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Restructuring in the Czech Republic: Beyond Ownership and Bankruptcy*

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Draft: Please do not quote out of context; all data is preliminary

*/ We use aliases for the names of the companies and their managers to protect their privacy. An earlier version of this paper was presented at the Ford Foundation Conference on CR transition at CERGE-EI, Prague CR, May 1994.

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Abstract

Restructuring of large industrial holdings in the Czech Republic (S-firms) depends on probes into new markets. The development and financing of probes generates internal holdups and stalemates among the government, banks and S-firms. The government tries to preserve the value of just-privatized S-firms while avoiding subsidies; banks, facing their delinquency, cannot force bankruptcy since keeping them as clients is as important as maintaining capital adequacy. A compromise arises, IMBR (intricate monitoring based restructuring), where the outside parties condition their involvement on a peculiar reorganization of the firm. We provide the empirical and theoretical underpinnings of IMBR, the emergence of which is neither deliberate nor accidental.

Keywords: Restructuring, privatization, incomplete contracts, monitoring.

Abstrakt

Restrukturalizace velkých průmyslových holdingů (S-firem) v České republice závisí na průzkumech nových trhů. Vývoj a financování průzkumů vytváří zdržení a patové situace mezi vládou, bankami a státními podniky. Vláda se snaží zachovat hodnotu právě privatizovaných S-firem a současně se vyhnout poskytování dotací. Banky, které čelí delikventnímu chování podniků, nemohou iniciovat bankroty, neboť udržení této klientely je pro ně stejně důležité jako udržení kapitálové přiměřenosti. Vzniká kompromis, IMBR (intricate monitoring based restructuring – restrukturalizace založená na složitém monitorování), kde vnější strany podmiňují svoji angažovanost vlastní reorganizací firmy. Poskytujeme empirickou a teoretickou podporu IMBR, jejíž objevení se není záměrné ani náhodné.

Klíčová slova: restrukturalizace, privatizace, neúplné kontrakty, monitorování.

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1. Introduction

Five years into post-socialist economic and political reforms, the Czech Republic (CR) is often hailed as the crowning success of rapid market liberalization and privatization, typified by the mass privatization of firms through vouchers. Yet on closer inspection the results and the method of reform are less clear. On the hand, alarming rates of commercial indebtedness have resulted in virtually no bankruptcies and the state still holds strong direct and indirect influence over firms, particularly in the crucial financial and industrial sectors.[1] On the other hand, despite continued state guidance and the lack of firm or plant closing, progress has been made in restructuring, notably through government sponsored negotiated solutions to resolve stalemates among the banking and enterprise parties to large industrial assets.[2]

This paper examines why expected forms of corporate restructuring and ownership have not come about and how a new institutional arrangement for the restructuring of large industrial concerns (S-firms) has emerged in the Czech Republic. This arrangement was not designed or created deliberately; rather, it appeared through clashes among the interested parties to the assets – government, bank, and firm level actors. The upshot is that reform appears less about getting the property rights "right" and rapid divestiture of state holdings; it is more about how parties to the assets, including the state, resolve collective action problems through the continual trading of rights and responsibilities while deliberating over concrete restructuring steps. Let us first introduce two important conceptual points, which can help one understand better why government participation in restructuring is endogenous to privatization and can create unforeseen institutional incentives.

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[1] The indirect ownership and influence of the state through the banks, cross holdings among the dominant bank investments funds (IPFs), and the passiveness of these IPFs are well documented. Moreover, no less than 30% of assets in engineering, 78% in iron and steel, and 47% in banks remain in state hands as of June 1994. See Coffee 1994, Pistor and Turkewitz, 1994.

[2] The most noted cases concern holding companies, each dominating their respective industries: Skoda Plzen and CKD in engineering; Poldi Steel, Vitkovice, and Nova Hut in steel, Aero in aircraft manufacturing, the five major chemical companies under the Chemapol Group; and Liaz, Avia in truck manufacturing (Tatra, though privatized with 97% vouchers has effectively come under the guidance of the Ministry of Industry). Add to this, a third of the machine tool firms, and in June 1994, remaining shares (40% on average) of 44 large manufacturing firms were transferred from the FNP back to the direct monitoring of the Ministry of Industry.

First, privatization is often understood as the technical transfer of ownership from state to private hands. While analysts may disagree about the speed and mode of this transfer, the general view is that once exclusive private owners, a strict bankruptcy law, and a stock market are established, managers would be disciplined, loss-making units closed, and debtors punished.[3] Often overlooked, however, is a key second component to privatization: an implicit guarantee by the state that the assets are viable and have value. Otherwise, the assets will become worthless as fast as they are privatized and return to government ownership through bailouts. (For related warnings, see Dabrowski et. al. 1991, Stark & Bruszt 1994)

This duality appears at all levels of economic institutions and is potentially in conflict. In the Czech Republic we may see it at three levels. For instance, the post-1990 Civic Forum (OF) government pursued at times conflicting agendas of rapid voucher privatization and attracting strategic FDI. The banks attempted to clean their portfolios (i.e., asserting their rights as creditors to punish debtors) but also maintain a client base. Firms and units tried to assert their autonomy and pursue new production programs but could not ignore the financial and production needs of their few collaborators to existing joint programs.

Second, the value of the assets is not so much indicated by the physical assets or the accounting records, but rather by the ability of the parties to the assets to cooperate. Due to the peculiarities of Czechoslovak industrialization and central planning, concentrated, distinct groups of plants, firms, and the current commercial banks developed tight financial and production links among them. In the rush of privatization, these interdependencies and overlapping control rights over common assets largely remained intact, and are breeding grounds for hold-ups under the current uncertainties of reform.(McDermott 1995) While each party may be unwilling to compromise its newly gained autonomy, none is willing or financially able to take on the risks of buying out or liquidating one of its few potential suppliers or clients. Stalemates ensue, assets sit idle, and value drops potentially to the point that all connected parties will crash.

