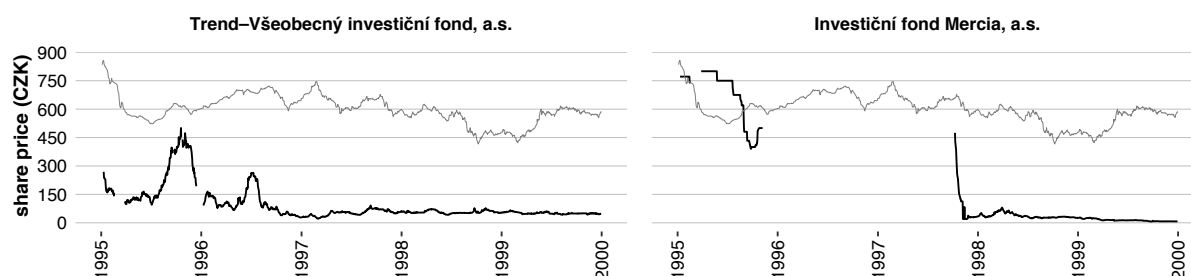
³⁸ We can see here what we discussed in Table 2.7 above, that is, the alliances of the funds were able to concentrate the shares of a company so that they effectively managed it. The AGB, podílový fond held 8.8 per cent of Kotva, a.s. The AGB investiční fond II., a.s. held another 4.6 per cent. Both funds were administered by A-INVEST, a.s. and therefore, the investment company held as much as 13.4 per cent.

acknowledgement. There he writes that he, and other members, resigned from the posts because of the unclear ownership in VIF Trend itself, but also in the companies from its portfolio. Note that the unclear ownership emerged while Mr Hálek was the influential person in the fund.

What is being discussed together with the VIF Trend is the Investiční fond Mercia, a.s., and we, therefore, present it here, too. Jílek (2009) writes that the scenario was identical: the fund was taken over by Miroslav Hálek and people related to him, and they abused their power to take the shares of Kotva, a.s. out of the fund. When the transaction was completed is not stated. Nonetheless, we can deduce that it was before the VIF Trend's sale. This is trackable from the company register—the boards of Investiční fond Mercia, a.s. were taken by people connected to Královéhradecká brokerská, a.s. as soon as in January 1995. The sale must have been, therefore, completed around that time. On 5th December 1996, Investiční fond Mercia, a.s. was, too, put under the forced administration (justice.cz, 2019f).

In Figure 3.6, we can see the market prices of the shares of VIF Trend and Investiční fond Mercia, a.s. As for the VIF Trend, the message is clear—at the beginning of August 1995, the prices fell sharply after a short and robust growth. The beginning of August was when the IPF was sold to Královéhradecká brokerská, a.s. The reason for the gains in the middle of 1996 is unclear, nevertheless, they were wiped away as soon as the fund was put under the forced administration. Regarding the Investiční fond Mercia, a.s., assuming anything from the curve of its prices is tricky since there were no deals made between 1996 and 1998. This is despite they were publicly tradeable, as was stated in the Articles of Association from 9th January 1997 (justice.cz, 1997g). The absence of trades still gives us a piece of information—the shares were virtually untradeable. The trust in the fund is, subsequently, illustrated by the sharp decline that was recorded as soon as the trades were restored. Overall, it is clear that the shares of either fund were virtually worthless as soon as at the end of 1996. All factors mirrored in the losses—the forced administration, the worthless portfolios, and the lack of trust in the funds.

FIGURE 3.6 VIF TREND'S AND MERCIA'S PRICES AT THE RMS



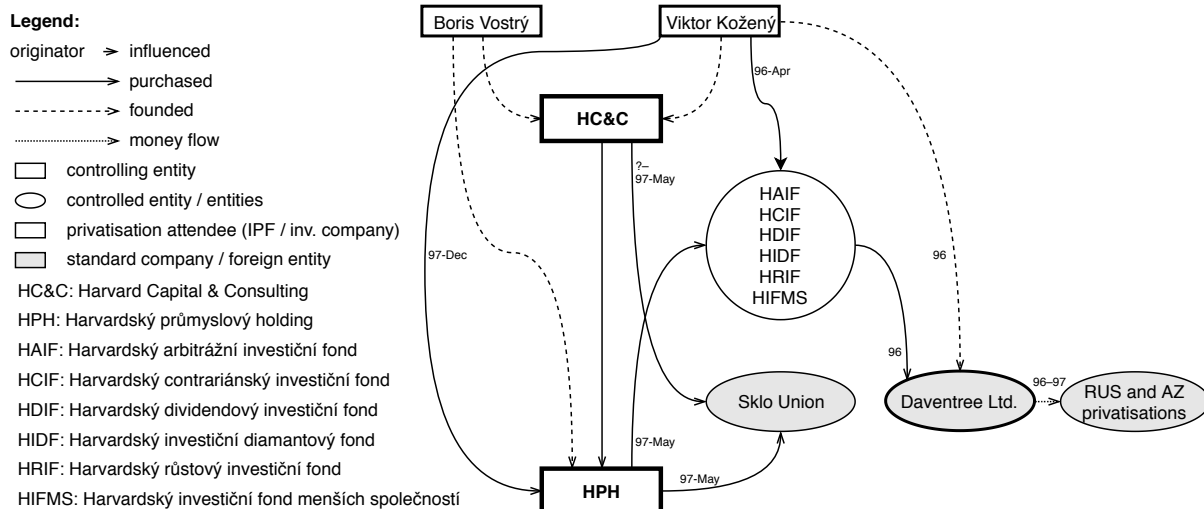
Source: kurzy.cz (2019)

3.4 HARVARD FUNDS

So far, we have discussed cases where the tunnelling and the eventual consequences were obvious and eventually proved. This cannot be said for the case of Harvard Funds. The Harvard Funds, although being named among “typical” cases of tunnelling, differ significantly from those above.³⁹ In this subchapter, we will describe what the Harvard Funds’ case was, and why it is commonly classified among the defrauded funds. Just as in the case of the C.S. Funds, the ownership structure and changes were numerous and chaotic. The visualisation of the case, to help the reader grasp the structure we describe within the subchapter, is in Diagram 3.2. The dates and the relations are mentioned below in the text which the diagram is based on. It shows the changes over time, and is, therefore, meant to be used with the text to elevate the understanding of what is described.

³⁹ This raises the question “What is a typical case of tunnelling?” We will attempt to answer the question in the conclusions.

DIAGRAM 3.2 INTERCONNECTIONS AMONG ENTITIES IN THE HARVARD FUNDS' CASE



Source: author's construction

Harvard Funds, as they are commonly called, were privatisation funds established by the investment company Harvard Capital and Consulting investiční společnost, a.s. (HC&C hereafter). The investment company was set up by Viktor Kožený and Boris Vostrý, who were the key people in the whole case. HC&C attended both waves, and had, by far, the largest number of individual funds. That is six IPFs for the first wave, and additional 17 mutual funds for the second wave. Consequently, it was one of the most successful investment companies in terms of obtained vouchers—it ranked third in both waves. Also, as we have argued above, it was the most successful investment company that was not set up by a bank. We have also discussed the advertisement campaigns; with no doubt, it was the advertisement campaign which lured many people into the Harvard Funds. Recall that in the advertising campaign, the Harvard Funds promised to redeem the shares for ten times the value of the voucher booklet (see footnote 21). Liška & Gazda (2004) write that this is indeed what the Harvard Funds did, i.e. they fulfilled their promise.⁴⁰ However, the authors also write that most of the Harvard Funds' shareholders felt cheated. They assume that this is because how much, on average, each booklet earned came soon into light (we have discussed this issue in subchapter 2.2). Wallace (1996) mentions one more detail that was certainly decisive for the Harvard Funds shareholders—the funds charged inflated fees from them. These were not always legal because, as Wallace continues, Kožený collected \$45 million in fees on funds with total assets of \$1 billion. We can see that this is 4.5 per cent, while the investment companies were only allowed to charge 2 per cent. The extra fees were, for example, for setting up the fund, or for managing the fund. Overall, the ten-times redemption was deflated by these fees, which was certainly a reason to feel cheated.

If we concentrate on the patterns of tunnelling which we have discussed so far and which are the main subject of this text, we can find two things. They both can be regarded as the reason for the Harvard Funds standing among the funds that were tunnelled. First, all of the Harvard Funds converted into holding companies, and all of them did so in June 1996. And second, the Harvard Funds ownership was eventually transferred to Cyprus.

As for the first pattern, the converted funds were only the IPFs, not the mutual funds. As we have stated above, there were six IPFs in total. These were all converted between 11th April and 7th June 1996. The announcements of the conversion were, according to Hopt et al. (1998), followed by shrinks in the IPFs' market prices as much as 22 per cent in a single week. The shares, that were suddenly

⁴⁰ Unfortunately, we do not have information about how long the Harvard Funds were fulfilling the promise. On the other hand, we do not have information about *not* fulfilling the promise, either. Therefore, we assume that the "a year and a day" promise was kept.

cheaper due to the sell-off, were eventually bought by Kožený himself (Wallace, 1996). Moreover, the general meetings of the respective funds decided that they would be merged, together with a company Sklo Union, a.s. which was controlled by the mutual funds managed by HC&C. The resulting merger was Harvardský průmyslový holding, a.s., which was entered into the company register on 17th May 1997.⁴¹ Meanwhile, the converted IPF changed their portfolios considerably. The aggregated portfolios of the individual Harvard Funds, showing the ratios between the firms in the portfolios as on 31st December 1996, are in Table 3.2. We report the cost price, i.e. the price for which the shares were bought by the respective Harvard Funds, as the comparing criterion. This is because the Daventree Limited was not publicly traded (neither on the Czech nor on any other public market) and thus was not priced by the market.

TABLE 3.2 HARVARD FUNDS IPFs' PORTFOLIOS, AS ON 31ST DECEMBER 1996

Harvard fund	Daventree Limited		Remaining firms		
	No. of shares	Cost price (CZK thous.)	No. of firms	Cost price (CZK thous.)	Market value (CZK thous.)
Harvardský arbitrážní investiční fond, a. s.	348,721	16,315.1	2	309.0	448.0
Harvardský kontrariánský investiční fond, a. s.	889,124	41,598.3	2	1,235.8	1,795.0
Harvardský dividendový investiční fond, a. s.	170,873,071	7,994,413.0	4	226,629.0	139,535.0
Harvardský investiční diamantový fond, a. s.	1,184,470	55,416.2	2	1,551.2	2,247.0
Harvardský investiční fond menších společností, a. s.	556,992	26,056.0	2	930.6	1,347.8
Harvardský růstový investiční fond, a. s.	134,848,095	6,308,959.9	4	227,430.0	138,111.8

Source: justice.cz (1996f, 1996g, 1996h, 1996i, 1996j, 1996k), adjusted

As we can see, the first pattern of tunnelling we mentioned above (the conversion of the funds) ties closely with the second pattern (the transfers to Cyprus). The prevailing property of each converted fund was deposited in the shares of the company Daventree Limited. When the acquisition of the shares of Daventree Ltd. exactly proceeded is rather unclear, but the company was surely established by Kožený. Myant (2013) writes that in 1995, Viktor Kožený allied with an American investor Michael Dingman and his company Stratton Investments. Kožený allegedly sold shares of various companies from Harvard Funds' portfolios to Stratton and used the income to buy shares of other companies. Perhaps, the goal was to acquire decisive shares in a few companies instead of holding a very diversified portfolio. As is clear from Table 3.2, this potential goal was modified as the Harvard Funds bought shares of Daventree Ltd. instead. Wallace (1996) claimed that since the company was Cyprus-based, it was, obviously, beyond the scrutiny of the Czech authorities. Through the company Daventree Ltd., the Harvard Funds invested in Russian and Azerbaijani voucher privatisations in 1996 and 1997.⁴² These investments, however, failed to be profitable and the Harvard Funds got into loss. In this vein, the moment when the Harvard Funds ranked among the defrauded funds was not after the tunnelling. It was after a wrong entrepreneurial decision. Unfortunately, the wrong entrepreneurial decision was made with the money that belonged to the shareholders. Hence the results for the Harvard Funds' investors were identical in both cases, and this is why the Harvard Funds are believed to had been tunnelled, despite they were not.

As for the HC&C, i.e. the investment company, the company register entry from 25th June 1997 reads that the company was owned by a single shareholder—Daventree Limited (justice.cz, 2019e). That made

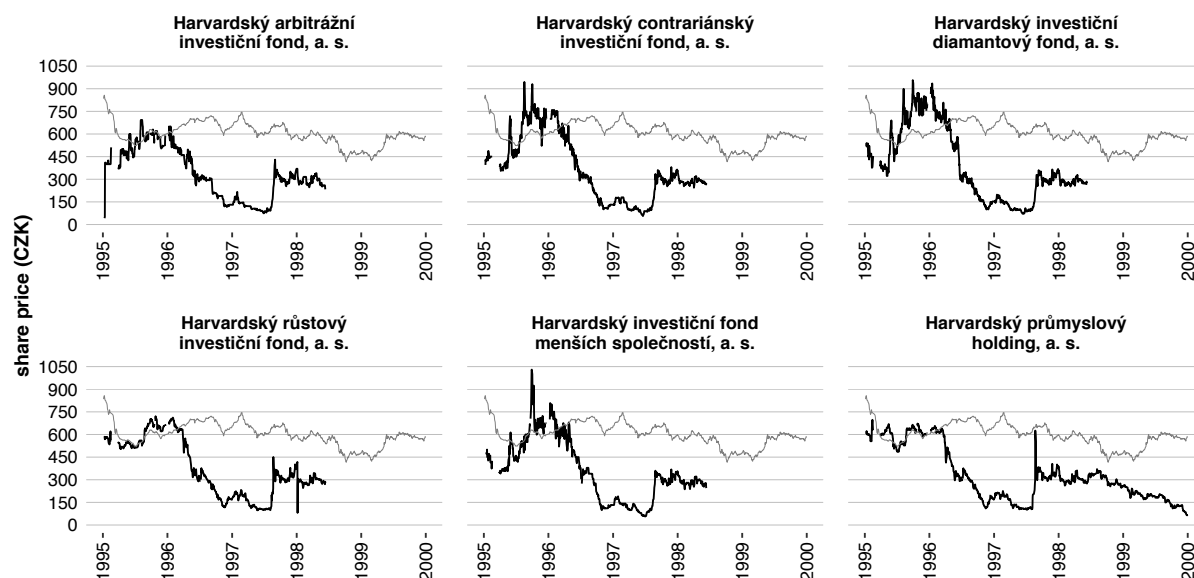
⁴¹ Formally, the Harvardský průmyslový holding, a.s., was the transformed Harvardský dividendový investiční fond, a. s.

⁴² In these countries, the rules of the voucher privatisation were different. The vouchers themselves were tradeable, and the privatisation could be attended by foreigners (Jílek, 2009).

the mutual funds a part of this Cyprus-based holding as well. Finally, Jílek (2009) writes that the merger of the IPFs—Harvardský průmyslový holding, a.s.—held a general meeting in August 1997. On this general meeting, termination of the existence of the company was decided. Boris Vostrý, who was the chairman of the company, was employed as the liquidation administrator. The company was later (in December 1997) bought by Kožený himself, who paid with two IOUs issued by his (another) company. Nonetheless, as soon as the failure of the investments in Russia and Azerbaijan revealed, Viktor Kožený acknowledged that he (i.e. the Daventree Limited) could neither redeem the mutual funds' shareholders nor repay the IOUs. Eventually, the case of Harvard funds was investigated—not only by the Czech but also by the American police. Again, discussing the judgements is not a subject of this text.

As previously, we conclude with the share prices which are visualised in Figure 3.7. First of all, we can see that the prices did not differ one from another—the Harvard Funds were perceived as a union. What is further apparent is that until the end of 1995, all funds seemed promising. Some of them were even traded for double the initial price. This was perhaps related to the fulfilled promises of the redemptions. In 1996, the expectations were, clearly, broken and the prices reacted accordingly. We can see drops around June 1996—we have mentioned above that the conversions were followed with drops in the market value of the funds. Lastly, we can see that the prices rose considerably, and simultaneously, in August 1997. This was the time when the termination of the Harvardský průmyslový holding, a.s. was acknowledged. Therefore, the redemption of the shares was, perhaps, expected. In June 1998, the shares of the individual funds were taken off the market. That is, the merger was completed around the date. This did not change the course that was present; Harvardský průmyslový holding, a.s. continued to be traded and it never gained the value back. In fact, the development during 1998 more or less corresponds to the steady losses of the whole share market. This did not hold for 1999 though when the whole market gained back what it lost in 1998.

FIGURE 3.7 HARVARD FUND'S PRICES AT THE RMS



Source: kurzy.cz (2019)

3.5 MORAVSKOČESKÁ INVESTIČNÍ SPOLEČNOST, A.S.

The last problematic fund we (briefly) discuss is the mutual fund set up by Moravskočeská investiční společnost, a.s. The investment company was established in October 1993, and therefore, it only attended the second wave. It set up one fund for the second wave—a mutual fund Bonus. Later on, it took over management of an IPF Moravskočeský investiční fond, a.s. which was originally set up by a steel-producing company. The IPF was neither put under the forced administration and we did not find

any documents that would indicate tunnelling or fraudulent activities. Nonetheless, the investment company was put under the forced administration on 20th March 1997 (justice.cz, 1997i). The reason for the forced administration was not stated in the documents we have access to. Nonetheless, Liška & Gazda (2004) write that the company itself demanded to be put under the forced administration. The reason was, according to the authors, withdrawal of 300 mil. CZK from the fund.⁴³ Unfortunately, the mutual fund, despite its shares were tradeable (in line with the law), was never traded at the public market. That is, the shares existed but were quoted neither at the RMS nor at the PSE. The trades were, therefore, realised only over-the-counter or not at all. We, therefore, cannot investigate the case any further since we have neither any documents nor data.

3.6 OVERVIEW

Having discussed the individual cases of tunnelling, we can contemplate the unifying patterns that are trackable. We have seen five cases in total, which significantly differed one from another in complexity but not too much in the method. Clearly, the C.S. Funds were the most complicated case, which was to a large degree due to the number of entities that were involved. Oppositely, the case of Bohemia funds appears the simplest and clearest. All cases were, however, very similar. A typical case of tunnelling would, perhaps, bear the following four features.

First, we have seen that the funds' representatives could simply withdraw money from the funds through trading with the stocks for different prices. That is, intentionally buying the shares expensively and selling cheaply. The cases were numerous—the very same patterns were trackable in the C.S. Funds, in the entities related to the C.S. Funds and in the VIF Trend. We have discussed this activity in subchapter 2.5 already. The most thought-out case was, probably, the one of the funds related to the C.S. Funds; there were many actors with interconnected ownership. That made the whole case very opaque which was, obviously, desired by the people who wanted to defraud the funds. A very clear, and to some degree naïve variation of the money withdrawal was found in the VIF Trend. Artificial trading with the shares as was described by Macháček (1997) was obvious and easily provable. Furthermore, we have seen in reality what we explained in Chapter 2—if the managers wanted to defraud the fund, the way was straightforward. Since the managers were those who handled the IPFs' assets, they could easily decide to handle them dishonestly.

Second, the representatives could establish a new company, and invest the money from the IPF in this company's shares. For example, they could buy the assets with an agio (the difference between the nominal value and the price). This resulted in profits for the newly established company, i.e. for the company's owners who were at the same time the IPF's representatives. The method was provably carried on in the Bohemia funds, C.S. Funds, and in Harvard funds. The asset of this method laid in its easiness. That is, establishing a firm meant complete control over its shares and their price. The managers could make quick and unobservable trades with these shares.

Third, the takeover of an IPF meant the right of the new owner to employ new representatives. These were to be recognised by the Ministry of Finance. Nevertheless, as we have seen in the cases of Bohemia funds and the C.S. Funds, the representatives could manage the funds before their recognition already. Since their supersession was, from the very beginning, intended to quickly tunnel the fund, these representatives did not even need to be recognised. Therefore, as was namely the C.S. Funds' case, the new representative could be an anonymous or an inexperienced person whose task was twofold; defraud the fund and cover the real offenders.

⁴³ The authors mention the IPF, not the mutual fund. This is, however, a confusion since the IPF does not have any such record as the forced administration in the company register, contrary to the investment company and its mutual fund.

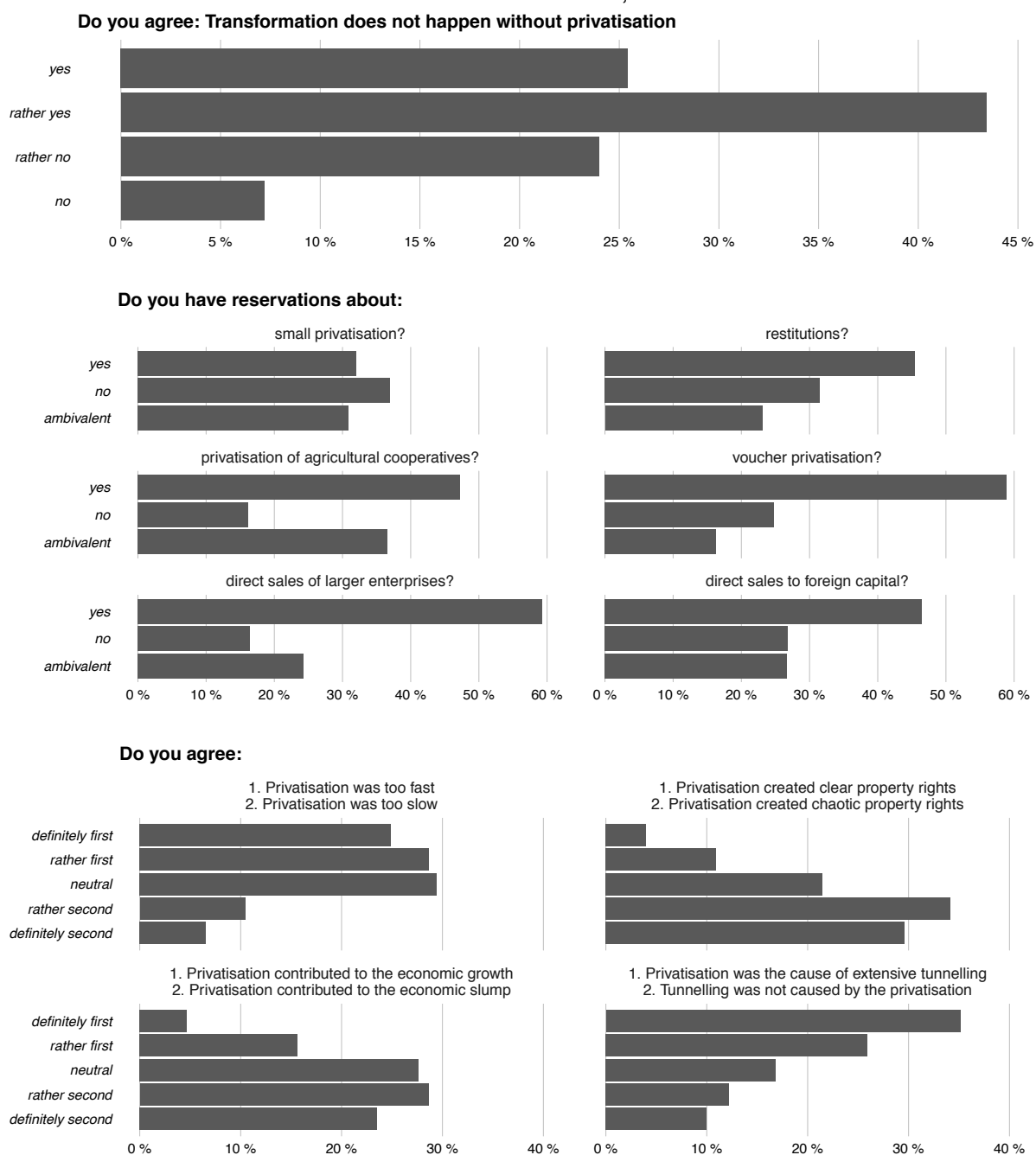
Lastly, we have seen that converting the fund into a holding company was a very effective way to escape the regulations imposed upon the investment funds. It was not, however, the tunnelling per se. That is, the fact that the fund was converted did not automatically mean that it was tunnelled. We have seen in subchapter 2.5 that as much as some 25 per cent of all funds converted. The tunnelling was proved in a mere fraction of these funds. Moreover, as we have seen, some funds were tunnelled without being converted. Therefore, the conversion being regarded as a proof of tunnelling is reckless; it was rather a peripheral symptom.