Value preservation, thus, is not necessarily injecting state financing into the assets, but rather the state, as the seller, providing some guarantees that all stakeholders will take into account the needs of one another during the current

[3] The most well known discussions in this vein are Lipton and Sachs 1991, Kornai 1990 a,b, Schleifer and Vischny 1992. This builds on the work of Hart 1988 and Hart and Moore 1986. For the framework in Czechoslovakia, see Triska 1990. For a thoughtful criticism and synthesis of the property rights school applied to East Germany, see Griffin 1993 and to China, Cui 1993.

and future reorganization of finances and production. Often the vast transition literature interprets the dual components of privatization as whether to restructure before privatizing or vice-versa. But when the two points about the duality of privatization and the collective action problem inherent in value creation are taken together, one realizes that restructuring and the transfer of rights is simultaneous. That is, in order to assure the commitment of all parties to restructuring, the state may delegate authority to agents and temporarily retain certain control rights to force the economic agents to prove that they are taking earnest steps toward restructuring. At the same time, in order to assure the flow resources and information, the agents often cede control and monitoring rights to one another. In the process, the agents and the state gradually clarify how the risks and benefits are divided. The point is that neither the ownership rights nor the boundaries of the firms, state, and banks may be pure, but a form of monitoring and cooperation is institutionalized.

We will illustrate these arguments in the following three sections. Section 2 explains how the dual character of privatization in the CR shaped the strategy of the leading banks, particularly how the financial crisis emerged with the unforeseen prominence of the role of debt (in turn the banks) in restructuring but without the liquidation of debtors. The government began to prepare the banks for a more active role in restructuring through partial bank recapitalizations and write-offs. Although this state assistance was done in a way to avoid creating the expectation of repeated bailouts, the banks neither got rid of nor helped industrial firms. As the banks positioned themselves as the only secured creditors, they however lacked the resources and equity partner to help bear the risks of a more interventionist approach. With the newly created voucher owners void of adequate financial resources, the only potential partner was the state or a foreign investor into the firms.

Section 3 examines how the dual privatization policies allowed joint ventures (JVs) to become the main form of potential FDI and why they ran aground. JVs were not joint projects per se, but rather frameworks to develop a joint project over time. As the one part of the CR government, which helped nurture the multi-party negotiations lost political power, a pillar in the frameworks fell and so did the JVs.

In this section we define S-firms and introduce our case study, the M&M firm. Restructuring of an S-firm depends on its probes into new markets. For these probes, the S-firm must come up with new or modified products that require the cooperation of several units with the firm. These relations, due to the nature of the probes, are based on incomplete contracts and lead to holdups. The success of restructuring thus depends on how the internal organization of the firm will be changed to solve the holdup, while the seller (state), the banks, and the firm itself deliberate to settle their stalemate.

Section 4 discusses the eventual privatization and restructuring of M&M. It examines in greater detail how the internal and external hold-up problems were resolved not through pure ownership forms, but through government empowerment of new management and the banks and through a forum for frequent negotiations among the government and these agents. This process lasted over two years. The government, through what was nominally a tender, delegated its responsibilities to an owner/manager who was monitored by the banks and the government. To get involved, the banks wanted transparency and the government wanted a complete breakup (atomization). What emerged from a series of negotiations is a system that balances the interests of the central management of the S-firm (holding center) and its subsidiaries through mutual and continuous monitoring of the center, subsidiaries, banks, and the government (IMBR). With such a balance, the holdup problems that may impede restructuring are solvable. What keeps this delicate balance intact are the banks' two level debt finance and the government's insistence on decentralization. The latter provided a window of opportunity for the subsidiaries to learn to be independent and for the center to learn to accommodate the needs of the subsidiaries. We conclude with a discussion of the main issues raised in the essay and their implications for economic reconstruction in the Czech Republic.

The reader should note that M&M is not atypical in the CR. The largest forms of S-firms, commonly known in the CR as holding companies, have all experienced a similar process of hold-ups leading to failed JVs and negotiated privatizations and restructurings. These holdings each are the hubs of the engineering, truck, aircraft, steel, and chemical manufacturing industries. M&M was simply the first case to force the government and the banks to experiment with alternative corporate governance arrangements.

2. The Duality of Privatization and Bank Restructuring in the Czech Republic

The dual character of privatization – the transfer of ownership and the preservation of the value of privatized firms – was personified by two groups within the new OF government during 1990-92. The two groups were not proposing in principle diametrically opposed ideas, but were emphasizing different components of a common privatization program. One group, led by then Federal Finance Minister Vaclav Klaus, believed that government intervention into restructuring was antithetical to privatization. They proposed voucher privatization as the fastest way to proceed with privatization. They would allow temporary and minimal government interventions only to protect the legitimacy of voucher privatization and to strengthen the banks to perform the much needed role of liquidator of debtors. Another group, led namely by Czech Minister of Industry, Jan Vrba, believed that complex reorganization of large industrial firms was intimately related to the method of debt resolution and the inclusion of foreign partners. He strove to limit the use of vouchers, preferring to reserve a significant share of assets in the Fund for National Property (FNP) for potential foreign partners, which would provide investment, know-how and new markets. Thus, for him privatization was not simply prior to restructuring, but at least simultaneous to it.

We will argue here that these potential conflicts had two significant impacts on financial restructuring. First, this tension at the level of the government trickled down to the banking sector as a balancing act between increasing capital adequacy and maintaining a client base. Second, as the Klausian influence increased, the firms could only turn to the banks for short-term operating capital and restructuring finance. The Klausians encouraged this even further by turning a plan to recapitalize firms into one to recapitalize banks. The banks kept all firms at bay by not cutting off even the worst delinquents; but they did not throw their full support to the firms. The combination of these actions created an impasse in restructuring of S-firms (large industrial firm with multiple plants and divisions) where it became almost impossible to guarantee the maintenance of the value of S-firms at least until new owners would take charge.

2.1. Czech Banks and Financial Stalemate

Five main Czech banks grew out of the break up of the former Czechoslovak State Bank in late 1989. Along with the newly created government clearing house KOB,[4] they accounted for 82% of total loans and 85% of total deposits in 1992. The dominant Czech commercial banks, Komercni Banka (KB) and Investicni Banka (IB), had well over 75% of their loan portfolios toward the transforming state and cooperative sectors. The Czech Savings Bank (CSB) held 68% of total deposit, and was the principal source of funds for IB and KB. (Hrncir 1992, 1993; Kerous 1993) Although the government allowed foreign banks to operate in the CR and new domestic banks to be established, the banking sector remained highly concentrated.[5] As of November 1994, the 5 banks plus KOB accounted for 79.1% of loans and 83.6% of deposits.

By the second half of 1992, the Czech financial system was in disarray, with total arrears to banks and firms rising at 250% in 1991 and 100% in 1992. (McDermott 1995) The industrial sectors, particularly engineering and machinery bore the large majority of arrears and risky debt. 1992 estimates showed that no less than 43% of Czechoslovak (CS) firms were in default but with assets still greater than liabilities. The Czech Union of Industry noted that about 60–80% of its members were delinquent in payments. Estimations of risky loans in 1991 ranged between 30% and 60% of total loans. Even by the optimistic calculations of the Czech National Bank (CNB), in Dec. 1993, 23% of total loans were classified as risky and doubtful. 27.7% of total loans in manufacturing industries and 36% of loans in the engineering and steel sectors were classified as risky and doubtful. (Estimations based on Hrncir 1993; Kerous 1993; CNB reports.) See Table 1.

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[4] The Consolidation Bank (KOB) was established in mid-1991. Under the jurisdiction of the Ministry of Finance, this bank clearing house was initially given a six-month license and financed mainly by the CNB, the Czech Savings Bank, and the Czech Insurance Company. The aim was to assume and restructure only the TOZ, continuously revolving loans for inventories established in the 1970s. 80% of TOZ was transferred to the KOB -- worth Kc80 billionn for the CR and 20% of total loans. TOZ were turned into new eight-year loans with a higher interest rate of 13%. (KOB 1993.)

[5] Despite the government's interest in achieving a more competitive banking structure through new private banks, the imposition of strict capital standards, the lack of state deposit insurance, the costs of developing a branch system and deposit base have limited new banks' growth. New banks are required to have capital adequacy ratios of 8% and the minimum capital requirements have risen to Kc300 million and Kc500 million (about 30 Kc = $1). With state insured deposits only for the big four, gaining deposits and creating a branch system from scratch has become extremely difficult.

As corporate debt rose, the government was increasingly concerned about transferring worthless equity to the public. It took two main measures to fulfil the second component of privatization (ie, protect the value of firm assets). One concerned suspension of the bankruptcy law (see 2.b.); the other focused on debt relief. These two measures would make the banks effectively the main agents of corporate governance. Mass write-offs were rejected because of the fear that they would immediately require a recapitalization of the banks and the funding requirement could have jeopardized the nascent stabilization program. Vrba proposed a one-time transfer of all industrial firm debts above a certain debt-equity ratio into a government clearing house. Receipts from sales or JVs would be earmarked for the gradual payment of these debts. Klaus moved quickly to block it. Implicit in Vrba's proposal was that privatization of industrial companies would be focused on gaining foreign investment, thus slowing voucher privatization. Instead, Klaus allowed the banks to choose which debts to write off and thus moved the action under the control of his ministry.

The banks meanwhile were under pressure to increase their capital base and cleanup their balance sheets. The government and the CNB moved quickly to use the opportunities of a relatively stable macro-economy to set strict operating conditions for the newly formed state commercial banks. The aim was to strengthen their capital base and shut down SOE's easy access to easy money, a growing problem in Poland and Hungary. The main Czech banks, notably IB and KB, started with meager capital adequacy ratios between 1.25 and 1.5%. They were to increase this ratio to gain international finance and to meet legal standards – 6.25% by 12/93 and 8% by 12/96. (Investicni Banka 1993) This would be monitored both by the CNB, which was providing important start-up financing, and international audits.

The main banks faced a serious dilemma: on the one hand, they could drop troubled industrial firms and hope to retain the custom of the good firms in the face of increased competition from the foreign banks; on the other hand, they could replenish their capital by increasing interest rates on paying customers and buy time to sit on the loans to the troubled firms in the hope that these firms would form a captive client base. Heavily dependent on the troubled industrial firms, IB and KB had to clean their portfolios while making sure that these industrial firms did not perish in the process.[6] Liquidations or write-offs to

[6] For instance, as of 12/93, industrial manufacturing firms accounted for about 35% of KBs and over 40% of IBs loan portfolio. As of 12/92, IB's and KB's interest income accounted for 96% and 93% of total income, respectively.