Overall, the cases of tunnelling we have described here were those which we are aware of, based on the disposable sources we discussed. We have seen five cases, with one being utterly serious and that can be called a typical case of tunnelling—the case of the C.S. Funds. Recall that there were almost 500 privatisation funds in total. Out of these, we examined 22 individual subjects. That is, we have not found evidence for an absolute majority of the funds. However, we are aware of the missing documents, and thus we cannot regard the remaining funds as not tunnelled; we only do not have the evidence. What we do have, on the other hand, is data; the IPFs performance approximated with their share price. Some IPFs could perform poorly because of circumstances, not the dishonest behaviour. As we have argued in subchapter 2.4, the Czech capital market was peculiar in the 1990s. The IPFs with their portfolios composed of the shares traded at this market could be in loss simply because of the fact that they held these shares. This is what the data could reveal. We must question, and eventually reject, the statement by Myant and Drahokoupil (2013) who write that the tunnelling was a symptomatic phenomenon in the transformation of the Czech economy. We have already seen that it was not. The problem here is that the discussion is focused on the deviations from the expected outcomes. This is, after all, exactly what we have done, too—we have discussed what the IPFs were meant for, and the cases of failure.

Consequently, the exposure to the widely-discussed problems left a belief that the whole voucher privatisation was a failure. For a Czech Republic citizen, a rash statement like “the voucher privatisation was one big tunnel” became a piece general knowledge. We can very well illustrate the unfavourable notion of the voucher privatisation by a public opinion poll named “Ten years of the social transformation in the Czech and Slovak Republics, 1999.” Despite its name, the poll was conducted in the Czech Republic only. The scope was large (4,744 observations of 725 variables) and there were three consecutive questions in the poll which are interesting for us. They together draw the overall view on the privatisation results. The answers are shown in Figure 3.8.

Apparently, although most of the people were convinced that the privatisation was an inseparable part of the privatisation, they were not so much in favour of the particularities. In general, no method of privatisation seems to have passed the evaluation in the poll. Namely, the voucher privatisation together with the direct sales was evaluated to be the most problematic method. The reservations that 60 per cent of people had were not described any further, however, we can deduce the source of the misgivings from the question that followed. Most people believed that privatisation was the cause of tunnelling. There is such problem with the dataset that all participants were asked all questions. Therefore, one person could have reservations about all forms of privatisation, believing that the privatisation was too fast, resulted in chaotic property rights, slowed down the economy, and on top, allowed for the tunnelling. It is therefore impossible to adjust the data for a participant’s overall negative stance on the privatisation as such. However, since no other form of privatisation but the voucher method was marked with the tunnelling, it is obvious which type of privatisation, and which attendees, these people had in mind. This is rather unfortunate because as we have argued so far, and as we will show in the next chapter, most IPFs were not involved in the fraudulent activities. We formally test the IPF’s performance, using a very simple, and thus easily comprehensible econometric model, which supports our claims.

FIGURE 3.8 PUBLIC OPINION ON THE CZECH PRIVATISATION; OCTOBER 1999



Source: Sociologický ústav, AVČR (1995a)

4 MEASURING THE PERFORMANCE OF THE INVESTMENT PRIVATISATION FUNDS

In the previous chapters, we explored the overall environment within which the investment companies and investment funds operated, as well as the cases of some funds' (intentional) failure. What we have seen so far is that the privatisation funds were introduced in a very nonstandard, if not confusing environment. The environment provided opportunities and, as for the IPFs, those who were willing to take it were eventually able to enrich themselves. We must, however, stress that those who were not willing to take the opportunity were in an absolute majority.

The relay now continues with the econometric modelling that supplements what we have revealed so far. That is, what we attempt to show empirically is that tunnelling was not a systematic issue. We first introduce the economic model which, as we will see, follows the design of the IPFs and the discussion we had so far. After that, we briefly introduce the data and the econometric strategy as well. In the fourth part of this chapter, we present the estimations and discuss the results. And fifth, we generalise the results and derive the conclusions.

4.1 ECONOMIC MODEL OF THE IPFs' PERFORMANCE

Generally, the performance of a company is only approachable when it is compared with a benchmark entity, preferably with an entity that is similar by design. At this point, we make use of what we have already outlined in Chapter 3—the benchmark for the comparison is the global index of shares. As we have already argued in the introduction of the 3rd Chapter, the global index can be understood as a fund that holds every possible share that is being traded at the stock exchange. Therefore, it mirrors the risks connected to the respective shares, but not the risks connected to the fund itself. In other words, we are able to distinguish between the systematic risks present at the whole market, and the individual risks related to the respective entities. Such approach is nothing new in economics; the capital asset pricing model (CAPM) is a well-known and widely used model of financial economics which relates individual assets' returns to the market returns. In this subchapter, we discuss the design of the CAPM and how it contributes to this text; we do not aim to provide a comprehensive overview of the different approaches to the CAPM. What we deal with is the basic specification which, however, reveals to be sufficient for our needs. Moreover, most articles that suggest various adjustments to the model do so through adding more variables, such as price/earnings ratio. Since these data are simply unavailable for the Czech economy in the 1990s, we suffice with the basic specification of the model.

CAPM, as we have stated above, explains the individual asset returns as a function of the whole market's returns (the market portfolio). The asset return is measured relative to the opportunity costs. As for the opportunity costs, it is the return of a riskless asset—a chosen interest rate. The difference between the return of the individual asset (the asset return) and the opportunity costs (the interest rate) is the risk premium. That is, the risk premium is what the investor obtains for undertaking the specific risk connected to the individual asset. This specific risk is not present in the whole economic environment. What the CAPM assumes is that this risk premium is proportional to the market premium. The market premium is designed in the same way as the risk premium; as a difference between the benchmark rate of return and the riskless asset. That is, the risks are divisible into two kinds: the specific risk manifested in the risk premium, and the systematic risk represented by the market premium.

Early studies on the CAPM were published back in 1964 by Sharpe (1964), and independently in 1965 by Lintner (1965). Since then, many other studies were conducted, modifying the original model. However, the basic idea introduced by the two authors still holds and is used. The assumption is that an investor views the outcome of an investment in probabilistic terms, i.e. in the terms of some probability distribution. His utility function then depends on two parameters: on the expected future wealth and the standard deviation from the expected future wealth. Needless to say, an investor prefers higher future

wealth. Also, since he is risk-averse, he prefers lower dispersion of the future wealth, i.e. lower standard deviation. We can see this is exactly what the individual investors did when deciding whether or not they would attend the voucher privatisation via an IPF. They wanted to maximise their wealth and minimise the risk that the realised wealth would not be what they expected.

The basic idea was expanded, built on, and eventually criticised by many authors. As a result, the model as was sketched above was developed. Fama (1971) defined the one-period return of an investment asset as a per-cent change of its market price and identified the return of an investment as a linear function of the market return. In a consecutive study, Fama and MacBeth (1973) derived the basic equation in the form represented in equation (1):

$$E(R_i) = E(R_0) + [E(R_m) - E(R_0)] \times \beta_i \quad (1)$$

where $E(R_i)$ is the expected return of investment asset i , $E(R_0)$ is the expected return of the riskless asset—the opportunity cost, $E(R_m)$ is the expected benchmark return, i.e. the market return, and β_i is the measure of the risk of the investment asset. In words, the expected return of an investment asset i is equal to the expected return of the riskless asset and the risk premium, which is β_i times the market premium. The equation (1) assumes that there is a linear relationship between the expected return of an asset and its risk. Furthermore, it assumes that the risks can be measured completely by systematic and specific risks. And lastly, since the investors are risk-averse, the higher risk should be followed with a higher expected return, that is, $E(R_m) - E(R_0) > 0$.

Obviously, the β_i is of utmost interest for us since it measures the performance of an asset relative to the performance of the whole market. Testing the validity of the CAPM was further discussed by Gibbons (1982) who summarises the general model with the formula (2):

$$E(R_{it}) = \gamma_0 + \sum_{j=1}^K \beta_{ij} \gamma_j, \quad i = 1, \dots, N \quad (2)$$

where t stands for the time dimension, γ_0 is the riskless asset ($E(R_0)$ in equation (1)), γ_j is the parameter for the premium for risk j , K is the number of risks, and β_{ij} is the measure of the relationship between the returns of the investment asset i and the returns of the benchmark for risk j . We can see that the formula (2) follows the formula (1) in the sense that it takes the product from it. What the equation says is that the expected return of an asset in different time periods is equal to the return of the riskless asset, and the sum of the measurement of risks. Obviously, the parameter γ_j for the sum of the measurements of risks should correspond to the market risk ($E(R_m)$ in equation (1)). This is because since the equation (2) allows for the time dimension, it expects the long-time returns of an asset to be explained only by the riskless asset, and the total risks, i.e. the specific risk times the systematic risks. We can see that in case the specific risk “corrects” the market risk (that is, $\beta_{ij} < 1$), the asset returns would be lower than the market returns. This would indicate a defensive asset. Vice versa, in case $\beta_{ij} > 1$, the higher risks would be associated with higher expected returns.

The formulas (1) and (2) are all we need for our performance measurement. We use adjusted versions of the equations, as are represented in formulas (1') and (2'):

$$E(R_i) - E(R_0) = \beta_i \times [E(R_m) - E(R_0)] \quad (1')$$

$$E(R_p) - E(R_0) = \gamma_1 \beta_p \quad (2')$$

where $E(R_p)$ is the expected return of a portfolio p . That is, we do not employ the time dimension of one asset but the cross-sectional expected return of individual assets. In other words, instead of observing one asset over separated time periods, we observe p assets within one period. In equation (2'), we excluded the dimension j from equation (2) since the only risk we measure for is the specific risk that is related to the investment asset.

Overall, the economic model represented by the CAPM brings the following implications into our discussion about the performance of the IPFs. First, we should expect the parameters β_i to be close to one since the investment funds diversify risks connected to the individual shares. That is, what makes the investment (or mutual) funds is its portfolio. In this case, the IPFs' performance measurement is a measurement of the IPF's portfolio performance relative to the market portfolio performance. Second, the CAPM states that an IPF's returns should be proportional to the market returns adjusted for the specific risks. These specific risks are unique for the given fund and are a result of two things; the fact that the IPF's portfolio differs from a hypothetical market portfolio, and the fact that the IPFs (contrary to the market) were companies themselves. And third, the CAPM expects that there are no other factors except for the systematic and specific risks that would significantly influence the profitability of an asset. As Fama & French (1996) summarise it, the CAPM model assumes that the value-weighted market portfolio m is mean-variance efficient. This implies that β_i , the slope in the regression of a security's return on a market return, is the only risk needed to explain the expected return. And also, that there is a positive expected premium for β_i risk. Therefore, the CAPM is able to show us the funds that do not follow the expectations, that is, the funds whose prices do not mirror the market.

4.2 DATA

Our economic model explains the risk premium of an IPF with the risk premium of the whole market. Therefore, as results from the design of the model, we need three variables in total; the prices of the funds, the benchmark index of share prices, and the riskless asset—some market interest rate.

As for the IPF prices, we have already stated above that the prices from RMS were available for more funds and over a longer period than the prices from PSE. We have also stated above that the prices at the PSE and the RMS were not identical, but closely correlated. We thus continue with what we presented so far, that is, we use the RMS prices. In subchapters 2.2 and 2.3, we have seen that there were 429 IPFs that attended the first wave, and 349 funds that attended the second wave.⁴⁴ Out of these, 164 first-wave funds were Slovak and we, therefore, do not consider them in the context of the third wave. Some funds merged and therefore left the market, and some were never publicly traded and there is thus no record on their market prices. All in all, we do not have data for all 479 Czech funds. What we do have is data for 66 IPFs that attended the first wave but not the second, 140 IPFs that attended the second wave including those that attended both waves, and 83 mutual funds. That is, we have daily data of 289 individual funds, within the period between 26th October 1993 and 31st December 1999 (most funds were not traded within the entire period). All IPFs' data were obtained from the website kurzy.cz (2019). Descriptive statistics for the RMS prices of the first-wave IPFs, second-wave IPFs, and mutual funds separately are provided in Table 4.1.

TABLE 4.1 DESCRIPTIVE STATISTICS OF THE PRIVATISATION FUNDS' PRICES AT THE RMS

	IPFs first wave	IPFs second wave	mutual funds
<i>Number of observations</i>	86,520	171,980	79,402
<i>Minimum</i>	0	0	0
<i>First quartile</i>	55	36	67
<i>Median</i>	165	88	196.5
<i>Third quartile</i>	490	190	380.2
<i>Maximum</i>	3,200	5,046	3,296
<i>Mean</i>	331.4	157.2	295.1
<i>Variance</i>	140,435.4	40,628.84	100,994.1
<i>Standard deviation</i>	374.7	201.6	317.8

Source: author's calculation

⁴⁴ The numbers can slightly differ depending on the source due to the fact that some funds merged, were sold etc. However, the differences are in units. All in all, this is a minor issue from our point of view since the total number of funds plays no role in our discussion; we only use it to illustrate the scope of the business which we deal with in detail.

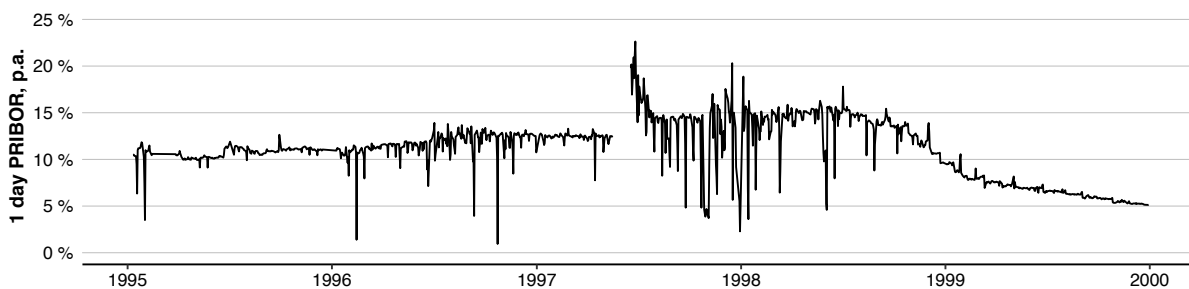
We can see that the first-wave IPFs were, on average, traded for considerably higher prices than the second-wave IPFs. This is not surprising since the number of Czech funds was lesser in the first wave, and the funds obtained a larger share of vouchers in the first wave. Since the value of property in the first wave was larger, this obviously led to the situation where the first-wave IPFs held larger portfolios and thus were traded for more. What is confusing, on the other hand, is that the mutual funds were, on average, traded for more than the second-wave IPFs. This cannot be interpreted as that the mutual funds would have systematically larger portfolios; there is no reason for it since the conditions were the same for the mutual as well as investment privatisation funds. The mutual funds must have been trusted more.

However, not all funds were traded regularly. In fact, some of them, despite being tradable, were not traded at all which is revealed with the trade values at zero over the whole period they were on the market. The prices of these funds, obviously, do not mirror the IPF's evaluation by the market. For this reason, all funds which were traded less than 50 per cent (arbitrary) of the time they could have been traded were excluded. That is, the funds whose traded volume was zero for more than half of the time they were on the market are not included in the dataset. We also excluded one fund which, once the data were prepared, had less than 100 observations (also arbitrarily; this is to preserve enough observations for the structural breaks tests). What we ended up with are 149 individual IPFs and mutual funds. Out of the 22 funds that were discussed in Chapter 3, only three were excluded and the remaining 19 problematic funds, plus eight Harvard Funds' mutual funds, are thus incorporated in the dataset. Finally, the model requires the returns of the investment assets (the IPFs' shares) and returns of the market index. They therefore need to be converted into per cent changes. The return of an i -th investment asset, $r_{i,t}$, in time t is defined as the percent changes of the asset's prices $p_{i,t}$, that is, $r_{i,t} = (p_{i,t} - p_{i,t-1})/p_{i,t-1}$.

As for the benchmark share index, we use the PX-glob we introduced at the beginning of Chapter 3. The reasoning to use this particular index was explained there, too, and its curve is depicted in Figure 3.1. We, therefore, do not introduce the index here again. The market return r_{m_t} which is used for the modelling is defined as $r_{m_t} = (m_t - m_{t-1})/m_{t-1}$, where m_t stands for the PX-glob in time t .

Lastly, the market interest rate we use as the opportunity cost is the Prague interbank offered rate (PRIBOR). The rate was obtained from the CNB websites (CNB, 2019). We use daily rates since we seek for a riskless asset; we do not want to include the time risk that is accounted for in the longer-term rates. Moreover, the stock market prices rank among the most elastic prices in the whole economy, and they should, therefore, react to the market changes as fast as the interest rates. The interest rates are published as per annum rates and were therefore converted into per day rates for the modelling. In Figure 4.1, the original p.a. interest rate is depicted. The values between 19th May 1997 and 17th June 1997 are excluded from the graph because, in the currency crisis, the rates were as high as 200 per cent which would make the graph unreadable. However, they are not excluded from the dataset since the interest rate is subtracted from both the IPF and the market returns and does not influence the variability.

FIGURE 4.1 RISKLESS ASSET: 1-DAY PRIBOR, P.A. RATES



Source: CNB (2019)

Subtraction of the interest rate from the two variables leaves us with the risk premium and the market premium. The variables are used in per cent changes, that is $(r_{i,t} - r_{f_t}) \times 100$ and $(r_{m_t} - r_{f_t}) \times 100$,

where r_{f_t} stands for PRIBOR in time t . The same notation of the variables from this section is used throughout the following text.

4.3 ECONOMETRIC APPROACH TO THE IPF'S PERFORMANCE

In the previous subchapter, we developed the economic model that explains the expected behaviour of the share prices of the IPFs. In this section, we briefly introduce the econometric model and the method we use for its estimation. As is obvious from the two equations that represent our model, the CAPM is estimated in two steps. The first equation to be estimated is the equation (1') with the added constant and error terms, and with the variables that are used for the modelling. That is:

$$r_{i,t} - r_{f_t} = \alpha_i + \beta_i(r_{m_t} - r_{f_t}) + \epsilon_{i,t} \quad (3)$$

where α_i is the constant term, β_i is the measurement of the sensitivity of the investment asset i to the variability of the market, and $\epsilon_{i,t}$ is the regression error term. We can see that the equation (3) follows the idea of the risk premium as was defined above. This leads to the assumption that the constant term should be statistically insignificant from zero (formally $H_0: \alpha_i = 0$).

Consequently, the second step estimation can be performed. For it to be estimated, the cross-sectional data are taken. The risk premium for each portfolio as the average of the risk premia of that fund, and its beta, are taken as one observation. The estimated equation then has the form as is in formula (4):

$$r_{p_i} - r_f = \gamma_0 + \gamma_1\beta_i + \epsilon_p \quad (4)$$

where r_{p_i} is the aggregated return of the portfolio i , i.e. the aggregated return of the i -th IPF, r_f is the interest rate aggregated over the whole period, γ_0 is the constant term, γ_1 is the CAPM parameter that should correspond to the market risk, i.e. the aggregated market return, and ϵ_p is the error term. The constant term should be statistically insignificant since, as we have stated above, the risk premia should be explained solely by the systematic and the specific risks, there should be no further factors.

After the basic identification of the model, we proceed to what is most interesting, that is, to the identification of the structural breaks in the data. We estimate the structural break with the standard Chow test for structural breaks and use the estimated break in two equations. First, the equation (5) expects the break to influence the parameter β_i , i.e. the specific risk. And second, the equation (6) includes a standard dummy variable.

$$r_{i,t} - r_{f_t} = \alpha_i + \beta_i(r_{m_t} - r_{f_t}) + \delta_i d \times (r_{m_t} - r_{f_t}) + \epsilon_{i,t} \quad (5)$$

$$r_{i,t} - r_{f_t} = \alpha_i + \beta_i(r_{m_t} - r_{f_t}) + \delta_i d + \epsilon_{i,t} \quad (6)$$

where $d = \begin{cases} 0 & \text{before the break} \\ 1 & \text{otherwise} \end{cases}$.

Multiplying the variable for the market premium in equation (5) by the dummy variable introduces a very useful feature to the model. That is, the parameter δ_i is, in fact, an addition to the parameter β_i for the observations after the break. It means that the parameter accounts for the change in the measurement of the asset's sensitivity to the market volatility. In other words, the equation (5) is the same as the equation (3) for the observations before the break. After the break, however, another dimension of the variable for the market risks is added to the model. This specification allows for additive adjustment of the β_i parameter. The second specification, on the other hand, allows for additive adjustment of the α_i parameter—the constant term. Overall, the equation (5) assumes a structural change in the volatility. The equation (6) assumes a structural change in the levels.

All models are estimated using standard OLS regressions. We also perform tests for heteroskedasticity and serial correlation, as well as normality of the standard errors. All tests are performed on five per cent significance level, i.e. $\alpha = 0.05$, unless stated otherwise.

4.4 RESULTS AND DISCUSSION

Employing the above-described model, data, and methodology, the estimations were made, and the results are presented in this subchapter. On a technical note, virtually all models rejected the null of the Jarque-Bera test about the data normality. Such results of the diagnostics were expected because the distribution of financial data often has fat tails. This is not a problem, however, since we have a sufficient number of observations (the lowest is $n = 163$) to rely on the asymptotic theory. The other two testable classical assumptions of the models, i.e. the error terms' homoskedasticity and absence of serial correlation, were tested, too. The Breusch-Pagan test identified heteroskedasticity, and the Durbin-Watson test rejected the null for the number of funds. Despite only a part of the funds in the dataset were problematic in terms of the diagnostics, we used the HAC estimator for all of them. Since the HAC estimator does not correct the problem but merely accounts for the heteroskedasticity and autocorrelation, the standard errors estimations that were not problematic in the first place are still robust. The significance levels in the presented estimations were thus computed using the Newey-West standard errors. As for the IPFs' identification, since we have 149 individual IPFs, each is given a number between 1 and 149. The funds' names corresponding to the numbers are provided in Table 4.3 and will be used throughout the whole empirical part of the text. The funds that are highlighted grey are those that were discussed in Chapter 3.

4.4.1 BASIC MODEL ESTIMATION

In this subchapter, we present the estimation results of formulas (3) and (4). That is, this chapter concentrates on the CAPM identification, as was the model described above, and the implications that it brings into the discussion about the privatisation funds. The estimation results of formula (3) for each fund of the dataset are presented in 4.2. Before we turn to the discussion of the results and implications for individual funds, there are several general facts that result from the estimations.