improve bank portfolios appeared untenable since the existing stock of inherited loans was completely unsecured, loan-loss reserves were very low, and the banks were highly dependent on interest income rather than fee income.
The banks instead chose to hang on the industrial firms and increase interest rates. First, the banks set out to use interest income to increase their reserves and invest in their infrastructure, to securitize existing loans, and to lend short. In commercializing inherited loans, banks rose interest rates from a 1989 average of 4–6% to 18% and then to 24%. Margins between deposit and credit rates have stayed at about 6.7%–7% since the end of 1990. The government lowered taxes on income retained as reserves. For instance, in 1992 KB and IB set aside, respectively, 30% and 18% of income for reserves alone. Collateralization of and an interest rate increase on outstanding loans was a precondition for firms to receive short-term loans, which became a vital source of firm operating capital and cash flow. The immediate consequences were a tightening of lending and a drastic rise in financial costs for firms.[7]

Second, the government recapitalization schemes gave the banks the opportunity to cut off insolvent industrial firms, but they chose not to do so. To avoid impact on the state budget, the FNP, the administrator for property to be privatized, would finance a limited write-off from its already accumulated privatization receipts. In early 1992 the FNP transferred to the main Czech banks Kc22.2 billion for loan write-offs and Kc7.8 billion in bonds for bank recapitalization. In Fall 1992, the KOB purchased Kc15 billion of loans from KB and IB at 80% the nominal value.[8] The FNP financed most of the purchase, with KB and IB making additional medium-term deposits into the KOB. Rather than writing off significantly risky loans of the largest firms, which would be tantamount to a speedy bankruptcy from the banks' point of

[7] First, as lending by the main banks grew well below the rate of inflation, notably toward industrial sectors, the share of short-term loans grew dramatically and long term loans declined. Total loans grew in 1991 by only 9% and in 1992 by 15%. But loans by IB, KB, and the Czechoslovak Trade Bank (for foreign trade), the primary lenders to the industrial sectors, grew in 1992 by only 4%, -5%, -1% respectively. Despite significant increases in their deposits, loans to manufacturing industries grew by only 4.5% and to engineering and steel only 6.3%. Second, the serious burden of interest rate payments on firms can be seen for instance in the jump in interest rate costs as a percentage of gross income. In 1991, this ratio increased in the engineering industry from 15% to 21%, in electronics from 8.7% to 19%, and in steel from 6.7% to 15%. While 1992 debt-equity ratios for these sectors averaged about 30%, their bank debts accounted for over half of total liabilities. (Buchtikova and Capek 1994; Czech Statistical Office; CNB reports.)

[8] All these schemes removed loans worth Kc45 billion (10% of total outstanding loans of the banking sector) from the books of IB and KB.

view, the banks spread the write-offs over their entire portfolios.[9] (Kerous 1993, Capek 1994.)

The one-time writing off and capitalization of banks would help to strengthen banks to become more active participants in industrial restructuring, decrease inter-firm debt, and, in turn, fortify the equity of firms in privatization. As the write-offs were rule-based, KOB purchased only loans made before 1990, the government did not create the impression of more bailouts to come. Moreover, the FNP resources are virtually exhausted.[10]

In sum, the main banks preferred to redefine their relationships with the industrial firms, and refused to become simply collection agencies aiming to recoup outstanding loans.

2.2. The Limits of Bankruptcy

The other main government action concerned bankruptcy. It diluted the bankruptcy law in Fall 1991 and then suspended it between September 1992 and April 1993 for modifications. With the sudden collapse of the USSR and the severe recession induced by the tight monetary and fiscal policies, firms' cash-flow dwindled and arrears grew at an alarming rate. Given the tight links between firms and the banks, an unexpected liquidation could set off mass-bankruptcies and severely threaten the banks, which had only begun to securitize the large stock of inherited debts. Such an unexpected liquidation threat could come from "spontaneous privatization."

The original law allowed bankruptcies to be initiated by any creditor, but had no conflict of interest provisions. The managers, or other insiders, could use this provision to bring the firm into bankruptcy and then acquire its assets for a fraction of their value. This procedure known as spontaneous privatization was common in Poland in 1991. Spontaneous privatization could have damaged the credibility of privatization and banks' solvency. The new legal provisions – a three month protection period for debtors, a special regime and added

[9] For instance, KB wrote off loans for 302 firms, only 33 of which were non-industrial. The size range of the write-offs was Kc50-500 million.

[10] By October of 1993, the FNP had transferred over Kc38 billion to the big banks and the KOB -- 65% of large privatization revenues, 77% of large privatization expenses, and the equivalent of 5.2% of GDP. The KOB has just negotiated another purchase of loans from IB and KB. (FNP 1993.)

protection for firms involved in large privatization, and a conflict of interest clause – prevented both theft and the likelihood that the new shareholders will receive assets about to be liquidated.

Evident in the virtual absence of bankruptcies since the introduction of the new law, bankruptcy does not appear to be an effective strategy for creditors. In the Czech economy 1991–93, the sale of collateralized assets would bring only a fraction of the original debt because of the decline in property values. The sale of fixed industrial assets would bring in even less revenue. Not only is the quality of these assets usually poor, but also they have few alternative uses since they are integrated into a larger industrial complex. Banks that have not liquidated their loans to industrial firms under the very advantageous write-off scheme would not, naturally, settle for such low returns from bankruptcy and start destroying their customer base. However, through collateralization and converting long-term loans into short-term loans, the banks were able to get a lock on the firms as their most senior creditors. The banks could thus protect themselves from interventions by other creditors. Moreover, the shared client base and close ties among the banks allow for effective coordination of workouts on their own.[11]

By early 1992, KB and IB had started to improve their capital base, through the building of reserves and the partial cleaning of their balance sheets. But with the future solvency of the banks themselves closely tied to the improvement of their rather narrow client base, the banks were reluctant to simply remove the industrial firms from their portfolios. Through changes in the bankruptcy law, KB and IB had effectively acquired a monopoly over the bankruptcy of the firms.