First, most of the funds fulfil the assumptions and hypotheses we stated above. Therefore, most of them show statistically insignificant constant term, and statistically significant β_i , which means that the risks that are connected to these funds are divisible into the systematic, and the specific risk. Moreover, the results show that the model fits the data for some funds very precisely, that is, they explain a substantial part of the variability of the data, as is indicated by the adjusted R-squared. These "role model" funds are in the first column; they are those whose R-squared is larger than 0.4. That is, the model explains more than 40 per cent of the variability in the data. The rest is left in the error term.

Second, besides the IPFs that correspond to the above-mentioned theory, there are some on the other side of the spectrum and these are in the third column. These are divisible into three categories; those who only violate the β_i hypothesis, those who only violate the constant term hypothesis, and those who violate both hypotheses. As for the first category, there are only two funds that belong here and both, obviously, do not mirror the market variability at all; the explanatory power of the model for these funds is so weak that the adjusted R-squared is negative. The second category's results show that these funds' prices correspond to the market but are consistently lower. That is, there was a systematic discount of these funds, which can be explained neither by the market risks nor by the specific risk of the IPF. However, some of these models are otherwise fitting well and explain a substantial part of the fund's prices variability. And the third category includes the results with insignificant values of β_i but significant constant term, which essentially means that the model only estimated the mean of the data. That is, the model is not suitable for the data of the particular fund since the prices of the particular fund did not mirror the market which was the only explanatory variable. The conclusion is supported by the values of R-squared of these funds, which show that the model explained no variability of the data.

TABLE 4.2 OLS REGRESSIONS OF RISK PREMIA ON MARKET PREMIA—RESULTS

IPF	α_i	β_i	adj. R ²	IPF	α_i	β_i	adj. R ²	IPF	α_i	β_i	adj. R ²
<i>role-models</i>				<i>weaker explanatory power</i>				<i>hypotheses violation</i>			
(58)	0.057	0.991***	0.866	(17)	0.025	0.962***	0.399	(32)	-2.789	0.111	-0.004
(57)	0.042	0.983***	0.822	(91)	0.083	0.959***	0.399	(102)	-2.202	0.311	-0.001
(16)	-0.029	0.972***	0.811	(19)	0.200	1.009***	0.398	(24)	0.443**	1.097***	0.599
(34)	0.005	0.982***	0.791	(83)	-0.211	0.939***	0.398	(36)	-0.310***	0.948***	0.465
(111)	-0.230	0.941***	0.784	(30)	0.053	0.995***	0.390	(43)	-0.410**	0.953***	0.460
(28)	0.069	0.999***	0.777	(136)	-0.113	0.971***	0.387	(116)	-0.283**	0.922***	0.412
(75)	0.011	1.002***	0.752	(20)	-0.015	0.984***	0.380	(134)	-0.458***	0.863***	0.334
(53)	-0.059	0.976***	0.748	(40)	0.065	0.975***	0.379	(61)	-0.510***	0.923***	0.307
(88)	-0.147	0.959***	0.747	(105)	-0.149	0.998***	0.379	(49)	-0.487**	0.951***	0.219
(27)	0.111	1.023***	0.745	(129)	-0.121	0.929***	0.375	(48)	-0.630**	0.807***	0.107
(133)	0.087	0.958***	0.723	(70)	0.232	1.004***	0.370	(22)	-1.132***	0.633***	0.083
(25)	0.017	0.988***	0.719	(72)	0.023	0.994***	0.363	(138)	-0.654**	0.816***	0.057
(56)	-0.026	0.978***	0.707	(144)	-0.124	0.949***	0.357	(69)	-1.727***	0.473***	0.050
(119)	-0.057	0.979***	0.695	(63)	0.139	1.076***	0.352	(124)	-0.884**	0.956***	0.045
(26)	0.075	0.999***	0.675	(94)	-0.072	0.960***	0.352	(65)	-1.125***	0.618***	0.033
(80)	0.043	0.998***	0.673	(44)	-0.165	0.936***	0.341	(67)	-1.319***	0.508***	0.025
(78)	0.059	0.985***	0.664	(128)	-0.165	0.970***	0.341	(29)	-2.131***	0.231*	0.005
(79)	0.015	0.991***	0.662	(21)	-0.047	0.943***	0.328	(7)	-4.774***	-0.590	0.003
(74)	0.059	1.003***	0.656	(140)	-0.140	0.945***	0.326	(99)	-4.899***	-0.502	0.002
(73)	-0.064	0.966***	0.642	(122)	0.106	0.973***	0.325	(115)	-5.087***	-0.136	-0.005
(66)	0.315	1.050***	0.623	(64)	-0.312	0.877***	0.322	(96)	-2.930***	0.090	-0.003
(76)	-0.133	0.980***	0.621	(89)	-0.243	0.907***	0.322	(149)	-2.692***	0.136	-0.003
(121)	-0.082	0.953***	0.614	(60)	0.050	1.032***	0.314	(15)	-3.171***	-0.160	-0.002
(81)	0.018	0.990***	0.606	(55)	-0.322	0.897***	0.309	(95)	-3.762***	-0.178	-0.002
(2)	0.016	1.005***	0.603	(50)	0.245	1.046***	0.307	(97)	-3.592***	-0.142	-0.002
(23)	0.027	0.976***	0.594	(52)	-0.309	0.941***	0.306	(98)	-2.756**	0.140	-0.002
(51)	-0.062	0.972***	0.581	(130)	-0.307*	0.943***	0.306	(101)	-2.604**	0.150	-0.002
(84)	-0.091	0.968***	0.571	(38)	-0.101	0.923***	0.300	(68)	-2.659**	0.097	-0.001
(109)	-0.020	0.979***	0.558	(139)	0.026	0.977***	0.300	(100)	-4.144***	-0.272	-0.001
(137)	-0.742	0.933***	0.547	(10)	-0.218	0.949***	0.293	(13)	-2.224**	0.263	-0.0004
(42)	-0.045	0.964***	0.545	(85)	-0.089	0.963***	0.287				
(82)	-0.212	0.960***	0.537	(113)	0.121	0.964***	0.285				
(3)	0.052	1.012***	0.528	(148)	0.058	0.994***	0.283				
(47)	-0.065	0.956***	0.522	(93)	-0.153	0.918***	0.276				
(1)	-0.012	0.987***	0.515	(112)	0.101	0.966***	0.276				
(120)	-0.032	0.988***	0.515	(5)	-0.166	0.934***	0.271				
(54)	-0.130	0.945***	0.507	(131)	0.010	0.916***	0.268				
(107)	-0.180	0.980***	0.505	(59)	-0.355	0.934***	0.250				
(108)	-0.110	0.965***	0.500	(147)	-0.035	0.889***	0.244				
(127)	-0.074	0.942***	0.499	(117)	-0.183	0.932***	0.235				
(9)	0.017	0.959***	0.487	(45)	0.072	0.950***	0.233				
(35)	-0.164	0.957***	0.484	(92)	0.466	1.012***	0.229				
(132)	0.004	0.940***	0.484	(114)	-0.149	0.944***	0.229				
(143)	-0.019	0.991***	0.484	(104)	-0.190	0.956***	0.224				
(31)	0.383	1.081***	0.467	(146)	0.435	1.034***	0.167				
(71)	-0.018	0.978***	0.465	(126)	0.121	0.961***	0.158				
(135)	-0.151	0.984***	0.459	(62)	-0.230	0.889***	0.154				
(33)	-0.115	0.951***	0.456	(18)	0.284	1.002***	0.153				
(125)	0.233	1.088***	0.442	(110)	-0.087	0.912***	0.146				
(103)	-0.280	0.913***	0.440	(87)	-0.159	0.887***	0.122				
(106)	-0.125	0.997***	0.437	(12)	0.149	0.926***	0.105				
(118)	-0.008	0.949***	0.434	(90)	0.389	0.999***	0.104				
(77)	-0.095	0.961***	0.431	(123)	-1.082*	0.973***	0.055				
(39)	-0.062	0.932***	0.422	(142)	-0.383	0.892***	0.049				
(11)	-0.173	0.987***	0.421	(6)	0.542	0.902***	0.045				
(8)	-0.031	0.930***	0.419	(46)	0.851	0.958***	0.037				
(4)	-0.103	0.951***	0.418	(141)	0.471	1.042***	0.035				
(14)	-0.088	0.941***	0.411	(86)	1.377	1.004***	0.015				
(145)	-0.106	0.979***	0.408	(37)	-0.767	0.768**	0.008				
				(41)	1.051	0.927***	0.006				

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Source: author's calculation

TABLE 4.3 NAMES OF THE INDIVIDUAL IPFS USED IN THE MODELLING

IPF name	IPF name
(1) Fond majetku první investiční a.s. – PF	(76) YSE akcionářů – IS LinhArt, s. r. o., PF
(2) Fond prosperity první investiční a.s. – PF	(77) YSE – Profit IS LinhArt, s. r. o. PF
(3) Fond pravidelných příjmů první investiční a.s. – PF	(78) Fond Odra IS Union, s. r. o., PF
(4) IS EMISSIN, spol. s. r. o. Veletržní PF	(79) PPF IS, a.s. Moravskoslezský PF
(5) ZEMAP – INVEST, první kuponová IS, spol. s. r. o., FORUM, PF	(80) PPF IS, a.s. Český PF
(6) COOP 94 COOP INVEST IS, a.s., PF	(81) Živnobanka – PF IS ŽB–Trust, s. r. o., PF
(7) Lázeňský fond, a.s.	(82) Správa fondů s. r. o. IS – Lichnice PF
(8) IF METALL, akciová společnost	(83) Jablonecká bižuterie IS, spol. s. r. o. Jablonecká bižuterie II, PF
(9) UNION FOND, a.s.	(84) Fond RADEGAST IS PREMIUM, a.s., PF
(10) KUPONIVEST, a.s., IF	(85) Zlatý uzavřený fond KVANTO IS O. B. Invest, s. r. o., PF
(11) Creditanstalt–IPF, a.s.	(86) Výběrový fond výběrové investiční akciové společnosti PF
(12) IF sdružení křesťanských podnikatelů a manažerů, a.s.	(87) Fond RENTIA PLUS IS RENTIA, a.s., PF
(13) 1. CZECH COUPON INVEST, a.s.	(88) A–INVEST, a.s., PF AGB
(14) Jablonecká bižuterie, a.s.	(89) Kapitálová IS TIPAINVEST, a. s. TIPa, první PF
(15) C.S. Fond pomoci, a.s.	(90) Raiffeisen Alfa IS, a.s., výnosový PF
(16) Živnobanka–1. FOND, a.s.	(91) Šrejber fond růstový – Šrejberova IS, s. r. o., PF
(17) IF PRAGOFOND, a.s.	(92) Šrejber fond dividendový – Šrejberova IS, s. r. o., PF
(18) Harvardský růstový IF, a.s.	(93) Plzeňská IS, s. r. o. – Energo uzavřený PF
(19) Harvardský kontrariánský IF, a.s.	(94) Plzeňská IS, s. r. o. – In West, Petrol uzavřený PF
(20) Harvardský investiční diamantový fond, a.s.	(95) Harvardský dividendový fond II HC&C IS a.s., PF
(21) INTERSIGMA, a.s.	(96) Harvardský růstový fond II HC&C IS a.s., PF
(22) Bankovní fond, a.s.	(97) Harvardský fond společnosti se zahraničním kapitálem HC&C IS a.s., PF
(23) Průmyslový IF a.s.	(98) Harvardský fond pojištění HC&C IS a.s., PF
(24) IF české a slovenské energetiky, a.s.	(99) Harvardský fond cestovního ruchu HC&C IS a.s., PF
(25) Křišťálový fond, a.s.	(100) Harvardský fond bankovních a finančních služeb HC&C IS a.s., PF
(26) Investiční fond obchodu, cestovního ruchu a služeb, a.s.	(101) Harvardský fond telekomunikací HC&C IS a.s., PF
(27) Potravinářský fond, a.s.	(102) Harvardský fond sklářského průmyslu HC&C IS a.s., PF
(28) Fond bohatství, a.s.	(103) IS Morava – s. r. o., pivo – Morava PF
(29) Fond rychlého výnosu, a.s.	(104) C.S. Fond, a.s., PF pravidelných dividend
(30) Rentiérský fond, a.s.	(105) C.S. Fond, a.s., PF kapitálových výnosů
(31) IF Potravinářský privatizační fond, a.s.	(106) C.S. Fond, a.s., PF energetiky
(32) První moravský IPF, a.s.	(107) ZEMAP – INVEST, první kuponová IS, spol. s. r. o., INDUSTRIA, PF
(33) Pivovarský fond RADEGAST, a.s.	(108) Speciální fond IS EVBAK, a.s. PF
(34) IPF Komerční banky, a.s.	(109) Všeoborový fond IS EVBAK a.s. PF
(35) IF Bohemia energetiky, chemie plynárenství a lehkého průmyslu, a.s.	(110) SUPER–EXTRA INVEST IS EVBAK, a.s., PF
(36) YSE, a.s.	(111) Zlatý otevřený fond KVANTO IS O. B. Invest, s. r. o., PF
(37) První zemědělsko-potravinářský	(112) GOLDEN CLUB, IS, a.s., Zlatý PF
(38) IF Kredit, a.s.	(113) GOLDEN CLUB, IS, a.s., Juniorský PF
(39) Slováký IF, a.s.	(114) THEMOS INVEST PARTNER, IS, s. r. o. – růstový PF
(40) Výběrový IPF	(115) Zlinconsult invest 94, Zlinconsult IS, a.s., PF
(41) Deza IF, a.s., – DIF a.s.	(116) Všeoborový IF, a.s.
(42) Českomoravský národní IF, a.s.	(117) Speciální IF, a.s.
(43) KREDITAL IF, a.s.	(118) IF jistoty, a.s.
(44) VIF Trend, a.s.	(119) IF jistoty, a.s.
(45) CONCORDIA investiční akciová společnost, IF	(120) LCS IF, a.s.
(46) Rentiérský IF, a.s.	(121) První český privatizační fond
(47) Prosperita, IF, a.s.	(122) EKO FOND IF, a.s.
(48) Prosperita, IF, a.s.	(123) C.S. Fond pravidelných výplat, a.s.
(49) AGB, IF I, a.s.	(124) C.S. Fond kapitálového růstu, a.s.
(50) Krušnohorský IF, s. s.	(125) C.S. Fond pivovarnického a sladovnického průmyslu, a.s.
(51) Zlatý IF KVANTO, a.s.	(126) IF FORT, a.s.
(52) Creditanstalt – druhý privatizační, a.s.	(127) II. Czech Coupon invest, IF, a.s.
(53) 2. spořitelní privatizační IF, a.s.	(128) Harvardský průmyslový holding, a.s.
(54) KVANTO fond důchodový, a.s.	(129) Moravskoslezský IPF, a.s.
(55) AGB, IF II a.s.	(130) IPF–Panok, a.s.
(56) Spořitelní privatizační – Všeobecný IF, a.s.	(131) IPF dopravy, spojů a souvisejícího průmyslu, a.s.
(57) Spořitelní privatizační – Výnosový IF, a.s.	(132) Šrejber tennis investing, a.s.
(58) Spořitelní privatizační – Český IF, a.s.	(133) 1. CZECH COUPON INVEST, a.s.
(59) CONSUS FOND, a.s., IPF	(134) Severočeský IF a.s.
(60) Moravskočeský IF, a.s.	(135) YSE 2, a.s. – IF
(61) Staropražský uzenářský IF, a.s.	(136) Interkupon, a.s.
(62) Český národní výběrový IF akciová společnost Litoměřice	(137) Postilión, a.s., Poštovní IF
(63) IF DIALOG–INVEST, a.s.	(138) Rentiérský IF, a.s.
(64) Fond pro prosperitu průmyslu – IF, a.s.	(139) PIVO–MORAVA, a.s.
(65) COR/US PROGRES IF, a.s.	(140) IF Kapitál, akciová společnost
(66) IF Čechy, a.s.	(141) Rentia, a.s.
(67) COR/US GARANT IF, a.s.	(142) OL–INVEST IF, a.s.
(68) MERCIA – Východočeský IF, a.s.	(143) Bohemia Crystal, IF, a.s.
(69) IF Morava, a.s.	(144) DKF, holding, a.s.
(70) MOTO FOND, akciová společnost, IF	(145) Rozvojový turistický fond, a.s.
(71) AAA kapitálová IS České pojišťovny, PF	(146) IF SEVERNÍ ČECHY, a.s.
(72) IS podnikatelů, a.s. – podnikatelský tržní PF	(147) První strojírenský IPF
(73) Alpha Effect kapitálová IS České pojišťovny, PF	(148) Český národní IPF, a.s.
(74) Thesaurus kapitálová IS České pojišťovny, PF	(149) IF Credit, a.s.
(75) IKS KB PLUS Investiční kapitálové společnosti KB, spol. s. r. o., PF	

Third, most of the funds fall into the middle category, which we define as fulfilling the criteria of insignificance of the constant, significance of the β_i but lower explanatory power than the role-models. What is, however, most convincing is that the first two groups of funds have the same factual interpretation—the parameters β_i are all close to 1. This follows the assumption from subchapter 4.1, that is, since the IPFs diversify the risks, they should not be significantly riskier than the market. Testing the linear hypothesis $H_0: \beta_i = 1$ reveals that the assumption is correct. The null was rejected for 36 funds, and only 16 of them are in either first or second group. For the remaining 103 funds, we can assume that their parameters β_i could be equal to one, which means that they were not riskier than the whole market. This is a very favourable conclusion since it shows that these funds worked just as they were meant to. It is very unlikely that the individual investors would reach such diversification that would copy the market volatility, as the IPFs did. This was true two-thirds of the funds from our sample. The conclusion is straightforward—the odds that the fund would make the voucher investment safer for an individual investor were high.

Turning to the individual funds, what we are mostly interested in are the funds that were discussed in Chapter 3. These funds are highlighted grey in all tables. As we can see, there is no unifying criterion that would, based on the estimation, place these funds into one category. Interestingly enough, most of them even fulfil the assumptions of the model which means that they were not systematically discounted. Proceeding by the groups of the problematic funds, as were divided in Chapter 3, should thus be more convenient.

As for the funds that were discussed in the context of the C.S. Funds, we can see that they do not belong to one category exclusively, which means that their development differed. However, there are in total five problematic funds in the first, role-model category, and all of these five were involved in the C.S. Funds' case. This is not as counterintuitive as might seem—the variability could be preserved, but with a change in the parameters, which we test for below. From the C.S. Funds' four IPFs, three (numbers 123–125) were preserved in our sample after the elimination of the non-traded funds. All of these were the first-wave attendees, and the results support what we have already seen in subchapter 3.2.1; they did not differ one from another. The similarity between the C.S. Funds and the remaining funds is not rejected either. That is, the C.S. Funds' IPFs followed the variability of the whole market. One of the funds, however, shows significant constant term in negative, which indicates systematic discounts. The other two funds were neither at the discount nor premium. However, fund number 123 shows that the constant term is significant on 10 per cent level ($p\text{-value} = 0.064$) which might indicate discounts as well. These conclusions are unsurprising since we have seen in Figure 3.2 that the funds recorded an obvious downfall. Moreover, after the prices fell, they never restored, and we should thus expect structural breaks. The other three funds established by the C.S. Fund, a.s., that are included in the sample, are the three mutual funds (numbers 104–106). These three were the second-wave attendees. Again, there are no violations from the model's expectation. This is confusing to a degree, but taking into account the curves of the prices which were depicted in Figure 3.2 can partly explain the reason. That is, the prices of the mutual funds fell as soon as they were introduced on the market and they merely had no room for a further plunge.

The similarity among the funds established by the C.S. Funds, a.s., is not trackable for the other entities that were related to the C.S. Funds. What is almost surprising is that one fund, namely the mutual fund AGB (number 88), is among the highest ranked. Recall that this was the mutual fund established by A-INVEST, a.s., the investment company under the control of Agrobanka Praha, a.s. The disadvantageous deals the investment company made on the fund's account were even revealed in the audit. Nevertheless, they were not mirrored in the prices of the fund. Therefore, as we argued in subchapter 3.2.2, the fund, perhaps, reliably redeemed its shareholders which resulted in its shares being traded for prices resembling the market. Nevertheless, as we can see, the Agrobanka's IPFs, i.e. the AGB, investiční fond I, a.s. (number 49) and AGB, investiční fond II, a.s. (number 55), differed in the

significance of their constant terms—that is, the AGB, investiční fond II, a.s. is the one that was put under the forced administration and thus taken from the administration by A-INVEST, a.s. The other one, however, successfully changed its legal form and escaped the legislation. This fund's risk premia were in each time lower than the systematic risks would predict, as the constant term shows. This does not mean that the risks were lower; the parameter β_i is close to 1 and is significant. What it means, in fact, is that the fund was systematically discounted. Such conclusion is fully in line with the expectation based on what we discussed in subchapter 3.2.2; the fund's connection to the Motoinvest, a.s. was mirrored in the fund's price.

Moving to the remaining entities involved in the C.S. Funds' case, the two Creditanstalt funds (numbers 11 and 52), the YSE 2, a.s. (number 135), and the Rentia, a.s. (number 141) are all among the IPFs that follow the volatility of market returns. The comparison between the Creditanstalt funds shows, however, that the Creditanstalt – druhý privatizační, a.s. has a lower R-squared. This is in line with what we have seen in Figure 3.4, that is, there were obvious changes in the fund's price that did not follow the market index. The same conclusion applies to the YSE 2, a.s.—there was a slump in its stock prices with the beginning in January 1996 (see Figure 3.5) which followed the take-over by Motoinvest, a.s. Again, this should be revealed using structural break tests. Lastly, the results for IPF Rentia, a.s. show what we expected from based on the funds' prices; there are no visible breaks or changes. The only problematic aspect of the funds was, however, the presence of Motoinvest, a.s., and the fund's conversion into a holding company. We did not find any evidence of tunnelling, and the results do not show violations from the market returns either.

Next group of problematic funds is constituted of two entities. The VIF Trend, a.s. (number 44), and the fund Mercia, a.s. (number 68). We can see that the fund Mercia, a.s. violates the model's presumptions, which is not surprising since, as we have seen, the fund was not traded between 1996 and 1998. The VIF Trend, a.s., on the other hand, meets the model's expectations. As was shown in Figure 3.6, the fund's prices did not violate wildly, and such results, therefore, do not contradict what was expected.

On the other hand, there were funds we identified as problematic, and that show the problematic behaviour in the data as well. What is revealed is that, as we showed in subchapter 3.4, the Harvard Funds' IPFs (numbers 18–20, and 128) more or less followed the market, but they also recorded visible changes. This is certainly the reason why they fell into the middle category—the pattern corresponded the market, but the drops accounted for large error terms which resulted in low R-squared. However, all the Harvard Funds' mutual funds (numbers 95–102) cannot be explained by the model, and, moreover, were systematically discounted. This corresponds to the opaque situation in the HC&C; the prices, surely, reflected the uncertainty that emerged from the situation around the investment company. Thus, the Harvard Funds' mutual funds, because they did not meet the model's expectation, behaved just as we expected. Perhaps, as we mentioned in subchapter 3.4, this was the reason why the Harvard Funds are generally considered as the “typical case of tunnelling.” The development of the Harvard Funds case was opaque and, with regard to the Cyprus-based company ownership, irregular.

Overall, what we have seen is that the funds that were tunnelled were not unambiguously revealed problematic in the basic specification of the model. Surprisingly, the C.S. Funds—the most serious case of tunnelling—were in the basic specification not perceived much differently than neither other funds nor the whole market. Their significant constants, however, hint that they were possibly discounted which we test for below. Contrary to that, the Harvard Funds' returns differed so much that they are not at all suitable for modelling with the CAPM. There were, as we can see, more funds whose results indicate that the model does not fit the data. We found no documents, such as audit reports, that would indicate tunnelling for these funds, and no evidence of forced administration. The eventual transformation of the funds does not explain the results, either, since some were transformed, and some

were not. This is not surprising because as we argued previously, the Czech capital market was far from standard. Overall, however, the results show that in the last group that violated the hypotheses, 11 out of 30 funds were discussed as problematic in Chapter 3. This is a significantly larger share than for the two other groups. Therefore, the funds that were problematic fulfil the model's assumptions less likely. It also proves that a majority of the funds were simply influenced by the market conditions.

Before testing for the structural breaks, we test the hypotheses raised by the second step of the CAPM model in line with the formula (4). Obviously, we perform the tests only for the 119 funds that fell into the first and the second category. That is, for the funds that fulfilled the criteria so far. The results are presented in Table 4.4.

TABLE 4.4 REGRESSION OF AGGREGATED RETURNS ON BETAS—RESULTS

	dependent variable – aggregated returns of IPFs
Constant	-1.158 (0.795)
γ_1	-2.466*** (0.822)
Number of observations	119
Adjusted R-squared	0.063
Residual standard error	0.384 (df = 117)
F-Statistic	8.999*** (df = 1; 117)
<i>Note: *p<0.1; **p<0.05; ***p<0.01 (standard error)</i>	

Source: author's calculation

As we can see, the results correspond to the expectations of the model that we described in subchapter 4.1. That is, the constant is not statistically significant but the parameter γ_1 is. What slightly violates the expectation, however, is the value of the parameter γ_1 . The model says that it should be equal to the aggregated market return; the value of the aggregated market return was between -3.4 and -3.9 per cent, depending on the period in which the particular fund was traded. The aggregated market returns obviously show that the shares' values declined in general, which made the earnings decline as well. These were not only the earnings of the individual shares but also those of the funds. The results imply that the model predicts larger returns than, based on the CAPM theory, should be true. That is, the model predicts that the decreases were steadier. Since the modelling is based on real data, we can, again, see that the funds, perhaps, made the investments safer. That supports our conclusion from above where we saw that the funds diversified the risks to well that the specific risk diminished. The results are clear, nevertheless, since the model's R-squared is very low. There are thus omitted variables, such as the variability of residuals of each model, which is suggested by Fama and MacBeth (1973), or Gibbons (1982). In fact, testing for these revealed that they are statistically significant, and the adjusted R-squared grew to 0.2. It means that what the IPFs returns were primarily influenced by was their own variability. We do not present the results here for two reasons. First, the marginal influence is very weak since the value of the parameter for the variability is 0.0007, while the variance is around 5 for most of them. And second, the second-step testing is not as important from our point of view since it does not shed any light on the individual funds' performance; it is rather testing for the CAPM validity. Therefore, we now turn our attention to testing the structural breaks.

4.4.2 STRUCTURAL BREAKS IN VOLATILITY

As the last step, we test for the structural breaks in the data. The breaks were identified with the standard Chow test. We did not provide the dates to test whether or not they are the breaks. Instead, we looped the tests over the data, got the F-statistics for each possible break, and took the largest value of the F-statistics as the estimation of the break. The tests were applied to the middle 60 per cent of each fund's observations to ensure there would be enough data for the regressions on each tail. This approach is better since there could be more breaks but less significant. What we are interested in is the most serious break in the data, that is, what was perceived the most strikingly. Moreover, most funds were not tunnelled, and for these, we only have the dates of their conversion as the indication of the possible

problem. Leaving the decision of whether or not the break occurred up to the model helps us find the breaks without restrictive assumptions. As for the match between the dates of conversion (in Appendix D), and the identified dates of breaks, we highlighted the dates dark grey. We allowed for slight discrepancy since the reaction did not have to occur immediately. Obviously, the conversions did not provoke such reaction that would be identified as a break in the data. Most of the dates for the structural breaks were identified for years 1997 and 1998. This is interesting because, in these years, the problems revealed and were widely discussed. Recall that in 1997, the C.S. Funds were tunnelled; the A-INVEST, a.s., Agrobanka Praha, a.s., Creditanstalt druhý privatizační, a.s., and VIF Trend, a.s. were under the forced administration; and the Harvard Funds faultily invested in Russian and Azerbaijani privatisations. All of these phenomena were widely discussed and reported in the newspaper. And later, in 1998, the law amendment that prohibited the funds to exercise their voting rights in the funds was effective. In fact, what the law did was that it made the collective investments safer. The identified breaks were used to create the dummy variable d used in the formulas (5) and (6). That is, we use two different equations for the structural break's effect estimation as we mentioned in subchapter 4.3. We now turn to the results for each specification to see the estimated effects of the breaks.

In the first structural break testing, the equation (5) is followed. It suggests that the structural break is in parameter β_i . Thus, the parameter δ_i for the structural break is an addition to the measurement of the risk premium. It tells us how much, and if, the specific risk premium changed after the indicated break. The results for this specification are in Table 4.5. We report only the funds for which the parameters δ_i were statistically significant. We can see two things here. First, significant structural breaks in parameters β_i were identified for most of the funds. And second, most of the parameters δ_i are negative, which in fact means that the parameters β_i got lower after the breaks.

Reduction of the specific risk points to the successful restrictive measures. That is, since some funds were put under the forced administration, and the overall environment tightened and was supervised closely, the faith in the remaining funds might rise. This conclusion is confirmed with the problematic funds' development; significant changes in β_i are recorded for the C.S. Funds' IPFs (numbers 123–125)—these funds unambiguously were riskier which was, for two of them, revealed with positive values of parameters δ_i . The mutual funds administered by the C.S. Funds (numbers 104–106), however, do not follow the same pattern. We can see that they, similarly to the majority of the funds in the table, i.e. their β_i decreased. There is, however, a very straightforward explanation for it. Since the IPFs converted into holding companies, they escaped the stricter rules including the change to be put under the forced administration. This is not true for the mutual funds. Since the investment company C.S. Fond, a.s. was put under the forced administration on 21st March 1997, and as we can see, the structural breaks in the data were identified some three months after that. Clearly, the mutual funds were perceived to be safer than previously.

As for the funds administered by A-INVEST, a.s. (numbers 49, 55, and 88) the model identified a significant break in the volatility for all three of them. All were significant, and all occurred between May and July 1998, i.e. within the same time period. Moreover, as we can see, they all indicated a decrease in volatility. This could be explained by several factors—first, the above-mentioned perception of a safer environment after the amendments in the legislature. Second, the ongoing forced administration in Agrobanka Praha, a.s. And third, the more transparent situation in C.S. Funds in 1998.

The remaining funds from the C.S. Funds' case are the two Creditanstalt funds (11 and 52), the YSE 2, a.s. (135), and Rentia, a.s. (141). As we can see, the Creditanstalt funds did not record a statistically significant change in volatility. Therefore, they did not differ from the overall market situation. In subchapter 3.2.2, we mentioned that these funds were originally established by a Czech branch of an Austrian-based bank, and were later taken over by the Motoinvest, a.s. Therefore, what happened was that the funds were incorporated into the Czech environment so that they did not differ

from it. In other words, if they had remained under the Creditanstalt's administration, they could have outperformed the market which would be observable in the data. The situation was different, however, and the funds were perceived similar to the other IPFs.

TABLE 4.5 ESTIMATION OF THE STRUCTURAL BREAKS, ADDITION TO PARAMETERS β

IPF	α_i	β_i	δ_i	break date	adj. R ²	IPF	α_i	β_i	δ_i	break date	adj. R ²
(1)	-0.195	0.978***	-0.296***	30/10/1998	0.518	(78)	-0.623**	0.724***	0.243***	09/04/1997	0.666
(2)	-0.122	0.997***	-0.248***	01/12/1998	0.605	(79)	-0.190	0.992***	-0.178***	02/02/1998	0.666
(3)	-0.073	1.004***	-0.223***	01/12/1998	0.529	(80)	-0.110	0.989***	-0.295***	21/12/1998	0.676
(4)	0.138	1.292***	-0.335***	25/07/1996	0.423	(81)	-0.134	0.981***	-0.298***	05/01/1999	0.609
(5)	-1.231***	0.943***	-0.508***	24/06/1997	0.286	(82)	-0.393*	0.960***	-0.232***	16/06/1998	0.541
(6)	-0.084	0.921***	-0.406***	13/06/1997	0.047	(83)	-0.601**	0.945***	-0.280***	29/09/1997	0.405
(8)	-0.336*	0.947***	-0.217***	03/06/1997	0.425	(84)	-0.314	0.964***	-0.279***	07/08/1998	0.576
(9)	-0.131	0.962***	-0.126**	28/11/1997	0.488	(85)	-0.425*	0.972***	-0.208***	13/06/1997	0.290
(13)	-2.646***	-0.011	0.263**	15/02/1996	0.009	(87)	-0.610	0.918***	-0.290***	30/05/1997	0.126
(14)	-0.378**	0.948***	-0.197***	24/06/1997	0.415	(88)	-0.351**	0.959***	-0.246***	29/05/1998	0.754
(15)	-4.281***	-0.721*	0.480***	06/05/1996	0.012	(89)	-0.867***	0.913***	-0.358***	24/06/1997	0.333
(16)	-0.165	0.963***	-0.278***	23/12/1998	0.814	(93)	0.263	1.468***	-0.543***	10/10/1996	0.287
(17)	-0.191	0.963***	-0.227***	08/04/1998	0.403	(94)	0.459	1.297***	-0.319**	03/04/1997	0.357
(20)	-0.312	0.990***	-0.269***	16/06/1997	0.385	(95)	-2.668**	0.462	-0.431**	24/05/1996	0.010
(21)	-0.429**	0.951***	-0.263***	30/06/1997	0.334	(96)	-1.379	0.998***	-0.610***	24/05/1996	0.041
(22)	-2.103***	0.499***	-0.721***	25/01/1999	0.137	(97)	-2.315*	0.618	-0.510**	17/05/1996	0.013
(23)	-0.384	0.747***	0.219**	12/06/1996	0.597	(98)	-1.446	0.896**	-0.508***	30/05/1996	0.016
(24)	0.234	1.099***	-0.228***	15/04/1998	0.604	(99)	-3.113**	0.541	-0.701***	27/05/1996	0.037
(25)	-0.132	0.986***	-0.191***	14/07/1998	0.723	(100)	-2.715**	0.562	-0.561***	27/05/1996	0.029
(26)	-0.073	1.001***	-0.131***	06/01/1998	0.677	(101)	-1.259	0.955*	-0.542***	16/05/1996	0.014
(27)	-0.057	0.887***	0.131**	22/01/1996	0.746	(102)	-0.316	1.420***	-0.781***	10/06/1996	0.042
(28)	-0.102	1.013***	-0.128***	30/05/1997	0.780	(103)	0.240	1.559***	-0.633***	12/11/1996	0.462
(29)	-1.887***	0.227	0.120**	11/05/1995	0.019	(104)	-0.817**	0.962***	-0.345***	24/06/1997	0.228
(30)	-0.061	0.989***	-0.205***	20/11/1998	0.390	(105)	-0.799**	1.008***	-0.357***	13/06/1997	0.389
(32)	-1.181	1.917**	-1.586***	25/08/1995	0.087	(106)	-0.809**	1.006***	-0.376***	16/06/1997	0.449
(34)	-0.112	0.974***	-0.241***	29/12/1998	0.793	(107)	-0.431**	0.966***	-0.389***	02/12/1998	0.509
(36)	-0.471***	0.941***	-0.249**	01/10/1998	0.467	(109)	-0.242	0.980***	-0.159**	31/10/1997	0.561
(38)	-0.346*	0.928***	-0.198**	22/10/1997	0.303	(111)	-0.487***	0.936***	-0.278***	05/08/1998	0.792
(39)	-0.285	0.936***	-0.158***	25/07/1997	0.425	(113)	-0.295	0.960***	-0.296**	08/06/1998	0.287
(40)	-0.250	0.970***	-0.425***	31/07/1998	0.388	(114)	-0.702*	1.166***	-0.538**	27/11/1997	0.299
(42)	-0.122	0.959***	-0.147**	29/12/1998	0.546	(115)	-3.243**	1.207***	-1.136***	20/03/1998	0.120
(47)	-0.220	0.948***	-0.266***	06/11/1998	0.525	(116)	-0.737***	0.932***	-0.310***	27/06/1997	0.424
(48)	-1.345***	0.738***	-0.491***	01/12/1998	0.131	(118)	-0.322	0.942***	-0.441**	19/08/1998	0.445
(49)	-0.739***	0.950***	-0.308***	03/07/1998	0.221	(119)	-0.323***	0.970***	-0.247***	19/08/1998	0.699
(51)	-0.405**	0.984***	-0.210***	09/06/1997	0.588	(121)	-0.259**	0.952***	-0.223***	03/07/1998	0.618
(53)	-0.239	0.965***	-0.336***	23/12/1998	0.753	(123)	-0.206	0.959***	0.912**	19/12/1997	0.064
(54)	-0.386**	0.951***	-0.178***	03/07/1997	0.511	(124)	0.096	0.928***	1.265***	10/03/1998	0.065
(55)	-0.838***	0.893***	-0.552***	11/06/1998	0.327	(125)	-0.203	1.096***	-0.338***	11/08/1997	0.451
(56)	-0.169	0.969***	-0.272***	13/01/1999	0.709	(127)	-0.334*	0.928***	-0.428***	16/11/1998	0.506
(57)	-0.087	0.977***	-0.192***	05/10/1998	0.824	(128)	-0.493***	0.977***	-0.226**	03/07/1997	0.345
(58)	-0.034	0.991***	-0.075***	23/01/1998	0.866	(129)	-0.493**	0.936***	-0.259***	09/07/1997	0.382
(59)	-0.961***	0.941***	-0.367***	29/08/1997	0.257	(130)	-0.802***	0.952***	-0.354***	31/07/1997	0.316
(60)	0.186	1.209***	-0.335***	27/05/1997	0.327	(132)	-0.204	0.927***	-0.391***	02/12/1998	0.488
(61)	-0.967***	0.932***	-0.349***	19/09/1997	0.317	(133)	-0.385**	0.938***	-0.522***	11/11/1998	0.736
(65)	-1.446***	0.580***	-0.285**	20/11/1998	0.036	(134)	-0.707***	0.630***	0.229**	11/10/1996	0.337
(66)	-1.128*	1.031***	-0.485***	11/09/1997	0.638	(135)	-0.531**	0.988***	-0.250***	13/08/1997	0.465
(67)	-1.932***	0.418***	-0.477***	30/12/1998	0.036	(137)	-2.985***	0.884***	-0.783***	31/07/1997	0.578
(68)	-2.399**	0.685*	-0.694**	11/11/1997	0.003	(138)	-0.965***	0.846***	-0.318***	24/08/1998	0.065
(69)	-2.676***	0.407***	-0.488***	07/10/1998	0.114	(139)	-0.301*	0.989***	-0.224**	11/06/1997	0.304
(70)	-0.196	1.013***	-0.329***	12/09/1997	0.379	(141)	-0.131	1.054***	-0.446**	25/08/1997	0.036
(71)	-0.203	0.976***	-0.216***	02/07/1998	0.467	(142)	-1.041*	1.015***	-0.688***	17/08/1998	0.079
(72)	0.548**	1.404***	-0.392***	04/11/1996	0.370	(143)	-0.385*	0.990***	-0.403**	22/06/1998	0.495
(73)	-0.301**	0.970***	-0.178***	23/10/1997	0.646	(144)	-0.425***	0.947***	-0.371***	29/06/1998	0.364
(74)	-0.105	0.993***	-0.317***	29/12/1998	0.660	(145)	-0.316	0.967***	-0.378***	07/12/1998	0.411
(75)	-0.128	0.993***	-0.283***	08/01/1999	0.755	(147)	-0.248	0.882***	-0.335**	08/09/1998	0.247
(76)	-0.294	0.982***	-0.131**	04/12/1997	0.623	(149)	-3.708***	-0.083	-0.739**	29/06/1999	0.014
(77)	-0.343*	0.959***	-0.305***	24/06/1998	0.437						

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Source: author's calculation

For the YSE, 2, a.s. and Rentia, a.s., the conclusion is the same as for the majority of the funds—the decline in the parameter β_i was significant, which implies lower volatility, i.e. less risky investments.

Similarly to the Creditanstalt's funds, the prices of VIF Trend, a.s. (number 44) did not significantly change their volatility. This was expectable based on the discussion in subchapter 3.3 which showed that the fund was not tunnelled within days, as was the C.S. Funds' case, but rather within months or years. Therefore, there were no shocks that would lead to a significant break. The results for IPF Mercia, a.s. (number 68) show an interesting conclusion compared to the estimation without the break. That is, the volatility in the period before the break was significant on the 10 per cent level but after the break, the effect was nullified. Therefore, we can see that before the trades were halted (see Figure 3.6), the fund was not too different from the rest of the funds. After the trades' restoration, the fund's returns did not relate to the market.

Lastly, we have results for the Harvard Funds' structural breaks as well (numbers 18–20, 95–102, and 128). As we can see, the mutual funds now correspond to the model's expectations better; even though some of them still show significant constant term, division of the market returns into two periods helped to separate the influence. Moreover, we can see that the mutual funds are unique when it comes to the date of the break; they all recorded the break in May or June 1996. This was not related to conversions since the mutual funds could not convert. The breaks in the mutual funds thus, perhaps, reflected either the situation with the investments into the foreign privatisations. That is, when we discussed the Harvard Funds' in the subchapter 3.4, we mentioned that the IPFs converted into the holding companies in June 1996. However, the break for the IPFs did not occur when they transformed, but around the time when they merged into one large holding company HPH in 1997. Again, the conversions might have been questionable but not the most serious issues to be mirrored in the prices.

Overall, we have seen that only the tunnelling of the C.S. Funds was followed with the structural break that indicated larger risks. This is, nevertheless, an interesting and, in fact, favourable conclusion. Recall that Chapter 3 showed that the C.S. Funds were the most serious case of tunnelling and that they could be called the typical case of tunnelling. Therefore, were there more of such cases, we should expect similarities in the data, i.e. riskier returns, just as we have seen them for the C.S. Funds. Nevertheless, these do not prove—what the data show is the opposite. To complete the image, we test for the significance of the structural breaks in parameter for the constant term instead of the risk premia in the next section. The final conclusion of the testing is in subchapter 4.5 below.

4.4.3 STRUCTURAL BREAKS IN LEVELS

In this subchapter, we briefly discuss the occurrence of structural breaks in the constant term. We use the same breaks that we identified above. In fact, what the variable for the breaks is usually used for is the specification we follow in this chapter, and which is described with the formula (6). That is, the dummy variable we added to the model is equal to zero before the break, and to one after the break. The specification implies a break in the constant term, i.e. an adjustment in the parameter α_i . The results are provided in Table 4.6.

The results show very interesting conclusions. First, the testing revealed that the structural breaks were not necessarily in the variables β_i , but could be in the constant terms, too. The parameters for which the break occurs are not, however, the result that is worth attention the most. What is more interesting is that the volatility tests showed that the risks were lower, and the tests about the change in the levels show that these are higher. Therefore, the overall conclusions are, indeed, that the IPFs represented a safer investment after the breaks. Nevertheless, this is again different for the C.S. Funds; their constant terms significantly plummeted after the break. No other fund shows similar patterns. The structural breaks, therefore, support our claims from Chapter 3 that the C.S. Funds were exceptionally problematic.

And they also support our claims that the tunnelling was not symptomatic phenomenon in the privatisation.