3. S-firms and Joint Ventures: A Possible Framework

If the main banks were reluctant to finance restructuring, FDI, notably through joint ventures (JVs), could do this. A JV with an S-firm, however, gave rise to problems, which appeared to require government mediation. A JV would involve only some units of the S-firm. In turn, the Czech and foreign firm

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[11] Intervention by KOB is not a worry, since all TOZ and most of the purchased loans are unsecured and KOB lacks the personnel and information necessary for close monitoring of troubled debtors. The KOB consults regularly with loan officers in the main banks about the development of their clients and possible loan restructuring strategies. This positioning by the banks does not necessarily mean the emergence of relational investing. For more on this topic see Scott 1986 and Sabel et al. 1994.

would have to arrange mutual financial and organizational linkages between the JV and non-JV units of the S-firm. KB and IB would not be very helpful in resolving the potential conflicts in this arrangement, since the JV would start working with foreign banks, leaving KB and IB with unprofitable units. Vrba attempted to reconcile these conflicts through continued government involvement in both the restructuring of firms and the JV negotiations. But as Vrba's position in the government declined, the Klausians were ever more reluctant to assist in any sort of protracted assistance to industrial restructuring and JVs.[12]

This section illustrates how the unusual scope and close production ties among S-firm units shape and constrain restructuring. In this context, the success of JVs depends on an acceptable risk-sharing arrangement, via incomplete contracts that require government involvement.

3.1. Introducing M&M and S-firms

Our case, M&M, was established in the late 1800s. In the 1960s, its main areas of production included electric locomotives, steam turbines, various generators, mining excavators, rolling mills, heavy machine tools and presses, transformers, trolley buses, and cigarette production machines. In 1978–79, it began production of nuclear power plants for the whole CMEA. In 1983, M&M was the largest of five companies included in the formation of an industrial association (VHJ). In 1988–89, the VHJ was liquidated, and each member became a state firm. Subsequently, M&M created 21 divisions out of its operating units. By 1991, M&M accounted for a considerable share in employment, output, sales, and export in the country. For instance, it accounted for 2% of employees, 1.4% of output, and 1.9% of exports in Bohemia; and 30.5% of employees, 23.2% of output, and 30.2% of exports in its region (*kraj*).

Similar to other manufacturing companies, the break-up of the CMEA, the fall in domestic demand, and the sharp rise in interest rates hit M&M hard. By 1991, exports to the CMEA had fallen from late 1980s levels of 75% to 14% of all M&M exports. Outstanding bank loans (including debt service) had risen to Kc6.6 billion, about 70% of annual sales and 93% of base capital. Investment was being cut by 30% annually. During 1992, sales fell by 22% and

[12] Despite a rush of potential foreign investors, most deals collapsed under the weight of the collective action problems and the mixed signals from the government. Subsequently, FDI has stayed away from the industrial sectors. For instance, as of 1994 engineering accounted for only 2.5% of total FDI in the CR. Engineering accounts for 24%, 30%, 32% industrial production, industrial employment, and industrial value added in the CR.

exports by 44%; output fell by 31.3%; compared to 1990 profits declined by 28%. As payables grew and cash flow dwindled, banks were unwilling to lend any additional loans and outside suppliers began to withhold goods.

M&M is an S-firm. S-firms account for the majority of heavy manufacturing firms in the CR. These firms are typically large manufacturing concerns, whose many vertically and horizontally integrated operating units are usually on a single production site and have product ranges that often cover a complete sub-sector of an industrial branch. Due to shortages and the peculiarities of Czechoslovak planning and industrial organization, S-firms became highly autarkic with only one set of financial accounts for the whole concern. Units within concerns emerged from socialism with tight technical and financial links and shared product and process development capabilities. The forced autarky and shortages had driven S-firms to develop unusually large side-production capabilities, for both the production of needed components and to adapt inputs for production compatibility (i.e., forced substitution; see Stark 1986). Also, because of planned efforts to capture both economies of scale and scope, S-firms produced a fairly wide range of end-products within a certain class in relatively small batches and with incremental modifications on a given product generation. These factors have left three key legacies. First, S-firms have relatively broad production capabilities for both end-products and components. Second, machine failures, forced substitution, and short batches forced firms to rotate work groups regularly, allowing flexible, broadly skilled work groups. Third, the combination of shortage and production "storming" led units to out-source to one another and share labor when needed. The currently high import prices, the concentrated domestic industrial structure, and the narrow technical specifications for key parts and materials continue to constrain units' options for changing suppliers.

These inherited flexibilities and constraints have had two main impacts on the current strategies of S-firms. First, as units try to probe new markets and generate cash flow without knowing exactly which particular product will become the specialization of the firm's future, managers have tried to utilize the flexibility and broad skill base to pursue simultaneously a number of production areas, including valued component production. Developing new sales usually means trying to adapt gradually the given production capabilities and product classes to the customer's specifications – short cycles and hedging all production areas. Such a strategy allows them to gain turnover and cash while trying to build longer term contracting relationships and specializing production over time, albeit at a short-term loss in profits. Second, in an effort to cap costs and innovate on existing processes and products, units have tried to take advantage of their shared history to develop jointly products and sub-contract to one another. This has led often to an increased density of product flows, capacity and labor sharing, and technological synergies among units, even across main production programs.