TABLE 4.6 ESTIMATION OF THE STRUCTURAL BREAKS, ADDITION TO PARAMETERS α

IPF	α_i	δ_i	β_i	break date	adj. R ²	IPF	α_i	δ_i	β_i	break date	adj. R ²
(1)	-0.060	0.136***	0.983***	30/10/1998	0.515	(78)	0.093**	-0.327***	0.976***	09/04/1997	0.664
(2)	0.015	0.002***	1.005***	01/12/1998	0.603	(79)	-0.052	0.133***	0.988***	02/02/1998	0.662
(3)	0.079	-0.079***	1.014***	01/12/1998	0.527	(80)	0.021	0.070***	0.996***	21/12/1998	0.673
(4)	-0.966	1.143***	0.960***	25/07/1996	0.424	(81)	-0.003	0.067***	0.988***	05/01/1999	0.606
(5)	-1.008***	1.039***	0.908***	24/06/1997	0.274	(82)	-0.249*	0.140***	0.959***	16/06/1998	0.537
(6)	0.201	0.570***	0.893***	13/06/1997	0.045	(83)	-0.496**	0.573***	0.931***	29/09/1997	0.400
(8)	-0.120*	0.169***	0.928***	03/06/1997	0.418	(84)	-0.162	0.173***	0.964***	07/08/1998	0.571
(9)	0.045	-0.056**	0.960***	28/11/1997	0.487	(85)	-0.315*	0.349***	0.956***	13/06/1997	0.287
(13)	-2.166***	-0.855**	0.141	15/02/1996	0.010	(87)	-0.542	0.585***	0.879***	30/05/1997	0.123
(14)	-0.172**	0.143***	0.939***	24/06/1997	0.410	(88)	-0.216**	0.207***	0.956***	29/05/1998	0.747
(15)	-3.473***	-1.447***	-0.445*	06/05/1996	0.010	(89)	-0.654***	0.764***	0.900***	24/06/1997	0.324
(16)	-0.063	0.114***	0.969***	23/12/1998	0.811	(93)	-1.342	1.585***	0.927***	10/10/1996	0.285
(17)	-0.145	0.387***	0.953***	08/04/1998	0.400	(94)	-0.738	1.408***	0.988***	03/04/1997	0.362
(20)	-0.306	0.934***	0.983***	16/06/1997	0.383	(95)	-3.717**	1.474**	0.141	24/05/1996	0.013
(21)	-0.389**	0.578***	0.932***	30/06/1997	0.330	(96)	-2.873	1.852***	0.492***	24/05/1996	0.040
(22)	-3.757***	2.388***	0.101***	25/01/1999	0.154	(97)	-3.563*	1.458**	0.175	17/05/1996	0.010
(23)	0.217	-0.514*	0.967***	12/06/1996	0.595	(98)	-2.678	1.799***	0.531**	30/05/1996	0.023
(24)	0.399	0.109***	1.095***	15/04/1998	0.599	(99)	-4.836**	1.985***	-0.072	27/05/1996	0.032
(25)	-0.005	0.056***	0.986***	14/07/1998	0.719	(100)	-4.085**	1.825***	0.122	27/05/1996	0.033
(26)	0.069	0.011***	0.999***	06/01/1998	0.675	(101)	-2.585	1.624***	0.501*	16/05/1996	0.013
(27)	0.310	-0.347**	1.018***	22/01/1996	0.745	(102)	-2.047	2.274***	0.809***	10/06/1996	0.036
(28)	-0.029	0.168***	0.997***	30/05/1997	0.777	(103)	-1.999	2.318***	0.932***	12/11/1996	0.466
(29)	-1.665***	-0.391**	0.292	11/05/1995	0.020	(104)	-0.812**	0.859***	0.936***	24/06/1997	0.225
(30)	0.031	0.066***	0.993***	20/11/1998	0.389	(105)	-0.848**	0.963***	0.977***	13/06/1997	0.383
(32)	-4.910	4.205***	0.514*	25/08/1995	0.071	(106)	-0.775***	0.898***	0.977***	16/06/1997	0.441
(34)	-0.025	0.099***	0.979***	29/12/1998	0.791	(107)	-0.188**	0.023***	0.979***	02/12/1998	0.504
(36)	-0.363***	0.150**	0.944***	01/10/1998	0.465	(109)	-0.050	0.077**	0.978***	31/10/1997	0.558
(38)	-0.199*	0.185**	0.920***	22/10/1997	0.300	(111)	-0.309***	0.170***	0.937***	05/08/1998	0.784
(39)	-0.017	-0.077***	0.933***	25/07/1997	0.422	(113)	0.131	-0.016**	0.965***	08/06/1998	0.284
(40)	-0.138	0.530***	0.962***	31/07/1998	0.380	(114)	-1.241*	1.072**	0.869***	27/11/1997	0.243
(42)	-0.045	0.002**	0.964***	29/12/1998	0.545	(115)	-6.455**	3.926***	0.255***	20/03/1998	0.098
(47)	-0.084	0.056***	0.955***	06/11/1998	0.522	(116)	-0.573***	0.488***	0.913***	27/06/1997	0.414
(48)	-2.558***	1.622***	0.444**	01/12/1998	0.131	(118)	-0.165	0.417**	0.938***	19/08/1998	0.435
(49)	-0.664***	0.435***	0.941***	03/07/1998	0.219	(119)	-0.191**	0.262***	0.971***	19/08/1998	0.695
(51)	-0.281**	0.336***	0.966***	09/06/1997	0.582	(121)	-0.167**	0.212***	0.948***	03/07/1998	0.614
(53)	-0.127	0.206***	0.970***	23/12/1998	0.748	(123)	0.159	-4.466**	0.983***	19/12/1997	0.068
(54)	-0.268**	0.235***	0.941***	03/07/1997	0.507	(124)	0.328	-5.355***	0.953***	10/03/1998	0.068
(55)	-0.783***	1.022***	0.872***	11/06/1998	0.315	(125)	-0.172	1.060***	1.085***	11/08/1997	0.447
(56)	-0.046	0.061***	0.976***	13/01/1999	0.706	(127)	-0.235*	0.456***	0.929***	16/11/1998	0.500
(57)	0.023	0.054***	0.982***	05/10/1998	0.822	(128)	-0.363***	0.335**	0.963***	03/07/1997	0.341
(58)	0.068	-0.028***	0.991***	23/01/1998	0.865	(129)	-0.414**	0.500***	0.919***	09/07/1997	0.377
(59)	-0.960***	0.908***	0.913***	29/08/1997	0.252	(130)	-0.793***	0.843***	0.926***	31/07/1997	0.309
(60)	-0.241	0.863***	1.040***	27/05/1997	0.315	(132)	-0.058	0.195***	0.935***	02/12/1998	0.483
(61)	-0.914***	0.733***	0.909***	19/09/1997	0.310	(133)	-0.199**	0.565***	0.941***	11/11/1998	0.725
(65)	-1.842***	0.791**	0.478***	20/11/1998	0.035	(134)	-0.098***	-0.563**	0.858***	11/10/1996	0.336
(66)	-1.145*	1.614***	1.010***	11/09/1997	0.630	(135)	-0.447**	0.648***	0.980***	13/08/1997	0.461
(67)	-2.753***	1.389***	0.214***	30/12/1998	0.036	(137)	-3.367***	3.301***	0.861***	31/07/1997	0.575
(68)	-4.151**	1.871**	0.056*	11/11/1997	0.001	(138)	-1.537***	0.836***	0.674***	24/08/1998	0.061
(69)	-4.247***	2.158***	0.081***	07/10/1998	0.143	(139)	-0.259*	0.480**	0.970***	11/06/1997	0.301
(70)	-0.027	0.503***	0.996***	12/09/1997	0.371	(141)	-0.305	1.384**	1.015***	25/08/1997	0.036
(71)	-0.076	0.136***	0.975***	02/07/1998	0.464	(142)	-3.111*	2.504***	0.501***	17/08/1998	0.077
(72)	-0.673**	1.244***	1.015***	04/11/1996	0.370	(143)	-0.326*	0.697***	0.975***	22/06/1998	0.487
(73)	-0.162**	0.174***	0.962***	23/10/1997	0.642	(144)	-0.302**	0.442***	0.939***	29/06/1998	0.357
(74)	0.034	0.078***	1.001***	29/12/1998	0.656	(145)	-0.188	0.244***	0.972***	07/12/1998	0.408
(75)	0.004	0.026***	1.001***	08/01/1999	0.751	(147)	-0.154	0.367***	0.881***	08/09/1998	0.244
(76)	-0.108	-0.048**	0.981***	04/12/1997	0.620	(149)	-6.124***	2.824**	-0.824	29/06/1999	0.047
(77)	-0.192*	0.254***	0.955***	24/06/1998	0.431						

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Source: author's calculation

4.5 OVERVIEW

The final chapter was devoted to the measurement of the privatisation funds' performance. Our approach was simple but sufficient to provide empirical support to what we have seen in the previous chapters. To sum up, what was tested was the validity of the CAPM model, which in return gave us a notion of the exceptions from the CAPM expectations. Despite the model is simple, it is a standard method of pricing the capital assets which intuition is sufficient to grasp the situation at the capital market.

Specifically, we tested the relationship between the whole market returns and the returns of individual IPFs. The returns are, in addition, adjusted for the opportunity cost measured by a riskless asset; in our case, the interbank interest rate. Therefore, the variables that enter the regression are defined as market premium, and risk premium, respectively. The theory says that the relationship between these two should be linear and that the investment risk is divisible into two separate risks. The first is the systematic risk, and the second is the specific risk. Systematic risk is present in the whole market and is included in the market premium over the riskless asset. Specific risk is the asset's own, but the key point is that it is linear to the systematic risk. Linearity in the relationship is measured by the slope in the regression of the risk premium on the market premium. The assumption is that the linear combination of the two risks is sufficient to explain the returns of the investment asset. We assumed that, since the investment funds' assets were portfolios of shares present at the market, the funds diversified the specific risks which, in turn, mitigated. The expectation was that the slope in the regression was equal to one, i.e. that the specific risk was, due to the diversification, equal to the market risk.

Testing the CAPM theory on the sample of 149 individual funds showed that for most of the funds, the theory provides a good explanation of what was the issue at the Czech capital market of investment funds in the 1990s. We saw that for the majority of the funds in our sample, the assumptions hold. The slope was not significantly different from one, which bears witness to our claim that the returns of a majority of the funds were driven by the systematic risks, i.e. by the environment at the Czech capital market. What the funds did, well in line with what is standardly expected from the collective investment, was that they diversified the risks of individual investments. We have also seen that for most of the funds, the changes of the legislature, and the overall environment at the market, resulted in structural changes that were favourable. The volatility of the funds' prices lowered, i.e. the risks lowered, and their constant terms rose, i.e. the discounts were smaller. Generally speaking, the privatisation funds were subjects to the situation at the market since what they were composed of was nothing else but the shares that were traded at the market.

Deviations from the assumptions were expected mostly in the funds that were identified as problematic in the previous chapters. This was unambiguously proved for two C.S. Funds, which were, oppositely to the rest of the funds, more volatile and heavily discounted after the identified structural breaks. The C.S. Funds, as Chapter 3 revealed, were the most problematic case; two of them were problematic enough to show opposite patterns in the data than the rest of the sample. The two IPFs, originally administered by A-INVEST, a.s. also indicate that the administration by Motoinvest, a.s. was problematic. Specifically, it resulted in significant discounts of the one fund that was taken over by the Motoinvest, a.s. As for the remaining cases, i.e. the VIF Trend and the Harvard Funds, they were ambiguous. The VIF Trend, despite it was provably tunnelled, did not show the proof as the C.S. Funds do. This was, perhaps, due to the fact that the VIF Trend was not as large, and also due to the fact that it was not a one-time act. The Harvard Funds, on the other hand, were not tunnelled in the sense which the term is understood in this text. As we have seen in subchapter 3.4, the Harvard Funds recorded many problems which, however, were not a fraud. Despite, they were perceived negatively by the market.

On the whole, the empirical results support the claim we developed in the previous chapters. The tunnelling was not a symptomatic phenomenon of the privatisation. The IPFs were influenced by the market which was peculiar because unmaturing. Tunnelling was an exception, not a rule.

CONCLUSION

Investment privatisation funds in the voucher privatisation were unique entities in a unique experiment. The voucher privatisation had, in general, two aims. Its purpose was to change the ownership of a substantial part of the state-owned enterprises, and the change was to proceed quickly. The nontrivial task was seasoned by the fact that there was no experience and thus no inspiration to such transfer and its set up. Hence, many particularities were to be decided on the run. One of these was the allowance for the investment privatisation funds. If we are to decide whether the investment privatisation funds were beneficial or harmful for the privatisation, the answer is that they were beneficial—simply because they were not as harmful as is believed. Luckily, neither the question nor the answer is black and white; it has many shades of grey, and here we give an overall conclusion based on what we learned in the previous chapters.

The aim of this thesis was to find out how the funds performed after the privatisation, and why. We sought to answer the ultimate question of whether the funds were a failure. We walked the journey from the idea of the privatisation funds' involvement in the privatisation, through the privatisation's two waves and the funds' role in them, to the third wave where their role was enhanced. Then we turned our attention to the individual funds whose names were accented in the discussion about the tunnelling of the investment privatisation funds. The last step was econometric modelling that revealed that the funds, in most cases, met the expectations with which they were introduced into the privatisation. The main conclusion that summarised what we revealed on the way is that after the privatisation, the IPFs did not perform worse than the market. As for the funds' opportunities, each fund concentrated more property than any individual holder of investment vouchers could, which resulted in the funds being tempted to abuse their power. An absolute majority of the fund did not do it. What we revealed was that the tunnelling was not a phenomenon that would be symptomatic for the privatisation funds. Therefore, the conclusion is that despite the general belief that "all funds were tunnelled," they were not. Thus, the privatisation funds were not a failure in this sense.

A number of articles and studies that either supported or opposed the presence of the investment funds in the voucher privatisation. The fact is that most of the studies dealt with the requirements the funds were to meet *in* the privatisation, but not *after* it. The role of the funds during the two waves is clear and, as we are sure, rather positive; positive because their service was demanded. The funds brought two aspects into the privatisation. One is such that they widened the spectrum of options for the holders of investment vouchers from "full attendance or no attendance" to "full attendance, no attendance, or attendance through an intermediary." The demand for the service was strong—the funds obtained two-thirds of the vouchers. The very decision to let the funds join the privatisation was thus positive from the attendants' point of view. On the other hand, there is another aspect the funds brought. They were not necessary for the privatisation; it could very well proceed as it was originally designed, that is, without a single fund. Apparently, the easier the process, the better for its organisation. Therefore, from the organisers' point of view, the funds were not as beneficial. We argue that the funds did not promote the voucher privatisation, but surely lured some people. As a result, the demand for vouchers exceeded the supply and the vouchers needed to be re-stocked. This means that there were more attendants than was planned, i.e. than was optimal. Obviously, each holder of investment vouchers obtained a lesser amount of property than was initially planned. From the organisers' point of view, the allowance for the funds might not be as positive. Overall, however, the market forces showed that the willingness to establish the sector was strong. Since the aim of the transformation was to change the socialist economy into a market one, letting the market forces do their job was a good decision. Nobody could anticipate the eventual problems that showed up during the third wave.

During the privatisation itself, the funds did not qualitatively differ from the individual investors. Apart from a few particularities that were, in fact, unfavourable for the funds, the bidding process was identical for both. As Triska (2002) points out, nobody could gain any advantage on others' expense; the system was designed so that there was no useful insider information. Therefore, the funds and the individual investors only differed qualitatively—in the number of vouchers they held. For the bidding process, the presence of the funds was neutral.

Discussion about the third wave brought us to the main aim of the thesis. In fact, were there not for the funds, the third wave would never even gain its name, and would probably not proceed with such pace. The role of the investment funds after the privatisation was, therefore, decisive. As we have seen, what characterised the third wave was the ownership concentration. The core of the problem was that despite the funds and the individual investors were equal in the two waves, they differed immensely in the third wave. We discussed the position of the funds in the companies broadly. What we have seen was that the funds' strong position in the companies was strong not only due to the fact that they collected the vouchers but mainly due to the fact that the individual investors' position was weak. This is nothing unexpected since, in every company, the small shareholders' vote is never decisive alone. In the post-privatisation environment, however, this was unfortunate. Identical ownership structure was present in the funds themselves, too; the funds' founders in the funds' management were the main shareholders. That is, the relative power of the main shareholder was significantly stronger than their absolute power, which led to the situation where the main shareholder could pass any decision. This was their window of opportunity; either for managing the fund well or for the tunnelling. However, the fact that the managers were the main shareholders is sometimes deemed to be *"the only mistake in the privatisation"* (Ježek, 2010), we argue that this is most likely not true. It was one way; the other was to concentrate the individual shareholders' ownership. This alternative way was the dubious one.

As the third wave proceeded, the motivation for the funds to exercise their ownership rights with honesty was weak. At the same time, the legislature got gradually tighter which had an immediate reaction—a wave of funds' conversions into holding companies occurred and was perceived negatively. Moreover, the very fact that the rules were tightened signalled the presence of a behaviour that was to be ceased. The undesirable behaviour was what we called tunnelling throughout the text. This behaviour was undeniably destructive for the whole collective investment sector, and perhaps for the notion of voucher privatisation as such. The line of reasoning we followed was, however, not as reckless. We have seen that the negative attitude to the investment funds was a result of a few rather isolated cases. The problem, in our opinion, lied in the morals and interests of individuals, or in other words, in the heritage of communism. It was not in the collective investments or the voucher privatisation. We must ask ourselves what the outcome would be, in case the funds were never included in the privatisation. Would the individual shareholders of the companies attend the general meetings and exercise their ownership rights? Would the companies' management, up to then working in a socialist economy, instantly adjust to the new environment and start to manage the companies in accordance with the rules of the market economy? As we have argued, the answer to both questions is *not necessarily*. This is the core of the problem. In this sense, Holman writes:

"The 'morals' of the voucher privatisation is often criticised nowadays—some people made a fortune at individual shareholders' expense. This is a popular myth. The voucher privatisation was a lottery, but a very favourable one. People were not required to invest their savings; for 1,000 CZK, they obtained companies' shares worth of 30,000 CZK on average. No lottery would ever make such an offer. Of course, nobody knew what is better, to buy shares of a screw company in North Bohemia or entrust the vouchers to the Harvard Funds. Some won, some lost. The state could not mitigate the risks for all and ensure a profit for every attendant. And every attendant knew that very well" (Holman, 2002, p. 100).

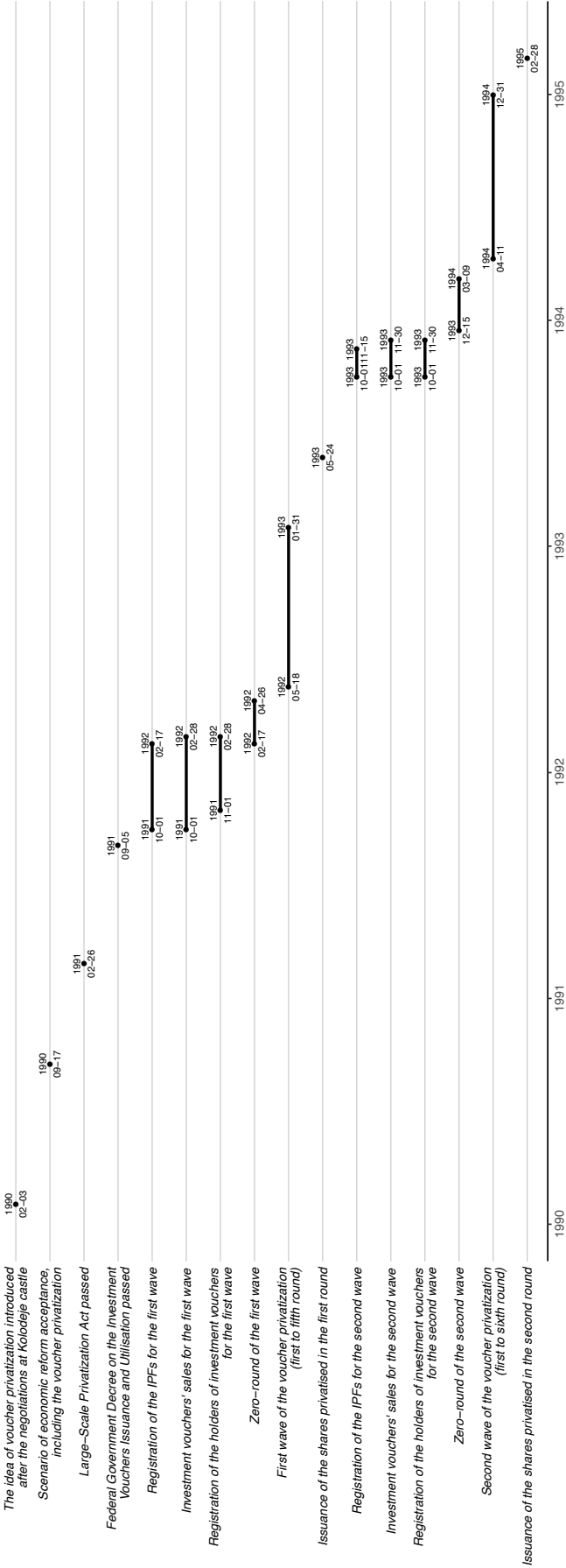
Overall, what is to be criticised are the three proved cases of tunnelling which we discussed. Perhaps, the one case of bad entrepreneurial decision is to be criticised as well; but not for the tunnelling. The results suggest that the (sometimes aggressive) methods led to the notion that the “privatisation was the cause of extensive tunnelling.” We argue that it was not. This is easily provable with two numbers. First, it is the number of defrauded funds relative to the total number of funds. There were 480 Czech funds in total—a sum of the first wave funds adjusted for those that attended both waves, and the second wave funds including those that attended both waves. We found problems in 22 of these funds; recall that not all of them were provably tunnelled, the number is thus, perhaps, on the upper side. That is, only 4.5 per cent of all funds were problematic. And second, it is the sum of money that was provably tunnelled relative to the sum of the value of the property that was offered in the privatisation. The total value of the property sold in the two waves was nominally 360 bil. CZK (the number is adjusted for 90 bil. CSK that was the value of Slovak companies offered in the first wave). The sum of defrauded money is, mainly by Ježek (e.g. 2010) estimated to be 50 bil. CZK. Nevertheless, he never gave a method of the estimation. In the cases we discussed, as far as we know, the sum did not exceed 5 bil. CZK. This is 1.4 per cent of the property sold in the voucher privatisation. Despite the value of the property sold is nominal, and the sum of the defrauded money is, probably, a combination of market and book value, it is obviously much lesser than 50 bil. CZK. Therefore, the conclusion is that the tunnelling was far from extensive; and the privatisation is hardly the cause of it. Recall that the most serious case, the case of C.S. Funds, emerged through concentration of individual shareholders’ shares. Obviously, this is a way into a company which is independent from the presence of investment funds.

The empirical results support our argument. A majority of the funds corresponded to the market. That is, a majority of the funds diversified the risks as much as the risks connected to specific investments were reduced to the risks that were unavoidable for the market as a whole. A significant exception was recorded for the C.S. Funds, which were identified as the main problem not only by the model but throughout the whole text. We argue that the name Motoinvest, a.s. could sufficiently replace the term tunnelling. The investment privatisation funds, in general, were not a failure. So was not the voucher privatisation, which is often accused of making the tunnelling viable.

As Tříška (2016b, p. 116) puts it: *“Only those who did not catch the factual, that is, gigantic scope of the problem can regard the voucher privatisation as unsuccessful.”* Rome was not built in a day.

ACRONYMS

IPF	Investment privatisation fund
NPF	National property fund
SNPF	Slovak National property fund
CSK	Czechoslovak koruna
CZK	Czech koruna
SKK	Slovak koruna
RMS	RM-system
PSE	Prague Stock Exchange
BCPP	Burza cenných papírů Praha (Prague Stock Exchange)
CAPM	Capital asset pricing model



APPENDIX B DISTRIBUTION OF VOUCHERS ALLOCATED TO IPFS, BY FOUNDER⁴⁵

Founder	No. of IPFs	No. of points allocated	Share of points	Cumulative share
<i>first wave</i>				
1 Česká spořitelna	1	950,918,800	15.494	15.494
2 První investiční, a.s. (PIAS)	11	713,837,100	11.631	27.126
3 Harvard Capital and Consulting, a.s.	6	565,170,000	9.209	36.334
4 V+B INVEST, a.s.	1	500,668,100	8.158	44.492
5 IKS KB spol. s.r.o.	1	465,708,300	7.588	52.081
6 Kapitál. Invest. Společnost, a.s. (KIS České pojišťovny)	1	334,234,900	5.446	57.527
7 SLOVENSKÉ INVESTICIE, s.r.o.	1	188,041,300	3.064	60.591
8 Creditanstalt, a.s.	1	138,924,800	2.264	62.854
9 PRVÁ SLOVENSKÁ INVESTIČNÍ, a.s.	11	136,348,000	2.222	65.076
10 Správce prvního privatiz. fondu	4	117,681,800	1.918	66.993
11 Živnostenská banka, a.s.	1	117,606,100	1.916	68.910
12 SLOVENSKÁ POISTOVNA, a.s.	5	108,710,600	1.771	70.681
13 Investiční společnost Bohemia, a.s.	6	85,363,700	1.391	72.072
14 AGROBANKA PRAHA, a.s.	13	85,035,000	1.386	73.457
15 VSŽ, a.s. Košice	1	78,409,000	1.278	74.735
16 HC and CS, a.s.	2	73,454,900	1.197	75.932
17 LINH ART, spol. S r.o.	1	72,141,000	1.175	77.107
18 DIVIDEND, a.s.	10	55,264,000	0.900	78.008
19 SLOVHOLDING, a.s.	1	50,553,900	0.824	78.832
20 O.B. INVEST, spol. S r.o.	2	48,644,900	0.793	79.624
21 C.S. Fond, a.s.	3	46,154,000	0.752	80.376
22 Panok-Knight, a.s.	1	42,971,500	0.700	81.076
23 GUMÁRNE BARUM, a.s., Púchov	1	39,764,200	0.648	81.724
24 VSŽ, a.s. Košice + SŠTSP, š.p.	1	37,815,400	0.616	82.341
25 CZECH INVESTMENT COMPANY	1	35,944,400	0.586	82.926
26 SKLOEXPORT, a.s.	1	34,803,800	0.567	83.494
27 Evrobanka, a.s., Praha	2	32,321,300	0.527	84.020
28 SLOVENSKÁ ŠTÁTNA SPORITELŇA	1	31,525,300	0.514	84.534
29 Pivovar RADEGAST, a.s.	1	31,153,600	0.508	85.041
30 COOPEX INVEST, a.s.	1	29,103,100	0.474	85.515
<i>second wave</i>				
1 A-INVEST, investiční společnost, a.s.	2	309,243,300	7.896	7.896
2 Investiční společnost Expandia, a.s.	3	306,290,600	7.820	15.716
3 Harvard Capital and Consulting, a.s.	23	292,170,900	7.460	23.176
4 O.B. Invest, investiční společnost, s.r.o.	3	198,351,200	5.064	28.240
5 KIS České pojišťovny, a.s.	3	186,697,800	4.767	33.007
6 Investiční společnost ponikatelů, a.s.	2	159,263,500	4.066	37.073
7 Investiční společnost Linh Art, s.r.o.	3	156,432,100	3.994	41.067
8 Czech investment company investiční společnost	1	151,666,300	3.872	44.939
9 Spořitelni investiční společnost, a.s.	1	124,161,800	3.170	48.110
10 Investiční kapitálová společnost KB, a.s.	1	124,063,500	3.168	51.277
11 PPF investiční společnost, a.s.	2	119,703,700	3.056	54.334
12 První investiční akciová společnost	5	97,629,000	2.493	56.826
13 C.S. Fond, a.s., investiční společnost	7	94,007,200	2.400	59.226
14 Moravská agrární potravinářská inv. Společnost, a.s.	1	89,932,800	2.296	61.523
15 Creditanstalt investiční společnost, a.s.	1	78,201,900	1.997	63.519
16 ŽDB a.s., Bohumín	1	67,782,700	1.731	65.250
17 KREDITAL, a.s.	1	65,407,500	1.670	66.920
18 CS First Boston investiční společnost, a.s.	1	65,213,900	1.665	68.585
19 Montované stavby Praha, a.s.	1	64,533,300	1.648	70.233
20 ŽB – Trust Investiční společnost, s.r.o.	1	59,538,200	1.520	71.753
21 SHD SPOLEČNÝ PODNIK MOST	1	56,214,600	1.435	73.188
22 Tradeinvest, investiční společnost, s.r.o.	1	49,514,000	1.264	74.452
23 Investiční společnost EVBAK, a.s.	5	46,952,500	1.199	75.651
24 Moravskočeská investiční společnost, a.s.	1	45,692,500	1.167	76.818
25 Plzeňská investiční společnost, s.r.o.	3	38,479,400	0.982	77.800
26 Kontinentální sdružení pro investice a obchod, i.s., a.s.	2	35,255,500	0.900	78.700
27 Investiční společnost Bohemia, a.s.	2	32,140,500	0.821	79.521
28 Mercia, spol s r.o.	1	29,658,300	0.757	80.278
29 COOP INVEST Investiční společnost, a.s.	1	28,599,200	0.730	81.008
30 Česko-kalifornská investiční společnost, Praha, s.r.o.	3	25,692,500	0.656	81.664

Source: Kotrba et al. (1999), adjusted

⁴⁵ The number of IPFs presented in this table does not exactly match the number of IPF each investment company founded that were published for the respective zero rounds. The reason is the fact that some IPFs merged, some of them as early as during the zero-round. Since the table contains the information about the number of obtained vouchers, it must have been calculated after the zero-round at the earliest.

APPENDIX C EXAMPLE OF AN IPF'S PORTFOLIO (RENTIÉRSKÝ IF 1.IN) AS ON 31. 12. 1994

Name of the company	Number of shares held	Market value (CZK)	Per cent of the portfolio	Name of the company	Number of shares held	Market value (CZK)	Per cent of the portfolio
7. Obchodní a.s.	200	6,000,000.00	0.17	MSA, a.s., Dolní Benešov	80	105,600.00	0.00
Agrostroy Prostějov, a.s.	7,000	472,920.00	0.01	Nealko Olomouc, a.s.	4,064	4,185,920.00	0.12
Armabeton, a.s., Praha	334	272,210.00	0.01	Nisa, a.s.	7,089	99,246.00	0.00
Armaturka Česká Třebová, a.s.	30,966	2,786,940.00	0.08	Obchodní Sladovny, a.s.	19,116	32,114,880.00	0.91
Avia Kutná Hora, a.s.	10,062	1,187,316.00	0.03	Perex, a.s.	6,318	903,474.00	0.03
Balírný Tchibo, a.s., Jihlava	2,239	2,015,100.00	0.06	Pivovar Krušovice, a.s.	1,000	2,100,000.00	0.06
Báňské projekty Val.Mež., a.s.	606	409,656.00	0.01	Pivovar Radegast, a.s.	48,973	181,200,100.00	5.16
Barum Holding, a.s. Otrokovice	371	168,805.00	0.00	Pižetický Prazdroj, a.s.	38,241	38,241,000.00	1.09
Bohemia-lázně, a.s.	1,328	386,448.00	0.01	Pramet, a.s., Šumperk	48,615	9,723,000.00	0.28
Buzuluk Komárov, a.s.	30,936	12,529,080.00	0.36	Pražská teplárenská, a.s.	5,844	6,428,400.00	0.18
BVV Brno, a.s.	4,948	19,792,000.00	0.56	Pražské pivovary, a.s.	17,000	49,895,000.00	1.42
Cukrpol, a.s., Praha	519	88,749.00	0.00	Pražský stavební podnik, a.s.	11,799	3,244,725.00	0.09
Čechofracht, a.s.	2,100	7,014,000.00	0.20	Progress Ostrava, a.s.	9,414	706,050.00	0.02
Česká pojišťovna, a.s.	11,733	69,224,700.00	1.97	Rakovnické keram. závody, a.s.	9,999	22,497,750.00	0.64
Česká spořitelna, a.s.	685,572	222,810,900.00	6.34	Retex, a.s., Ivančice	27,511	2,108,718.15	0.06
Česká zbrojovka, a.s., Uh. Brod	16,185	37,225,500.00	1.06	Severočeské teplárny, a.s.	1,883	1,338,813.00	0.04
České loděnice, a.s.	6,845	919,420.40	0.03	Silniční stavitel. Praha, a.s.	14,237	7,545,610.00	0.21
ČEZ, a.s.	234,847	319,391,920.00	9.09	Sklárny Kavalier, a.s.	23,904	81,273,600.00	2.31
Čist. a prádelny Ostrava, a.s.	45	3,274.20	0.00	Spolana, a.s., Neratovice	35,244	24,670,800.00	0.70
ČKD Blansko, a.s.	30,000	30,000,000.00	0.85	Stavby mostů Praha, a.s.	160	122,400.00	0.00
Čokoládovny, a.s., Praha	45,000	147,150,000.00	4.19	Stavomont Praha, a.s.	5,301	2,252,925.00	0.06
Čs. námořní plavba, a.s.	53,000	97,255,000.00	2.77	Středočes. dřev. závody, a.s.	51,856	18,253,312.00	0.52
Čs. plavba labská, a.s., Děčín	29,833	4,236,286.00	0.12	Středočes. chov. sdružení, a.s.	3,198	262,363.92	0.01
Danone, a.s.	5,000	5,000,000.00	0.14	Svit, a.s., Zlín	118,096	43,502,459.50	1.24
Desta Děčín, a.s.	40,000	40,000,000.00	1.14	Svoboda, grafické závody, a.s.	10,000	5,300,000.00	0.15
DEZA, a.s.	14,405	31,691,000.00	0.90	Škoda Diesel, a.s.	28,822	6,023,798.00	0.17
DOWO, a.s.	4,041	692,950.68	0.02	Škoda Praha, a.s.	26	12,844.00	0.00
Drogerie Nový Jičín, a.s.	2,796	699,000.00	0.02	Tanex Plasty, a.s., Jaroměř	15,187	28,035,202.00	0.80
Dřevostroj Čkyně, a.s.	5,000	1,900,000.00	0.05	Tanex, a.s.	112,820	8,706,319.40	0.25
Elektrárna Kolín, a.s.	359	384,130.00	0.01	Tatra, a.s., Kopřivnice	277,107	36,370,293.75	1.04
Elektrárna Opatovice, a.s.	87	347,130.00	0.01	Teplárna Trmice, a.s.	1,149	804,300.00	0.02
Elektro-Praga Hlinsko, a.s.	213	447,300.00	0.01	Teplárny Karviná, a.s.	26,600	42,959,000.00	1.22
Fatra, a.s., Napajedla	289	744,175.00	0.02	Tesla Jihlava, a.s.	36,942	3,838,273.80	0.11
Favorit Rokycany, a.s.	2,874	1,448,496.00	0.04	Tesla Votice, a.s.	21,570	4,766,970.00	0.14
Grafiatisk, a.s.	1,500	412,500.00	0.01	Texlen, a.s., Trutnov	123,441	22,211,973.54	0.63
Hotel Intercontinental, a.s.	12,440	14,057,200.00	0.40	TOS Čelákovice, a.s.	27,210	3,372,679.50	0.10
Hotel Jalta, a.s., Praha	3,000	3,450,000.00	0.10	Tosta, a.s., Aš	31,274	5,615,246.70	0.16
Hotel Panorama, a.s.	42,995	40,415,300.00	1.15	TRAMO, a.s.	11,667	2,333,400.00	0.07
Chirana Praha, a.s.	5,901	678,142.92	0.02	Třinecké železářny, a.s.	7,609	4,519,746.00	0.13
Chlumčanské ker. závody, a.s.	2,478	10,903,200.00	0.31	Tylox, a.s., Letovice	1,000	1,280,000.00	0.04
Interhotel Olympik, a.s. (sic!)	5,383	3,902,675.00	0.11	UP Bučovice, a.s.	4,000	1,292,000.00	0.04
Interhotel Olympik, a.s. (sic!)	4,733	7,998,770.00	0.23	VEBA textilní závody, a.s.	14,898	1,720,719.00	0.05
Intex, a.s., Liberec	34,699	17,176,005.00	0.49	Velkoobchod obuví, a.s., Zlín	19,368	8,134,560.00	0.23
Investiční a Pošt. banka, a.s.	80,519	274,569,790.00	7.81	Velvana, a.s., Velvary	2,898	3,187,800.00	0.09
IPS Praha, a.s.	493	951,490.00	0.03	Vertex, a.s., Litomyšl	25	27,500.00	0.00
Jihočeské mlékárny, a.s.	35,091	57,900,150.00	1.65	Vodní stavby Praha, a.s.	16,330	22,943,650.00	0.65
Jihočeské pivovary, a.s.	4,000	4,000,000.00	0.11	Vsetnické stavební a.s.	7,575	513,963.75	0.01
Juta, a.s., Dvůr Králové	250	312,500.00	0.01	VSŽ, a.s.	30,000	10,330,500.00	0.29
Kablo Děčín, a.s.	7,498	7,498,000.00	0.21	VIPEK, a.s.	927	177,010.65	0.01
Kablo Elektro, a.s., Vrchlabí	5,637	10,992,150.00	0.31	Východočeské papírny, a.s. (sic!)	20,925	16,112,250.00	0.46
Kdynium, a.s.	3,778	2,077,900.00	0.06	Východočeské papírny, a.s. (sic!)	25,708	25,708,000.00	0.73
Komerční banka, a.s.	318,848	459,141,120.00	13.07	Žápadočeský dřev. prům., a.s.	20,000	2,570,800.00	0.07
Kovo Cheb, a.s.	29,934	5,147,151.30	0.15	ZAT, a.s.	15,123	15,123,000.00	0.43
Kovohutě Děčín, a.s.	3,824	1,502,832.00	0.04	ŽDAS, a.s.	79,709	147,461,650.00	4.20
Kovosvit, a.s.	16,522	3,076,726.84	0.09	Živnostenská banka, a.s.	11,804	36,592,400.00	1.04
Lázeňské san. Sanssouci, a.s.	3,031	1,366,981.00	0.04	ZPA Nová Paka, a.s.	13,966	1,256,940.00	0.04
Lázně Františkovy Lázně, a.s.	7,071	3,005,175.00	0.09	ŽPSV Uherský Ostroh, a.s.	1,922	561,224.00	0.02
Léčebné lázně Mar. Lázně, a.s.	13,143	5,796,063.00	0.16				
Ligna, a.s.	2,501	3,876,550.00	0.09	Total market value of the shares		3,052,789,648.00	86.88
LITES, a.s.	28,764	2,869,209.00	0.08	Real estates		0.00	0.00
Luhov, a.s., Stráž pod Ralskem	111	47,286.00	0.00	Movable goods		4,201,200.00	0.12
Metal, a.s.	6,377	3,634,890.00	0.08	Deposits on the silent partnership contracts		8,500,000.00	0.24
Metaz, a.s., Týnec n. S.	49,668	17,383,800.00	0.49	Acquisition costs of shares to be gained		66,088,800.00	1.88
Montáže Přerov, a.s.	4,986	2,188,854.00	0.06	Money accounts receivable		297,000,000.00	8.45
Moravia Glass, a.s.	5,000	2,875,000.00	0.08	Money accounts balance		16,537,680.00	0.47
Moravské kovářny, a.s.	17,583	8,967,330.00	0.26	Other assets		68,780,709.00	1.96
Moravskoslezské teplárny, a.s.	4,956	5,030,340.00	0.14	TOTAL ASSETS		3,513,898,037.00	100.00

Source: Burza (1995a, p. 3)

EXAMPLE OF AN IPF'S PORTFOLIO (YSE A.S. — INVESTIČNÍ FOND) AS ON 31. 12. 1994

Name of the company	Number of shares held	Market value (CZK)	Per cent of the portfolio	Name of the company	Number of shares held	Market value (CZK)	Per cent of the portfolio
Adamovské stroj.	5,012	4,094,804.00	0.12	Polonákup Záhoran a.s. (SR)	30,436	1,144,393.60	0.03
Agrocass, a.s. (SR)	14,129	1,195,172.11	0.04	Pragoprojekt	14,311	5,867,510.00	0.17
Agrohum a.s. (SR)	10,980	262,641.60	0.01	Pražská Tepláren.	353,216	388,537,600.00	11.46
Armabeton Praha	50,727	41,341,505.00	1.22	PREFA Pardubice	39,577	5,429,964.40	0.16
ARPO	3,492	436,596.84	0.01	REAS	9,076	853,325.52	0.03
AUTIA	7,000	2,541,000.00	0.07	Resonanční pila	9,438	2,944,656.00	0.09
AVIA Karoseria	8,020	714,492.00	0.02	RETEX	2,132	163,417.80	0.00
Báňské stavby Most	16,588	1,758,328.00	0.05	SAPOR	5,500	749,100.00	0.02
Bukóza, a.s. (SR)	207,788	13,315,055.04	0.39	SETUZA	43,070	107,244,300.00	3.16
Buzuluk Komárov	18,500	9,157,500.00	0.27	Severočes. cihelny	14,103	1,410,300.00	0.04
BVV Brno	220	880,000.00	0.03	Severočes. armatur.	38,381	34,888,329.00	1.03
Centr. st. inž. zkuš	5,661	549,117.00	0.02	Severočes. teplárny	199,990	142,192,890.00	4.20
Centroprojekt Zlín	4,885	977,000.00	0.03	SEVT	10,825	21,325,250.00	0.63
CEREA, a.s.	15,103	906,180.00	0.03	Sladovna Hodonice	3,498	4,424,970.00	0.13
Cutisin	2,638	5,349,710.00	0.16	Smrečina a.s. (SR)	83,004	4,610,042.16	0.14
Česká spořitelna, a.s.	1,285,385	417,750,125.00	12.33	Spojené kartáčovny	21,594	37,357,620.00	1.10
Česká zbrojovka	25,000	57,500,000.00	1.70	SPUR	3,000	915,000.00	0.03
Českoslov. námořní	84,402	154,877,670.00	4.57	Stav. podn. Písek	4,400	391,160.00	0.01
Českoslov. plavba labská	128,004	18,176,568.00	0.54	Stavomontáže Č.B.	10,413	1,736,367.75	0.05
ČEZ	140,180	190,644,800.00	5.62	Středočes. dřev. záv.	53,547	19,812,390.00	0.58
ČSAD Brno-Černov.	30,225	2,089,152.00	0.06	Svoboda graf. záv.	30,337	16,078,610.00	0.47
Desta Děčín, a.s.	35,000	35,000,000.00	1.03	TANEX	5,099	393,489.83	0.01
DOWO	452	77,508.96	0.00	TANEX Plasty a.s.	771	771,000.00	0.02
Drevokombinát Šariš a.s. (SR)	50,346	2,065,427.64	0.06	Techmat	2,668	478,105.60	0.01
Dřevozávody Ždírec	39,740	3,818,219.20	0.11	Tepna	27,270	2,863,350.00	0.08
EGÚ Brno	3,841	779,723.00	0.02	TESLA Jihlava	17,001	1,766,403.90	0.05
Ekoprojekt Praha	3,605	240,489.55	0.01	TEXLEN	1,500	269,910.00	0.01
Elektr. Opatovice	46,378	185,048,220.00	5.46	Tlak. plyn. Ústí	52,915	21,430,575.00	0.63
Geodezie Brno	5,044	2,718,716.00	0.08	Trenákup a.s. (SR)	34,656	1,125,280.32	0.03
Geofyzika	18,838	2,180,686.88	0.06	TYLEX	22,796	29,144,320.00	0.86
Hotel FORUM Praha	11,116	11,616,220.00	0.34	Uniservis Hr. Král.	6,003	1,650,825.00	0.05
CHEMONT Brno	12,789	792,918.00	0.02	Úst. pro výzk. paliv	3,510	1,123,200.00	0.03
Chemoprojekt	22,416	19,120,848.00	0.56	VEBA textil. závod	28,002	3,234,231.00	0.10
CHIRANA Strašnice	3,999	2,279,430.00	0.07	Vodní stavby Praha	122,633	172,299,365.00	5.08
INTEA	12,800	2,560,000.00	0.08	Vodoh. opr. a stroj.	10,944	656,640.00	0.02
Investiční a poštovní banka	192,556	656,615,960.00	19.37	YSE Profit holding a.s.	102,698	15,610,096.00	0.46
Klimacentrum	13,050	2,857,950.00	0.08	ZENA-zeměd. nákup	37,259	3,258,672.14	0.10
Komerční banka a.s.	90,547	118,616,570.00	3.50	ZEVEITA	20,340	862,822.80	0.03
Kornolit	1,867	754,268.00	0.02	ZPS Zlín	357	614,040.00	0.02
KOVOTERM	5,500	412,500.00	0.01	ZZN Břeclav	357	614,040.00	0.02
Krušnohor. strojir.	58,630	16,064,620.00	0.47	ZZN Děčín	25,484	3,557,566.40	0.10
KUNZ HRANICE	152	32,224.00	0.00	ZZN Chomutov	15,770	1,208,770.50	0.04
Léč. Konst. Lázně	3,490	1,151,700.00	0.03	ZZN Pardubice	13,053	1,367,693.34	0.04
Masný prům. Vimperk	405	166,455.00	0.00	ZZN Strakonice	23,937	1,715,564.79	0.05
MASSAG	5,801	5,801,000.00	0.17	ZZN Šumperk	21,000	1,155,000.00	0.03
MATE	9,504	346,420.80	0.01	ZZN v Berouně	10,584	2,106,216.00	0.06
Metaz	1,708	597,800.00	0.02	ZZN v Hodoníně	28,270	2,137,212.00	0.06
MITOP Mimoň	26,678	12,271,880.00	0.36	ZZN v Chrudimi	15,174	1,244,268.00	0.04
Montáže Příbram	6,253	1,109,782.44	0.03	ZZN v Nymburce	24,767	3,917,148.72	0.12
Morav. teplárny	99	100,485.00	0.00	ZZN v Praze	21,487	1,252,262.36	0.04
Moravské naft. doly	1,514	946,250.00	0.03	ZZN v Příbrami	36,000	3,276,000.00	0.10
Moravský plynostav	2,353	2,000,050.00	0.06	ZZN v Táboře	18,035	2,233,093.70	0.07
MSA	48,662	64,233,840.00	1.90	ZZN ve Frýdku-Místku	22,488	1,506,696.00	0.04
MSDZ Šumperk	25,053	2,154,307.47	0.06	ZZN Vyškov	20,000	906,800.00	0.03
Nealko Olomouc	2,118	2,181,540.00	0.06	ZZN Žďár n. Sázavou	22,008	1,540,560.00	0.05
NYCOM, a.s.	20,490	1,624,242.30	0.05	ŽĐAS	1,169	2,162,650.00	0.06
Obchodní sladovny	13,831	23,236,080.00	0.69	Železn. stavitel. Brno	377	202,449.00	0.01
OBILA Kutná Hora	14,118	1,129,440.00	0.03	Živnostenská banka	48,103	149,119,300.00	4.40
Pienstav a.s. (SR)	5,908	292,800.48	0.01				
Plzeňské pivovary a.s.	22	61,930.00	0.00	Total market value of the shares		3,346,399,463.55	98.73
Polonákup Agropol a.s. (SR)	8,820	210,974.40	0.01	Current assets, other investment funds etc.,		42,939,327.64	1.27
Polonákup Dunaj a.s. (SR)	18,004	1,569,228.64	0.05	TOTAL ASSETS		3,389,338,791.19	100.00

Source: Burza (1995b, p. 4)