3.2. Why Joint Ventures Failed

Joint ventures, as opposed to complete acquisitions or mergers, became the main conduit for foreign investment and partnerships in the CR for three reasons. First, a JV allows the capital to stay within the Czech firm or unit instead of going directly into the FNP, as would be the case of a buyout during privatization. Second, since foreign investors are usually interested in only part of an S-firm (i.e., in one or more technologically inter-linked unit or subsidiary of one or more S-firms), it is less risky to take a partial stake in a JV than doing a complete buyout. Scooping up whole firms or divisions pose potentially substantial financial and social burdens. Third, S-firms gain channels to new markets, know-how, and restructuring finance without dismantling their current configurations.

Despite these advantages, JV deals fell apart as soon as they were concluded, and only a relatively small share of FDI is in the industrial sectors. Why? A JV is not a joint project per se, but rather a framework to develop a joint project. The foreign partner is supposed to commit new capital (in the form of cash, equipment, or know-how), and the S-firm is to allow parts of its assets to be used in the joint projects. The reason why the partnership assumes the form of a JV, rather than a takeover, is that both parties need to observe and learn what their mutual capabilities are and what they can create together. As such, the JV agreement is an incomplete contract: it is a document that verifies both parties' interest to work together. The question is whether both parties will invest into this venture? The answer depends on severity of the incompleteness of the contract.

The intangible benefits of the JV (eg, developing local contacts) for the foreign partner are often more important than streamlining the production capabilities of the JV. As the assets earmarked for the JV already have a certain use, the foreign partner could easily afford to do nothing. As such, the foreign partner would hold back its investment and use the JV as a stepping stone into the local markets. This is more or less how far things have progressed for most JVs. To go any further, the foreign partner must make some investment. With this new investment the foreign partner will change the use of the assets of the JV. The units of the S-firm outside the JV will try to develop new products in new markets as part of their own restructuring efforts. In the process, they may need the cooperation of the units in the JV, but find that the foreign partner has no intention to cooperate with them. The S-firm may then try to reclaim the assets or propose to use them in ways to support the probes of the non-JV units. Therefore, the foreign partner cannot be assured of the commitment of the S-firm.

S-firms have such unusual scope that the foreign partner ends up working with only some parts of the firms but never with the whole firm. This stretches the incomplete contract framework of a JV since the foreign firm will demand that the JV be financially and organizationally independent of the rest of the S-firm. As such independence imposes additional difficulties on the rest of the S-firm, the S-firm will insist that the foreign partner share the liabilities and thus the risk of the whole S-firm. The foreign firm, however, does not want to absorb the outstanding debts and receivables since the risks of further debt management with a potentially uncooperative management are high. S-firm management sees the JV as an opportunity to get rid of the heavy debts and invariably ties the successful conclusion of the JV to debt relief. As the foreign partner dodges the open-ended commitment to manage the firm’s finances, the hope of restructuring via a JV hinges on the government’s willingness to take over some of the debts and act as a guarantor of mutual commitments.

The main strategy to revitalize M&M was to create JVs with western firms, notably a double JV between a foreign firm, Sies, and M&M’s Energo and Transport units, which represented almost half of M&M’s output and sales. Immediate complications centered around M&M’s concern that Sies’ production strategies would jeopardize the long term development and cash-flow of other units as well as of the holding as a whole. The Energo and Transport groups had collaborated on several projects, creating interdependencies on component production as well as sharing of debts and profits. If Sies wanted a majority share in a JV with Energo, it had then to take over many of Energo’s old production and financial obligations toward other subsidiaries. For instance, if it was to cancel or decrease already agreed to purchases by the groups, Sies would have to cover the difference between expected profit and sales income for in-progress production. Sies had refused this and the absorption of other debts, assuming that the government or M&M would cover the obligations the firm had incurred as a state owned firm. This disagreement led both the trade union and the M&M director to declare their reservations about ceding significant control and stakes to any foreign partner for fear that giving the partner the discretion to "not respect" the continued obligations between units and to the government could threaten the economic health of other units and the holding. The director added that ceding full control to Sies of operations that generated substantial liquidity through exports restricted the cross-subsidization between units necessary at the time.

The most obvious conflicts over future production came in core development strategies for the nuclear plant production and locomotive units. For both areas the modernization, servicing, and component production for existing products already in use throughout the former CMEA countries was seen as critical for the development of existing production capabilities and cash flow. Recognizing the decline in future construction of new nuclear plants, the nuclear group had begun to focus on the production of improved turbines, fuel containers, and parts for its plants in Eastern Europe. Although Sies could help develop M&M's turbine and nuclear equipment programs, it appeared intent on replacing M&M turbine production with its own while gaining through the JV the lucrative contracts for the unfinished construction of two nuclear plants in the Czech Republic and the modernization of eastern plants. M&M had begun to renew relations in Russia and the Ukraine, where it already had 3000 locomotives in operation, for sales of locomotives through third party financing and barter deals. JVs were being planned for future engine component production and recouping the large amount of uncollected receivables owed to the holding. Sies however wanted to shift more of its own production into Transport and orient Transport toward simple wagon production.