APPENDIX D CONVERSIONS OF THE IPFs—DATES FROM THE COMPANY REGISTER

w	IPF	date	w	IPF	date
1	ALFA-Invest, a.s.	21/04/1997	2	Investiční fond CIMEX, a. s.	09/01/1996
1	Bankovní fond, a.s.	27/06/1996	2	Investiční fond Credit, a. s.	10/04/1997
1	C.S. Fond pomoci, a.s.	14/05/1996	2	Investiční fond Čermák a Plevač Invest, a. s.	11/07/1996
1	Československý IPF Brno, a.s.	28/03/1996	2	Investiční fond FORT, a. s.	27/05/1996
1	Český národní IPF, a.s.	28/06/1996	2	Investiční fond INVEST EMPIRE, a. s.	21/06/1996
1	Chemofond, a.s.	21/03/1997	2	Investiční fond jistoty, a. s.	09/01/1996
1	CREDITANSTALT-IPF	02/07/1997	2	Investiční fond Kapitál, akciová společnost	17/10/1995
1	Dopravy, spojení a souv. průmyslu	18/06/1996	2	Investiční fond KIP, a. s.	25/03/1998
1	FOND RENTIA, a.s.	20/06/1996	2	Investiční fond KLASIK, a. s.	08/01/1997
1	1. CZECH COUPON INVEST, a.s.	17/06/1996	2	Investiční fond LIF, a. s.	07/06/1996
1	Interkupón, a.s.	13/07/1993	2	Investiční fond LUKRATIV, a. s.	18/06/1996
1	Investiční portfolio fond, a.s.	08/01/1997	2	Investiční fond M-Invest, a. s.	18/02/1997
1	IPF-Panok, a.s.	06/06/1996	2	Investiční fond MAIS, a. s.	31/05/1996
1	IPF AGRO Beroun, a.s.	30/06/1996	2	Investiční fond Minvest, a. s.	28/06/1996
1	IPF Boleslavsko, a.s.	28/06/1993	2	Investiční fond pojišťovny Morava, a. s.	18/06/1996
1	IPF CTP	03/02/1998	2	Investiční fond Potravinářský privatizační fond, a. s.	28/11/1996
1	IPF ITEC-LEASING, spol s r.o.	30/12/1994	2	Investiční fond SEVERNÍ ČECHY, a. s.	15/12/1996
1	IPF Smrčina, a.s.	17/04/1996	2	Investiční fond TOP PROFIT, a. s.	17/06/1996
1	IPF UNI-CON, a.s.	29/05/1998	2	Investiční fond ZBROJOVKA Vsetín, akciová společnost	02/07/1997
1	Moravskoslezský IPF, a.s.	29/05/1996	2	Investiční portfoliový fond, akciová společnost	30/05/1997
1	PIVO-MORAVA, a.s.	29/08/1996	2	Investiční privatizační fond - rodinný hospodář, a.s.	18/06/1996
1	Pivovarský fond RADEGAST, a.s.	29/10/1998	2	Investiční privátní fond , akciová společnost	09/04/1998
1	První budějovický invest. fond	29/03/1996	2	Investiční stavební fond, a. s.	17/10/1997
1	První český privatizační fond	17/06/1996	2	INVESTIM, investiční fond, a. s.	28/06/1996
1	První cihlářský IPF, a.s.	19/03/1996	2	Jihočeský podnikatelský investiční fond, a. s.	28/08/1995
1	První strojírenský IPF	23/07/1998	2	KOMPAS-OK investiční fond, a. s.	09/01/1997
1	První zemědělsko-potravinářský	19/06/1996	2	KUPONIVEST, a. s., investiční fond	11/09/1998
1	Rozvojový turist. fond, a.s.	06/05/1997	2	LCS investiční fond, a. s.	10/10/1995
1	THEMOS-Invest. fond I, a.s.	27/06/1996	2	Lesnicko-dřevařský investiční privatizační fond, a. s.	20/06/1996
1	YSE, a.s.	24/05/1996	2	Moravskočeský investiční fond, a. s.	27/06/1997
1	Šřejber tennis investing, a.s.	20/06/1996	2	Moravskoslezský potravinářský investiční fond, a. s.	08/11/1998
1	AG finanční investiční privatizační fond Praha, a. s.	13/06/1996	2	Moravskoslezský regionální investiční fond, a.s.	31/01/1997
1	AB-Agria a. s.	19/06/1996	2	Moravský investiční fond, a. s.	25/03/1996
1	DKF, holding, a.s.	08/07/1996	2	Moravská společnost pro kapitálové investice, a.s.	29/05/1996
2	1. Kroměřížská investiční, a. s.	16/05/1996	2	Moravský investiční privatizační fond, a. s.	28/06/1996
2	A + A investiční fond, a.s.	22/12/1997	2	Moravský zeměský invest. fond	27/06/1996
2	Agrofond Hradec Králové, a. s., investiční fond	10/04/1997	2	MOTOFOND, akciová společnost, investiční fond	10/04/1996
2	B. O. I. S. - Výnosový investiční fond	06/06/1996	2	MULTI, investiční fond, a. s.	06/03/1996
2	BETA - Český investiční fond, a. s.	28/03/1996	2	Národní investiční PF DOMOV, akciová společnost	18/06/1996
2	Bohemia Crystal, investiční fond, a. s.	19/06/1997	2	Obchodní a brokerský investiční fond majetkový, a. s.	07/02/1996
2	C.S. Fond kapitálového růstu, investiční fond, a. s.	14/06/1996	2	OL-INVEST investiční fond, a. s.	03/06/1997
2	C.S. Fond pivovarnického a sladovnického průmyslu, IF, a. s.	14/06/1996	2	PGH Investiční fond, a. s.	04/09/1997
2	C.S. Fond pravidelných výplat, investiční fond, a.s.	14/06/1996	2	Pivovarský investiční fond OSTRAVAR, a. s.	11/12/1995
2	C.S. Fond prosperity, investiční fond, a.s.	17/06/1996	2	Postiljón, a. s., Poštovní investiční fond	01/07/1996
2	Creditanstalt - druhý investiční privatizační fond, a. s.	27/05/1998	2	PROREGIO, akciová společnost, investiční fond	17/12/1997
2	Českomoravský investiční fond, a. s.	06/03/1998	2	První jihozápadní investiční fond akciová společnost	17/06/1996
2	EFEKTAFOND, a. s., investiční fond	26/06/1996	2	PRVNÍ MORAVSKÝ INVESTIČNÍ FOND, a.s., Přerov	24/02/1998
2	Ekofond investiční fond, a. s.	29/05/1996	2	První národní investiční fond, a. s.	17/06/1996
2	Euro-garant, a. s., investiční fond	26/06/1996	2	První Václavův investiční fond, a. s.	28/06/1996
2	FORESTINVEST Brno, investiční fond, a. s.	27/06/1996	2	První východočeský investiční fond, a. s.	31/01/1997
2	FORESTINVEST Frýdek-Místek, investiční fond, a. s.	27/06/1996	2	Rentiérský investiční fond, a. s.	28/06/1996
2	FORESTINVEST Jeseníky, investiční fond, a. s.	19/06/1996	2	Rolnický investiční fond, a. s. Kolín - Kutná Hora	25/05/1998
2	FORESTINVEST Praha, investiční fond, a. s.	27/06/1996	2	Severočeský investiční fond a. s.	30/06/1996
2	FORESTINVEST Stříbro, investiční fond, a. s.	02/04/1998	2	Sokolovský investiční fond, akciová společnost	28/08/1996
2	FORESTINVEST Velké Karlovice, investiční fond, a. s.	10/07/1996	2	Speciální investiční fond, a. s.	30/11/1995
2	Harvardský arbitrážní investiční fond, a. s.	06/06/1996	2	Společný investiční fond, a. s.	27/03/1998
2	Harvardský kontrariánský investiční fond, a. s.	07/06/1996	2	SPOLINVEST akciová společnost, investiční fond Liberec	16/09/1996
2	Harvardský dividendový investiční fond, a. s.	11/04/1996	2	Staropražský uzenářský investiční fond, a. s.	03/06/1996
2	Harvardský investiční diamantový fond, a. s.	07/06/1996	2	Stavební investiční a kapitálová, a. s. - investiční fond	24/06/1996
2	Harvardský investiční fond menších společností, a. s.	07/06/1996	2	THEMIS - Investiční fond pro podporu vývozu, a. s.	25/06/1996
2	Harvardský růstový investiční fond, a. s.	05/06/1996	2	THEMOS - investiční fond II, a. s.	28/06/1996
2	Hradecký investiční fond, a. s.	10/03/1997	2	Univerzální investiční fond, a. s.	28/06/1996
2	II. Czech Coupon invest, investiční fond, a. s.	12/06/1996	2	Valuta, akciová společnost, investiční fond	09/07/1993
2	Investiční fond Agro-Moravainvest, a. s.	17/05/1996	2	Všeoborový investiční fond, a. s.	30/11/1995
2	Investiční fond Agroma, a. s.	23/07/1996	2	YSE 2, a. s. - investiční fond	14/06/1996
2	Investiční fond Beta, a. s.	29/12/1995	2	Zdraví - investiční fond, a. s.	13/06/1996
2	IF Bohemia energ., chem., plyn. a lehkého prům., a. s.	18/06/1996	2	Znojenský investiční fond, akciová společnost	28/06/1996

Source: individual entries in the company register (MŠCR, 2012-2015)

REFERENCES

- [1] Act on Securities. Law No. 591/1992, Coll., On Securities [Zákon České národní rady o cenných papírech]. (1992). Retrieved 7 September 2018, from <https://www.psp.cz/sqw/sbirka.sqw?cz=591&r=1992>
- [2] Ad by Česká pojišťovna. (1992, February 7). *Ekonom, Týdeník Hospodářských Novin*, XXXVI(6).
- [3] Ad by HC&C. (1992, February 7). *Ekonom, Týdeník Hospodářských Novin*, XXXVI(6).
- [4] Anderson, R. E. (1994). *Voucher funds in transitional economies : the Czech and Slovak experience* (No. WPS1324; p. 54). Retrieved from The World Bank website: <http://documents.worldbank.org/curated/en/155471468759588493/Voucher-funds-in-transitional-economies-the-Czech-and-Slovak-experience>
- [5] Baloun, V. (2004). *Finanční kriminalita v České republice*. Praha: Institut pro kriminologii a sociální prevenci.
- [6] BCPP. (1996). *Statistická ročenka Burzy cenných papírů Praha, a.s. – 1995 fact book*.
- [7] BCPP. (1997). *Statistická ročenka Burzy cenných papírů Praha, a.s. – 1996 fact book*.
- [8] BCPP. (1998). *Statistická ročenka Burzy cenných papírů Praha, a.s. – 1997 fact book*.
- [9] BCPP. (1999). *Statistická ročenka Burzy cenných papírů Praha, a.s. – 1998 fact book*.
- [10] BCPP. (2000). *Statistická ročenka Burzy cenných papírů Praha, a.s. – 1999 fact book*.
- [11] BCPP. (2019). Index PX-GLOB. Retrieved from <https://www.pse.cz/indexy/popis-indexu/index-px-glob/>
- [12] Black, B. S. (1990). Shareholder Passivity Reexamined. *Michigan Law Review*, 89(3), 520–608. <https://doi.org/10.2307/1289384>
- [13] Brada, J. C. (1996). Privatization is Transition—Or is it? *The Journal of Economic Perspectives*, 10(2), 67–86. Retrieved from <http://www.jstor.org/stable/2138482>
- [14] Brom, K., & Orenstein, M. (1994). The Privatised Sector in the Czech Republic: Government and Bank Control in a Transitional Economy. *Europe-Asia Studies*, 46(6), 893–928. Retrieved from <http://www.jstor.org/stable/152887>
- [15] Burza. (1995a). Portfolio – rentiérský IF 1.IN - k 31. 12. 1994 (údaje z neauditovaných výsledků). *Burza*, 2(26), 20.
- [16] Burza. (1995b). PORTFOLIO YSE, a.s. - investiční fond k 31. 12. 1994 (údaje z neauditovaných výsledků). *Burza*, 2(26), 20.
- [17] Choděra, O. (1992). Reklama a investiční privatizační fondy. *Kupónová Privatizace, List Centra Kupónové Privatizace*, II.(7), 4.
- [18] CKP. (1992). Investiční privatizační fondy v roli vlastníků. *Kupónová Privatizace, List Centra Kupónové Privatizace*, II.(9), 31.
- [19] CKP. (1995). *Kupónová privatizace ve faktech a číslech*. Prague: Centre for Voucher Privatization.
- [20] Claessens, S. (1997). Corporate Governance and Equity Prices: Evidence from the Czech and Slovak Republics. *The Journal of Finance*, 52(4), 1641–1658. <https://doi.org/10.2307/2329450>
- [21] Claessens, S., & Djankov, S. (1999). Ownership Concentration and Corporate Performance in the Czech Republic. *Journal of Comparative Economics*, 27(3), 498–513. <https://doi.org/10.1006/jcec.1999.1598>
- [22] CNB. (2019). Fixing of Interest Rates on Interbank Deposits - PRIBOR. Retrieved from <https://www.cnb.cz/en/financial-markets/money-market/pribor/>

- [23] Coffee, J. C. (1991). Liquidity versus Control: The Institutional Investor as Corporate Monitor. *Columbia Law Review*, 91(6), 1277–1368. <https://doi.org/10.2307/1123064>
- [24] Coffee, J. C. (1999). Privatization and Corporate Governance: Lessons from Security Markets Failure. *Transition: The Newsletter about Reforming Economies*, 10(6). Retrieved from <http://documents.worldbank.org/curated/en/552701468746654547/Transition-10-6>
- [25] Commercial Code. Law No. 513/1991 Coll. [Obchodní zákoník]. (1991). Retrieved 26 August 2018, from <https://www.psp.cz/sqw/sbirka.sqw?cz=513&r=1991>
- [26] Dědek, O. (1992). *Kupónová privatizace a rozvoj kapitálového trhu v Československu*. Ekonomický ústav ČSAV.
- [27] Dittus, P., & Prowse, S. (1995). *Corporate control in Central Europe and Russia : should banks own shares?* (No. WPS1481; p. 1). Retrieved from The World Bank website: <http://documents.worldbank.org/curated/en/653991468746704283/Corporate-control-in-Central-Europe-and-Russia-should-banks-own-shares>
- [28] Egerer, R. (1995). *Capital markets, financial intermediaries, and corporate governance : an empirical assessment of the top ten voucher funds in the Czech Republic* (No. WPS1555; p. 1). Retrieved from The World Bank website: <http://documents.worldbank.org/curated/en/309871468746823150/Capital-markets-financial-intermediaries-and-corporate-governance-an-empirical-assessment-of-the-top-ten-voucher-funds-in-the-Czech-Republic>
- [29] Ellerman, D. (1999). *Voucher Privatization with Investment Funds: An Institutional Analysis*. <https://doi.org/10.1596/1813-9450-1924>
- [30] Estrin, S., Gelb, A., & Singh, I. (1995). Shocks and Adjustment by Firms in Transition: A Comparative Study. *Journal of Comparative Economics*, 21(2), 131–153. <https://doi.org/10.1006/jcec.1995.9999>
- [31] Fama, E. F. (1971). Risk, Return, and Equilibrium. *Journal of Political Economy*, 79(1), 30–55. Retrieved from <https://www.jstor.org/stable/1837385>
- [32] Fama, E. F., & French, K. R. (1996). The CAPM is Wanted, Dead or Alive. *The Journal of Finance*, 51(5), 1947–1958. <https://doi.org/10.2307/2329545>
- [33] Fama, E. F., & MacBeth, J. D. (1973). Risk, Return, and Equilibrium: Empirical Tests. *Journal of Political Economy*, 81(3), 607–636. Retrieved from <https://www.jstor.org/stable/1831028>
- [34] Federal Act on Securities. Federal Law No. 600/1992, Coll., On Securities [Zákon o cenných papírech]. (1992). Retrieved 7 September 2018, from <http://www.psp.cz/sqw/sbirka.sqw?cz=600&r=1992>
- [35] Federal Government Decree No. 69/1992 Coll.; the Decree No. 383/1991 amendment [Nařízení vlády České a Slovenské Federativní Republiky, kterým se mění a doplňuje nařízení vlády České a Slovenské Federativní Republiky č. 383/1991 Sb., o vydávání a použití investičních kupónů]. (1992). Retrieved 26 August 2018, from <https://www.psp.cz/sqw/sbirka.sqw?cz=69&r=1992>
- [36] Federal Government Decree No. 383/1991 Coll., On the Investment Vouchers Issuance and Use [Nařízení vlády České a Slovenské Federativní Republiky o vydávání a použití investičních kupónů]. (1991). Retrieved 22 August 2018, from <https://www.psp.cz/sqw/sbirka.sqw?cz=383&r=1991>
- [37] Fischer, S. (1991). *Privatization in East European Transformation* (Working Paper No. 3703). <https://doi.org/10.3386/w3703>
- [38] Fitzsimmons, M. (2002). Investment Privatization Funds, Banks, and Corporate Governance in the Czech Republic and Russia | Columbia Business School Research Archive. *Chazen Web Journal of International Business*. Retrieved from <https://www8.gsb.columbia.edu/researcharchive/articles/103>

- [39] Frydman, R., Gray, C., Hessel, M., & Rapaczynski, A. (1999). When Does Privatization Work? The Impact of Private Ownership on Corporate Performance in the Transition Economies. *The Quarterly Journal of Economics*, 114(4), 1153–1191. Retrieved from <https://www.jstor.org/stable/2586961>
- [40] Frydman, R., & Rapaczynski, A. (1993). Insiders and the state: overview of responses to agency problems in East European privatizations. *Economics of Transition*, 1(1), 39–59.
- [41] FS ČSFR. (1990). Scénář ekonomické reformy. Retrieved 29 August 2018, from http://www.psp.cz/eknih/1990fs/tisky/t0087_01.htm
- [42] Gibbons, M. R. (1982). Multivariate tests of financial models: A new approach. *Journal of Financial Economics*, 10(1), 3–27. [https://doi.org/10.1016/0304-405X\(82\)90028-9](https://doi.org/10.1016/0304-405X(82)90028-9)
- [43] Government Decree No. 222/1993 Coll., On the Investment Vouchers Issuance and Use [Nařízení vlády o vydávání a použití investičních kupónů]. (1993). Retrieved 7 September 2018, from <https://www.psp.cz/sqw/sbirka.sqw?cz=222&r=1993>
- [44] Hagopian, M. (1994). The Engines of Privatization: Investment Funds and Fund Legislation in Privatizing Economies. *Northwestern Journal of International Law & Business*, 15(1), 75. Retrieved from <https://scholarlycommons.law.northwestern.edu/njilb/vol15/iss1/7>
- [45] Hamm, P., King, L. P., & Stuckler, D. (2012). Mass Privatization, State Capacity, and Economic Growth in Post-Communist Countries. *American Sociological Review*, 77(2), 295–324. Retrieved from <https://www.jstor.org/stable/23102572>
- [46] Hewer, U. (1997). Czech Enterprises Seeking True Owners. In M. Selowsky, R. Martin, B. Shor, C. Burnside, D. Dollar, R. Hirschler, ... P. Peters, *Transition* 8(3). Retrieved from <http://agris.fao.org/agris-search/search.do?recordID=US2012401078>
- [47] Hinds, M. P. (1991). *Going to market : privatization in Central and Eastern Market Europe* (No. WPS768; p. 27). Retrieved from The World Bank website: <http://documents.worldbank.org/curated/en/935111468771613521/Going-to-market-privatization-in-Central-and-Eastern-Market-Europe>
- [48] Hingorani, A., Lehn, K., & Makhija, A., K. (1997). Investor behavior in mass privatization: The case of the Czech voucher scheme. *Journal of Financial Economics*, 44(3), 349–396. [https://doi.org/10.1016/S0304-405X\(97\)00008-1](https://doi.org/10.1016/S0304-405X(97)00008-1)
- [49] Holman, R. (2002). Kupónová privatizace s desetiletým odstupem. In *CEP Sborník: Vol. 13. Kupónová privatizace*. Retrieved from <http://cepin.cz/cze/kniha.php?ID=27>
- [50] Hopt, K. J., Kanda, H., Roe, M. J., Wymeersch, E., & Prigge, S. (Eds.). (1998). *Comparative Corporate Governance: The State of the Art and Emerging Research*. Oxford, UK: OXFORD University Press.
- [51] Hospodářské noviny. (1991, October 1). Ministerstvo pro správu národního majetku a jeho privatizaci ČR&Ministerstvo pre správu a privatizáciu národného majetku SR: Postup pri zakladaní investičných privatizačných fondov v procese kupónovej privatizácie. *Hospodářské Noviny*.
- [52] Hospodářské noviny. (1996, April 30). Creditanstalt ČIF se mění na holding. *Economia, a.s.*
- [53] Hrubý, M., & Rudlovčák, V. (2002). Kupónová privatizace a tři přístupy k transformaci. In *CEP Sborník: Vol. 13. Kupónová privatizace*. Retrieved from <http://cepin.cz/cze/kniha.php?ID=27>
- [54] Husák, P. (1997). *Budování kapitalismu v Čechách : rozhovory s Tomášem Ježkem*. Praha: Volvox Globator.
- [55] IMF. (1998). *Czech Republic : Selected Issues* (No. 98/36). Retrieved from International Monetary Fund website: <https://www.imf.org/en/Publications/CR/Issues/2016/12/30/Czech-Republic-Selected-Issues-2615>

- [56] IMF. (1999). *Czech Republic : Selected Issues* (No. 99/90; p. 70). Retrieved from International Monetary Fund website: <https://www.imf.org/en/Publications/CR/Issues/2016/12/30/Czech-Republic-Selected-Issues-3190>
- [57] Investment Companies and Investment Funds Act amendment. Law No. 124/1998 Coll., which changes and adds to the Law No. 248/1992 Coll., On the Investment Companies and Investment Funds [Zákon, kterým se mění a doplňuje zákon č. 248/1992 Sb., o investičních společnostech a investičních fondech, ve znění pozdějších předpisů]. (1998). Retrieved 6 September 2018, from <http://www.psp.cz/sqw/sbirka.sqw?cz=124&r=1998>
- [58] Investment Companies and Investment Funds Act amendment. Law No. 151/1996 Coll., which changes and adds to the Law No. 248/1992 Coll., On the Investment Companies and Investment Funds [Zákon, kterým se mění a doplňuje zákon č. 248/1992 Sb., o investičních společnostech a investičních fondech, ve znění pozdějších předpisů]. (1996). Retrieved 6 September 2018, from <http://www.psp.cz/sqw/sbirka.sqw?cz=151&r=1996>
- [59] Investment Companies and Investment Funds Act. Law No. 248/1992 Coll., On the Investment Companies and Investment Funds [Zákon o investičních společnostech a investičních fondech]. (1992). Retrieved 19 August 2018, from <http://www.psp.cz/sqw/sbirka.sqw?cz=248&r=1992>
- [60] Ježek, T. (1994, March 4). *Druhá vlna bude rychlejší* (I. Sklenář, Interviewer) [Kupónová privatizace, list Centra kupónové privatizace].
- [61] Ježek, T. (1997). The Czechoslovak Experience with Privatization. *Journal of International Affairs*, 50(2), 477–488. Retrieved from <https://www.jstor.org/stable/24357627>
- [62] Ježek, T. (2007). *Zrození ze zkumavky: Svědectví o české privatizaci 1990–1997*. Praha: PROSTOR.
- [63] Ježek, T. (2010, August 14). *Kuponovka měla jen jednu chybu, říkal v rozhovoru jeden z jejích otců Ježek* (V. Bednár, Interviewer) [Lidové noviny].
- [64] Ježek, T. (2015, February 3). *S Klaussem bych do privatizace znovu nešel, říká ekonom Ježek* (DVTV, Interviewer). Retrieved from <https://video.aktualne.cz/dvtv/s-klaussem-bych-do-privatizace-znovu-nesel-rika-ekonom-jezek/r~0e99864aaec11e4a10c0025900fea04/>
- [65] Jílek, J. (2009). *Akciové trhy a investování*. Praha: Grada publishing.
- [66] Johnson, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2000). Tunneling. *The American Economic Review*, 90(2), 22–27. Retrieved from <http://www.jstor.org/stable/117185>
- [67] Joint-Stock Company Act. Law No. 104/1990 Coll., On the Joint-Stock Companies [Zákon o akciových společnostech]. (1990). Retrieved 26 August 2018, from <https://www.psp.cz/sqw/sbirka.sqw?cz=104&r=1990>
- [68] justice.cz. (1991). *Zakladatelský plán investičního privatizačního fondu YSE a.s.* (Zakladatelské Dokumenty No. B 1132/SL2/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=16362148&subjektId=416032&spis=73898>
- [69] justice.cz. (1995a). *Notářský zápis: osvědčení o průběhu části jednání náhradní valné hromady akcionářů akciové společnosti IF Čermák a Plevač Invest, a.s.* (Notářský Zápis No. B 667/SL1/KSBR). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=15435868&subjektId=678028&spis=683045>
- [70] justice.cz. (1995b). *Notářský zápis průběhu řádné valné hromady obchodní společnosti YSE 2, a.s.* (Notářský Zápis No. B 2152/SL24/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14612175&subjektId=61384&spis=74841>
- [71] justice.cz. (1996a). *Notářský zápis: osvědčení o konání mimořádné valné hromady společnosti AGB, investiční fond II, a.s.* (Notářský Zápis No. B 2185/SL2/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14019541&subjektId=448478&spis=74872>