To alleviate these tensions Vrba had positioned his ministry in the negotiations to coax compromises from each side and provide guarantees for liabilities and technology development. The Skoda Mlada Boleslav-VW deal was his model to build on.[13] In the case of M&M-Sies, he had managed to have letters of intent signed by all parties in January 1992. Both Sies and M&M argued that the government's participation in the resolution of inherited liabilities was

[13] Similar to M&M, Skoda MB had considerable debts, most of which VW was unwilling to assume. The Czechs created a shell company, Prisko, which held the old debts of Skoda MB and the shares in the JV. Prisko had an initial 70% stake in the JV from the Skoda MB assets included in the JV. As VW made investments into the JV over the next 6 years, Prisko's stake would fall to 30% and VW's would rise to 70%. The equity of Prisko would then be sold on the market and be used to pay off the old debts. The catch was that the FNP would continue to hold the equity of Prisko. The Klaus government, elected in June 1992, wanted nothing to do with the government continuing to hold significant stakes in Czech companies, and thus be responsible for its corporate governance. This view eventually backfired for the Klaus government in the VW deal itself. Realizing that the new government was an absent shareholder, VW failed to meet its investment schedule and reneged on the planned investment for Skoda MB in September 1993. The government has since reversed its policy, renegotiated the terms of the JV with VW, and has taken an active role in the management of the JV and the support of the regional sub-contracting networks.

essential for signing the final agreement expected in May. When the government's commitment to the JV parties was tested, it wavered on the assistance with past liabilities, notably Kc1.2 billion receivable from the state railway company and a Kc1.9 billion debt in Energo.[14] This was mostly due to the increasing political strength of the Klausians, who viewed any government involvement in the JV as "restructuring before privatization." Following their victory in the June 92 elections, the Klausians took control of the government and Vrba was ousted. They refused to pay for the locomotives and relieve any debts, arguing it would set a bad precedent. The firm reacted by creating a smaller managing board without any government members. On September 17, three major units shut down for a week. Two weeks later, the government announced that it would appoint a new, bigger managing board to M&M and would sell 37% of M&M in a public tender. The existing board members walked out in protest of the government's intervention. On October 16, the tender was announced, and it was closed four days later.

A JV between a yet-to-be-restructured S-firm and a foreign firm present several contracting problems that could be solved by government guarantees. The Klausians refused to give such guarantees, and attempted to solve the problems by creating a new manager/owner and getting the banks more directly involved. But this attempt to solve the collective action problems through a unitary owner dissolved as quickly as it was announced. What follows is an examination of how these failings gave rise to dual government backed monitoring triangles which intertwined the external and internal parties to the assets.

[14] M&M had finished production of 60 locomotives for CSD, the state railway company, which had refused payment (1.2 bn Kc) for them in early 1992 due to budget cut backs. Energo also had an outstanding debt of 1.9 bn Kc from the previously state mandated development of nuclear plant technology. M&M and its unions argued that since the terms of the finance were dictated by the former government and the government was still the principal shareholder of M&M, this debt was still the responsibility of the new government. In addition, Sies needed environmental indemnities on existing environmental damage, which only the government could grant as the holder of M&M equity.

4. Delegation and Monitoring: Government, Banks, and the Firm Negotiate the Future

M&M's original privatization project had allotted 48.5% of equity to vouchers, while 42.1% would remain in the FNP. Only 41.6% of shares were sold in the first wave, leaving 6.9% unsold. The three largest shareholders/investment funds held only 6.8%, 4.4% and 2.5% respectively. Just as the voucher privatization was being carried out, the government organized a tender for the remaining shares with the intention of creating powerful owners who may invest in, break up M&M and use JVs or other means to provide additional financing.

As interest in an ailing Czech company was rather limited, the tender itself turned out to be a mere formality: the main candidates were Mr. M, a former M&M manager though without any additional funds, and the KB-IB consortium, the principal M&M creditors with whom the government had been holding discussions. These banks, for reasons mentioned above, were not keen on financing the whole restructuring on their own. The government allocated the shares between the two buyers: Mr. M would receive 20% and the IB-KB consortium would receive 17–19%. They both received seats on the board of directors, with Mr. M the director and chairman. Both the specific number and price of the shares were subject to further negotiations: some of the expenses they might incur during restructuring would be deducted from the agreed upon price, but the government did not specify the procedure to do so. With this vague pricing clause, the government did not put in any money, but it provided incentives for other parties to make the necessary investments which will then be deducted from the sale price.

The sale agreement required Mr. M to

- create legally independent subsidiaries out of the operating units,
- clarify the financial accounts of each,
- renew negotiations with potential JV partners,
- make concrete steps toward recouping uncollected receivables in Russia;

the banks to

- grant M&M a six month moratorium on debt service,
- decrease old penalties,
- lengthen payment periods and decrease the interest rates of outstanding debts,
- delimit debts among subsidiaries;

and the government to

- pay for the locomotives that were ordered by the Czech Railroads
- take over the debts incurred to develop the nuclear program.

Soon after the tender was concluded, the JV talks resumed and immediately collapsed. All parties also rejected the government's proposal/ultimatum to atomize M&M. To find new funds Mr. M soon turned to the government, claiming that he urgently needed them to start the restructuring of the firm. The banks initially rejected his plea. Only after the Ministry of Finance's persuasion did the banks agree to underwrite and purchase Kc1 billion of M&M bonds at a relatively low interest rate.

The most serious points of conflict, however, focused on the government's resolution of the nuclear and locomotive debts and the price and terms of the shares. In December 1992 and January 1993, the KOB and Ministry of Finance refused again to have the government finance these burdens. The key reason for the government's reluctance was the suspicion of Mr. M's reorganization plan according to which the subsidiaries of M&M would be limited liability companies, with the holding owning 100% of their equity capital and their buildings and property. In addition to dividends and a fee for the use of the M&M trade mark, *the subsidiaries would also have to pay rent to the holding*.

The objections of the Ministry of Finance to Mr M's plan were:
- the rents were seen as reminiscent of the old hierarchy;
- the subsidiaries could not easily receive outside funding without owning their own property;
- the plan did not address the issue of cross-collateralization of assets across subsidiaries that was a barrier to the future break-up of M&M.