- [72] justice.cz. (1996b). *Notářský zápis: osvědčení o průběhu mimořádné valné hromady společnosti TREND, všeobecný investiční fond, a.s.* (Notářský Zápis No. B 1389/SL1/KSHK). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=12807301&subjektId=416108&spis=607527>
- [73] justice.cz. (1996c). *Notářský zápis: osvědčení o průběhu řádné valné hromady společnosti Creditanstalt český infrastrukturní investiční fond, a.s.* (Notářský Zápis No. B 1175/SL9/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14471533&subjektId=416052&spis=73940>
- [74] justice.cz. (1996d). *Notářský zápis průběhu mimořádné valné hromady obchodní společnosti YSE 2, a.s.* (Notářský Zápis No. B 2152/SL26/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14612181&subjektId=61384&spis=74841>
- [75] justice.cz. (1996e). *Stanovy, I. C.S. Holding, a.s.* (Stanovy Společnosti No. B 1119/SL1/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14469784&subjektId=702405&spis=73886>
- [76] justice.cz. (1996f). *Účetní závěrka a zpráva auditora společnosti AGB, investiční fond I., a.s.* (Účetní Závěrka No. B 1164/SL3/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14470642&subjektId=432430&spis=73929>
- [77] justice.cz. (1996g). *Účetní závěrka společnosti Harvardská arbitrážní společnost, a.s. k 31.12.1996* (Účetní Závěrka, Zpráva Auditora No. B 1232/SL1/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=13964835&subjektId=432662&spis=73990>
- [78] justice.cz. (1996h). *Účetní závěrka společnosti Harvardská kontrariánská společnost, a.s. k 31.12.1996* (Účetní Závěrka, Zpráva Auditora No. B 1234/SL1/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=13964845&subjektId=432673&spis=73992>
- [79] justice.cz. (1996i). *Účetní závěrka společnosti Harvardská diamantová společnost, a.s. k 31.12.1996* (Účetní Závěrka, Zpráva Auditora No. B 1235/SL1/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14007088&subjektId=444730&spis=73993>
- [80] justice.cz. (1996j). *Účetní závěrka společnosti Harvardská finanční společnost, a.s. k 31.12.1996* (Účetní Závěrka, Zpráva Auditora No. B 1041/SL1/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=13949023&subjektId=427474&spis=73809>
- [81] justice.cz. (1996k). *Účetní závěrka společnosti Harvardský průmyslový holding, a.s. k 31.12.1996* (Účetní Závěrka, Zpráva Auditora No. B 1040/SL4/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=11904949&subjektId=704117&spis=73808>
- [82] justice.cz. (1996l). *Účetní závěrka společnosti Harvardský spolek menších společností, a.s. k 31.12.1996* (Účetní Závěrka, Zpráva Auditora No. B 1233/SL1/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=13964843&subjektId=432665&spis=73991>
- [83] justice.cz. (1996m). *Zpráva auditora o ověření účetní závěrky k 31.12.1996 firmy BETA Brno, a.s.; Přehled o peněžních tocích (cash flow).* (Účetní Závěrka No. B 662/SL5/KSBR). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=15435434&subjektId=553320&spis=683041>
- [84] justice.cz. (1997a). *Notářský zápis : osvědčení o konání mimořádné valné hromady společnosti AGB, investiční fond II, a.s.* (Notářský Zápis No. B 2185/SL1/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14019540&subjektId=448478&spis=74872>

- [85] justice.cz. (1997b). *Notářský zápis: osvědčení o průběhu části jednání mimořádné valné hromady společnosti Desta a.s.* (Notářský Zápis No. B 65/SL1/KSUL). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=11777565&subjektId=649941&spis=540319>
- [86] justice.cz. (1997c). *Notářský zápis průběhu jednání představenstva akciové společnosti Drůbež Příšovice, a.s.* (Notářský Zápis No. B 1635/SL1/KSUL). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=12039843&subjektId=549194&spis=541450>
- [87] justice.cz. (1997d). *Notářský zápis průběhu řádné valné hromady obchodní společnosti YSE, a.s.* (Notářský Zápis No. B 1132/SL4/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=16362146&subjektId=416032&spis=73898>
- [88] justice.cz. (1997e). *Notářský zápis : rozhodnutí nuceného správce v působnosti valné hromady investiční společnosti Bohemia, a.s.* (Notářský Zápis No. B 1044/SL1/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14442644&subjektId=427458&spis=73812>
- [89] justice.cz. (1997f). *Notářský zápis : rozhodnutí o změnách ve společnosti A-INVEST, investiční společnost, a.s.* (Notářský Zápis No. B 1387/SL1/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14479402&subjektId=433184&spis=74131>
- [90] justice.cz. (1997g). *Stanovy, Investiční fond Mercia, a.s.* (Stanovy Společnosti No. B 6172/SL2/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=16514695&subjektId=206764&spis=78369>
- [91] justice.cz. (1997h). *Účetní závěrka a zpráva auditora společnosti C.S. Infrastrukturní investiční fond, a.s.* (Účetní Závěrka No. B 1175/SL22/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14471565&subjektId=416052&spis=73940>
- [92] justice.cz. (1997i). *Účetní závěrka a zpráva auditora společnosti Moravskočeská investiční společnost, a.s.* (Účetní Závěrka No. B 618/SL1/KSOS). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=15005001&subjektId=493934&spis=816753>
- [93] justice.cz. (1997j). *Účetní závěrka, výroční zpráva a zpráva auditora společnosti A-INVEST, investiční společnost, a.s.* (Účetní Závěrka No. B 1387/SL2/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14479406&subjektId=433184&spis=74131>
- [94] justice.cz. (1997k). *Účetní závěrka, výroční zpráva a zpráva auditora společnosti Český investiční holding, a.s.* (Účetní Závěrka No. B 1119/SL3/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14469787&subjektId=702405&spis=73886>
- [95] justice.cz. (1997l). *Výroční zpráva Kotva, a.s.* (Účetní Závěrka, Výroční Zpráva, Zpráva Auditora No. B 2370/SL1/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14083427&subjektId=213120&spis=75042>
- [96] justice.cz. (1998a). *Tesla Karlín, a.s. Rozvaha v plném rozsahu k 31. prosinci 1997* (Účetní Závěrka No. B 1520/SL1/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=13345496&subjektId=416608&spis=74253>
- [97] justice.cz. (1998b). *Účetní závěrka a zpráva auditorů společnosti Agrobanka Praha, a.s., za rok končící 31. prosince 1997* (Účetní Závěrka, Zpráva Auditora No. B 53/SL14/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=16358951&subjektId=75309&spis=72887>
- [98] justice.cz. (2000a). *Notářský zápis: osvědčení o průběhu mimořádné valné hromady společnosti A-INVEST, investiční společnost, a.s.* (Notářský Zápis No. B 1387/SL3/MSPH). Retrieved from

- <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14479454&subjektId=433184&spis=74131>
- [99] justice.cz. (2000b). *Účetní závěrka a zpráva auditora společnosti A-INVEST, investiční společnost, a.s.* (Účetní Závěrka No. B 1387/SL4/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14479411&subjektId=433184&spis=74131>
 - [100] justice.cz. (2001). *Zpráva auditora o přezkoušení účetnictví a účetní závěrky investiční společnosti Bohemia, a.s., k 31. 12. 2000* (Výroční Zpráva [2000], Zpráva Auditora No. B 1044/SL3/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14442647&subjektId=427458&spis=73812>
 - [101] justice.cz. (2002). *Zpráva auditora o přezkoušení účetnictví a účetní závěrky investiční společnosti Bohemia, a.s., k 31. 12. 2001* (Výroční Zpráva [2000], Zpráva Auditora No. B 1044/SL6/MSPH). Retrieved from <https://or.justice.cz/ias/ui/vypis-sl-detail?dokument=14442655&subjektId=427458&spis=73812>
 - [102] justice.cz. (2019a). *Úplný výpis z obchodního rejstříku: Agrobanka Praha, a. s. v likvidaci, IČO 00411850* (No. B 53). Retrieved from <https://or.justice.cz/ias/ui/rejstrik-firma.vysledky?subjektId=75309&typ=UPLNY>
 - [103] justice.cz. (2019b). *Úplný výpis z obchodního rejstříku: Cifin a.s. v likvidaci, IČO 25093240* (No. B 4438). Retrieved from <https://or.justice.cz/ias/ui/rejstrik-firma.vysledky?subjektId=480154&typ=UPLNY>
 - [104] justice.cz. (2019c). *Úplný výpis z obchodního rejstříku: C.S. Fond, a.s., v likvidaci, IČO 43003401* (No. B 967). Retrieved from <https://or.justice.cz/ias/ui/rejstrik-firma.vysledky?subjektId=427218&typ=UPLNY>
 - [105] justice.cz. (2019d). *Úplný výpis z obchodního rejstříku: FIREX akciová společnost* (No. B 560). Retrieved from <https://or.justice.cz/ias/ui/rejstrik-firma.vysledky?subjektId=425620&typ=UPLNY>
 - [106] justice.cz. (2019e). *Úplný výpis z obchodního rejstříku: HARVARD CAPITAL and CONSULTING a.s.* (No. B 279). Retrieved from <https://or.justice.cz/ias/ui/rejstrik-firma.vysledky?subjektId=424899&typ=UPLNY>
 - [107] justice.cz. (2019f). *Úplný výpis z obchodního rejstříku: Investiční fond MERCIA, a.s., IČO 15054101* (No. B 6172). Retrieved from <https://or.justice.cz/ias/ui/rejstrik-firma.vysledky?subjektId=206764&typ=UPLNY>
 - [108] justice.cz. (2019g). *Úplný výpis z obchodního rejstříku: KOTVA, a.s.* (No. B 2370). Retrieved from <https://or.justice.cz/ias/ui/rejstrik-firma.vysledky?subjektId=213120&typ=UPLNY>
 - [109] King, L. P. (2001). Making Markets: A Comparative Study of Postcommunist Managerial Strategies in Central Europe. *Theory and Society*, 30(4), 493–538. Retrieved from <https://www.jstor.org/stable/658125>
 - [110] Kogut, B., & Spicer, A. (2002). Capital Market Development and Mass Privatization Are Logical Contradictions: Lessons from Russia and the Czech Republic. *Industrial and Corporate Change*, 11(1), 1–37. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=eoh&AN=0603651&site=ehost-live>
 - [111] Kotrba, J., Kočenda, E., & Hanousek, J. (1999). The Governance of Privatization Funds in the Czech Republic. In M. Simoneti, S. Estrin, & A. Böhm (Eds.), *The Governance of Privatization Funds: Experiences of the Czech Republic, Poland and Slovenia*. Cheltenham, UK: Edward Elgar.
 - [112] Kouba, K., Vychodil, O., & Roberts, J. (2005). *Privatizace bez kapitálu: zvýšené transakční náklady české transformace*. Praha: Karolinum.
 - [113] kurzy.cz. (2019). Retrieved from <https://www.kurzy.cz>

- [114] Large-Scale Privatisation Act Amendment. Law No. 190/1995 Coll., which changes and adds to the law no. 92/1991 Coll., On the Conditions of the State Property Conveyance. (1995, September 6). Retrieved 20 January 2019, from <https://www.slov-lex.sk/pravne-predpisy/SK/ZZ/1995/190/19950914.html>
- [115] Large-Scale Privatization Act. Law No. 92/1991 Coll., On the Conditions of the State Property Conveyance [Zákon o podmínkách převodu majetku státu na jiné osoby]. (1991). Retrieved 19 August 2018, from <http://www.psp.cz/en/sqw/sbirka.sqw?cz=92&r=1991>
- [116] Large-Scale Privatization Bill. No. 257, On the State Property Conveyance for the Purpose of Entrepreneurship [Vládní návrh zákona o převodu majetku státu na jiné osoby pro účely podnikání]. (1990). Retrieved 24 August 2018, from http://www.psp.cz/eknih/1990fs/tisky/t0257_01.htm
- [117] Laštovička, R. (1993). Investment Behaviour in Czech Voucher Privatization. *CERGE-EI Working Paper Series*, 42.
- [118] Laštovička, R., Marcinčin, A., & Mejstřík, M. (1994). Privatization and Opening the Capital Market in the Czech and Slovak Republics. *CERGE-EI Working Paper Series*, 1994(54).
- [119] Lee, C. M. C., Shleifer, A., & Thaler, R. H. (1990). Anomalies: Closed-End Mutual Funds. *The Journal of Economic Perspectives*, 4(4), 153–164. Retrieved from <https://www.jstor.org/stable/1942727>
- [120] Libnar, D. (1993, December 2). Investiční společnosti na finančním trhu. *Kupónová Privatizace, List Centra Kupónové Privatizace*, p. 48.
- [121] Lintner, J. (1965). Security Prices, Risk, and Maximal Gains From Diversification. *The Journal of Finance*, 20(4), 587–615. <https://doi.org/10.2307/2977249>
- [122] Liška, V., & Gazda, J. (2004). *Kapitálové trhy a kolektivní investování*. Praha: Professional Publishing.
- [123] Macháček, J. (1997). První velké ryby za mřížemi. *Respekt*, 6(11).
- [124] Mejstřík, M. (1997). The Emergence of Institutional Owners : the role of banks and nonbanking financial institutions in the privatization of the economy and the banks. In M. Mejstřík, A. Derviz, & A. Zemplinerová (Eds.), *The Privatization Process In East-Central Europe : Evolutionary process of Czech privatization*. USA, Massachusetts: Kluwer Academic Publishers.
- [125] Mejstřík, M., Marcinčin, A., & Laštovička, R. (1997). Voucher privatization, ownership structures, and emerging capital market in the Czech Republic. In M. Mejstřík, A. Derviz, & A. Zemplinerová (Eds.), *The Privatization Process In East-Central Europe : Evolutionary process of Czech privatization*. USA, Massachusetts: Kluwer Academic Publishers.
- [126] Ministry of Finance. (1997, November 5). *Analýza českého kapitálového trhu*. Hospodářské noviny.
- [127] Mládek, J. (1995). Privatizing the Czech Republic. *World Policy Journal*, 12(3), 124–128. Retrieved from <https://www.jstor.org/stable/40209438>
- [128] Mlčoch, L. (2000). *Úvahy o české ekonomické transformaci*. Praha: Vyšehrad.
- [129] MSČR (Ministerstvo spravedlnosti České republiky). (2012, 2015). Veřejný rejstřík a sbírka listin. Retrieved from eJustice website: <https://or.justice.cz/ias/ui/rejstrik>
- [130] Myant, M. R. (2013). *Vzestup a pád českého kapitalismu: ekonomický vývoj České republiky od roku 1989*. Praha: Academia.
- [131] Myant, M. R., & Drahokoupil, J. (2013). *Tranzitivní ekonomiky : Politická ekonomie Ruska, východní Evropy a střední Asie*. Praha: Academia.
- [132] NR SR. (1993, October 6). Slovenská národná rada / NR SR 10 (1992 - 1994), Stenografická správa o 22. schôdzi Národnej rady Slovenskej republiky. Retrieved 19 January 2019, from

- Spoločná Česko-Slovenská Digitálna parlamentná knižnica website:
<https://www.nrsr.sk/dl/Browser/Document?documentId=75882>
- [133] NR SR. (1994a, February 16). Slovenská národná rada / NR SR 10 (1992 - 1994), Stenografická správa o 26. schôdzi Národnej rady Slovenskej republiky. Retrieved 19 January 2019, from Spoločná Česko-Slovenská Digitálna parlamentná knižnica website:
<https://www.nrsr.sk/dl/Browser/Document?documentId=71574>
- [134] NR SR. (1994b, December 15). Národná rada Slovenskej republiky 1 (1994 - 1998), Stenografická správa o 3. schôdzi Národnej rady Slovenskej republiky. Retrieved 19 January 2019, from Spoločná Česko-Slovenská Digitálna parlamentná knižnica website:
<https://www.nrsr.sk/dl/Browser/Document?documentId=65802>
- [135] NR SR. (1995, March 6). Národná rada Slovenskej republiky 1 (1994 - 1998), Stenografická správa o 5. schôdzi Národnej rady Slovenskej republiky. Retrieved 19 January 2019, from Spoločná Česko-Slovenská Digitálna parlamentná knižnica website:
<https://www.nrsr.sk/dl/Browser/Document?documentId=65808>
- [136] OECD. (1999). *OECD Principles of Corporate Governance*. Retrieved from https://www.oecd-ilibrary.org/governance/oecd-principles-of-corporate-governance_9789264173705-en
- [137] Palda, K. (1997). Czech privatization and corporate governance. *Communist and Post-Communist Studies*, 30(1), 83–93. [https://doi.org/10.1016/S0967-067X\(96\)00023-2](https://doi.org/10.1016/S0967-067X(96)00023-2)
- [138] Peng, M. W., & Shekshnia, S. V. (2001). How Entrepreneurs Create Wealth in Transition Economies [and Executive Commentary]. *The Academy of Management Executive* (1993-2005), 15(1), 95–110. Retrieved from <https://www.jstor.org/stable/4165713>
- [139] Postup investičních fondů po skončení první vlny kuponové privatizace. (1993). *Kuponová Privatizace*, 3(15).
- [140] PSP ČR. (1992, November 4). Federální shromáždění ČSFR, 1992 – 1992 Společné schůze SL a SN, Stenoprotokoly 5. schůze. Retrieved 19 January 2019, from Digitální repozitář, Společná česko-slovenská digitální parlamentní knihovna website:
<https://www.psp.cz/eknih/1992fs/slsn/stenprot/005schuz/s005013.htm>
- [141] PSP ČR. (1996, February 8). Stenografický zápis 39. schůze, 8. února 1996, XXXVI. Vládní návrh zákona, kterým se mění a doplňuje zákon č. 248/1992 Sb., o investičních společnostech a investičních fondech, ve znění pozdějších předpisů (sněmovní tisk 2080) - první čtení. Retrieved from Digitální depozitář website:
<http://www.psp.cz/eknih/1993ps/stenprot/039schuz/39-3.html>
- [142] Quandl Inc. (2018). Prague Stock Exchange. Retrieved 4 December 2018, from Quandl Financial Data website: <https://www.quandl.com/data/PRAGUESE-Prague-Stock-Exchange>
- [143] Richter, T. (2005). *Kuponová privatizace a její vlivy na správu a financování českých akciových společností*. Praha: Karolinum.
- [144] RM-systém. (1999). *Výroční zpráva 1999*.
- [145] Rules and regulations of the PSE [Burzovní řád Burzy cenných papírů Praha, a.s., schválený 1. řádnou valnou hromadou akcionářů, ve znění změn a doplňků přijatých 2. valnou řádnou hromadou konanou dne 21. 4. 1994]. (1995). In *Úplné Znění. Cenné papíry: zákon o cenných papírech, o dluhopisech, o burze : směnečný a šekový zákon : burza cenných papírů Praha, a.s. RM-system, a.s. : podle stavu k 1.4.1995*. Ostrava: Sagit.
- [146] Savas, E. S. (1992). Privatization in Post-Socialist Countries. *Public Administration Review*, 52(6), 573–581. <https://doi.org/10.2307/977167>
- [147] Security Market Act. Law No. 214/1992 Coll., On the Stock Exchange [Zákon o burze cenných papírů]. (1992). Retrieved 7 September 2018, from <https://www.psp.cz/sqw/sbirka.sqw?cz=214&r=1992>

- [148] Sharpe, W. F. (1964). Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk. *The Journal of Finance*, 19(3), 425–442. <https://doi.org/10.2307/2977928>
- [149] Shleifer, A., & Vishny, R. W. (1997). A Survey of Corporate Governance. *The Journal of Finance*, 52(2), 737–783. <https://doi.org/10.2307/2329497>
- [150] Smith, A. (1904). *An Inquiry into the Nature and Causes of the Wealth of Nations* (E. Cannan, Ed.). London: Methuen&Co.
- [151] Sociologický ústav AVČR. (1995a). *Deset let společenské transformace v České a Slovenské republice 1999* (No. CSDA00128). Praha: ČSAV.
- [152] Sociologický ústav AVČR. (1995b). *Srpen 1995 - Kontinuální měsíční výzkum IVVM* (No. V9508). Praha: ČSAV.
- [153] Sociologický ústav ČSAV. (1991). *Ekonomická očekávání a postoje 4* (No. CSDA00028). Praha: ČSAV.
- [154] *Statistická ročenka České a Slovenské Federativní Republiky*. (1992). Praha: Federální statistický úřad.
- [155] *Statistická ročenka České republiky*. (1997). Praha: Scientia.
- [156] Stock-exchange fees for 1995 [Burzovní poplatky na rok 1995]. (1995). *Burza*, 2(16), 20.
- [157] The approach of Ministry of Finance n. 101/57 114/1996 to applying § 17 par. 4 of the amended Act no. 248/1992 Coll. [Postup Ministerstva financí čj. 101/57 114/1996, při uplatňování §17 odst. 4 novely zákona č. 248/1992 Sb.]. (1995). In *Úplné Znění. Cenné papíry: zákon o cenných papírech, o dluhopisech, o burze : směnečný a šekový zákon : burza cenných papírů Praha, a.s. RM-system, a.s. : podle stavu k 1.4.1995*. Ostrava: Sagit.
- [158] The Czechoslovak State Bank Act. Law No. 22/1992 Coll., on the State Bank of Czechoslovakia [Zákon o Státní bance československé]. (1992). Retrieved 19 August 2018, from <https://www.psp.cz/sqw/sbirka.sqw?cz=22&r=1992>
- [159] The World Bank. (1999). *Czech Republic - Capital market review* (No. 19306; p. 220). Retrieved from The World Bank website: <http://documents.worldbank.org/curated/en/769811468246580156/Czech-Republic-Capital-market-review>
- [160] Tomass, M. (1999). A Decade of Conflicts in Czech Economic Transformation. *Journal of Economic Issues*, 33(2), 315–324. Retrieved from <https://www.jstor.org/stable/4227442>
- [161] Tříška, D. (1996). The role of investment funds in the Czech Republic. *Czech Management Center Working Paper Series*. Retrieved from <https://deepblue.lib.umich.edu/bitstream/handle/2027.42/39413/wp23.pdf?sequence=3>
- [162] Tříška, D. (2002). Východiska, cíle a principy provedení kuponové privatizace. In *CEP Sborník: Vol. 13. Kuponová privatizace*. Retrieved from <http://cepin.cz/cze/kniha.php?ID=27>
- [163] Tříška, D. (2016a). *Ekonomie jako osud*. Praha: Institut Václava Klause.
- [164] Tříška, D. (2016b). Kuponová privatizace po 25 letech. In *25 let české transformace*. Praha: Institut Václava Klause.
- [165] Tříška, D., Klaus, V., Holman, R., Rudlovčák, V., Hrubý, M., Mládek, J., & Loužek, M. (2002). *Kuponová privatizace*. Retrieved from <http://cepin.cz/cze/kniha.php?ID=27>
- [166] Veverka, J. (1996, December 11). Kapitálový trh čekají změny, mnohé mohou být překvapením. *Hospodářské Noviny*.
- [167] Vojtěch, O. (1995). Drobní akcionáři, plačte. *Respekt*, 4(44).
- [168] Výsledky pátého, posledního kola první vlny kuponové privatizace. (1992). *Kuponová Privatizace*, 2(11).

- [169] Výsledky prvního kola a nabídka s kursy akcií pro druhé kolo kupónové privatizace. (1992). *Kupónová Privatizace*, 2(7).
- [170] Wallace, C. P. (1996, December 23). The Pirates of Prague. *Magazine Fortune*, 1996. Retrieved from http://archive.fortune.com/magazines/fortune/fortune_archive/1996/12/23/219833/index.htm
- [171] Waterman, R. W., & Meier, K. J. (1998). Principal-Agent Models: An Expansion? *Journal of Public Administration Research and Theory*, 8(2), 173–202. Retrieved from <https://www.jstor.org/stable/1181555>
- [172] Weiss, A., & Nikitin, G. (1998). *Performance of Czech Companies by Ownership Structure* (SSRN Scholarly Paper No. ID 148834). Retrieved from Social Science Research Network website: <https://papers.ssrn.com/abstract=148834>
- [173] Young, D., S. (1997). The demand side of voucher privatization on central and eastern Europe. In I. W. Lieberman, S. S. Nestor, & R. M. Desai (Eds.), *Between State and Market: Mass Privatization in Transition Economies* (p. 1). Retrieved from <http://documents.worldbank.org/curated/en/661531468753344945/Between-state-and-market-mass-privatization-in-transition-economies>
- [174] Yusupová, E. (2006). Information Asymmetry, Share Mispricing and the Coordination Problem: Investor Portfolio Choice in Czech Voucher Privatization. *CERGE-EI Working Paper Series*, 301.
- [175] Židek, L. (2017). *From central planning to the market: The transformation of the Czech Economy, 1989–2004*. Budapest: Central European University Press.