For the government, this was business as usual in the S-firms and gave the M&M holding unwarranted control over the activities of the subsidiaries. The government insisted on breakup (no one else was interested) or, at least, more independence for the subsidiaries (the banks teamed up with the government on this). The banks had to prove to the government that they have provided enough debt-relief and financing to get their shares (Mr. M teamed up with the government on this). And both Mr. M and the banks demanded government debt relief as a demonstration of its commitment to the whole project.

All parties accused each other of reneging, but no one could easily leave the table. The agreement (and note not a contract) was again revised: two government officials would sit on the M&M Board of Directors for at least 12 months; the government ordered a review of M&M in June 1993; and Mr. M would not be able to sell his shares for two years (12/1996). In the meantime, the parties would negotiate the price of shares and debt relief as the banks demonstrated their debt restructuring and Mr. M demonstrated adequate decentralization within M&M. These negotiations lasted over two years. The government assumed the debts from the nuclear program in early 1994 and partially paid for the locomotives in mid 1994. The banks and Mr. M finally received their shares at the end of 1994.

The government could neither delineate the ownership rights and walk away, nor could it now intervene directly into the banks and the firm. The reasons could be found in the macro stalemate between the government, the banks and the firms. In emphasizing the first component of privatization, the government had effectively relied on the banks to ensure the second component of privatization – maintaining the value of assets through restructuring. Since the banks were neither willing nor able to liquidate or help ailing S-firms, they passed the responsibility back to the government. To ensure the second component of privatization, the government could not force the banks to make new loans, as that would violate any notions of creating independent banks. Nor could it break up the firm.[15] So the failed tender took on a new life of its own.

The tender turned into an informal, implicit contract, whereby the government delegated to Mr. M the authority to rebuild the internal organization of the firm and to the banks the authority to finance this reorganization on the behalf of the government. Yet it still had to make sure that the delegees did what they were supposed to do. The final deal had many vague clauses and assigned responsibilities to parties that could not be easily verified. The government used the debts and the vague pricing of shares to monitor the progress of the parties in their restructuring obligations. The keys were dual processes of delegation of authority and the formation of monitoring triangles. At one level this concerned the government, the banks, and Mr. M. At another level, it concerned the center of the holding company, the banks and the newly formed subsidiaries of M&M. The rest of the paper focuses on these two processes at both levels. Let us first turn to the issue of government delegation and monitoring.

[15] The government already believed that M&M, along with other S-firms, had to be "atomized" to facilitate bankruptcies. It was restrained from doing so, however, for two reasons. First, such a move could have created a reputation of disregard of ownership rights (new owners created via voucher privatization also opposed atomization). Second, managing the ensuing the chaos would bring great financial burdens. If cross-subsidies were as problematic as the government thought they were, several spinoffs would quickly find themselves in default after atomization. Since this could set off a domino effect, the government would be dragged into bailing out the banks and/or some of the spinoffs. The rapid insolvencies of several potentially strong former units of Aero and CKD holdings were ominous examples of such a process.

4.1. Delegation

Delegation is distinct from the actual transfer of exclusive ownership rights since a) the parties receive partial control rights and b) the government, as the existing owner and seller, holds them accountable for their actions. By holding back the actual transfer of shares and the determination of their price, the government monitored the progress of Mr. M and the banks. Mr. M's marching orders were to prepare the company for an eventual atomization. Upon satisfactory progress, the government indicated its willingness to provide funds from two sources: direct repayment of the Czech Railroad's debt and the reductions in the share prices. Mr. M however had the discretion to determine how the new investments and subsidies will be absorbed within the firm. Banks had a more peculiar place in this delegation: as owner creditors, they ended up providing most of the outside funding, but they were partially reimbursed by the government. As such, government was monitoring the banks and banks were effecting changes in the internal organization by putting pressure on Mr. M through their financing relations.

Regular arguments for delegation are valid in this context: Mr. M and the banks have more information than the government and lower costs of taking certain actions on the basis of that information. But delegation also allows resolution to two problems that neither government nor purely private ownership can solve.

- First, the government may solve its commitment (time-consistency) problem through delegation (Melumad and Mookherjee 1989) Even if the government could credibly limit the aggregate amount of subsidies, in dispensing the subsidy, it may end up bailing out the units that will have only minimal contribution to probing (government proceeds by ordering a breakup and may have to react to the first bankruptcies which may not be the best targeting of the subsidy). Whereas with delegation, for the same amount of money the government gets Mr. M, monitored by the banks, to balance the conflicting objectives of atomization and avoiding bankruptcies.
- Second, linking the delegation of authority with general agreements on compensation and risk sharing forces the parties to demonstrate concrete results and difficulties in meeting them. In doing so, the parties reveal information to one another about their intentions and points of further negotiation and problem solving. They monitor one another as well as trade control rights and responsibilities (Sabel 1993). For instance, as Mr M. allowed the subsidiaries greater decision-making rights and direct access to material and financial resources, the government clarified the share prices and debt relief. As the banks provided alternative forms of refinancing and

operating credits, the government clarified the banks' compensation and Mr. M ceded valuable assets as debt collateral.

To understand the firm level reorganization more clearly, we turn to an analysis of M&M probing and holdup problems.

4.2. M&M Probing and Holdups

As discussed in Section 3, the viability of S-firms depends on the generation of probes, requiring internal decentralization to initiate them and coordination to realize them. To gain some insight into the probing process, we have conducted interviews with 10 major subs of M&M. Of the 10 subs that were extensively surveyed, 9 reported to have at least one probing activity. More than half of the all reported probes involving some other sub – most of the time more than one. They all reported improvements in their products or expansions into new lines of production. The quick change of product palette is demonstrated by the volatile relations among the subs.[16]

In the interviews the subs reported substantial problems in their dealings with other subs: 6 of them gave specific examples of major disputes which, they claim, jeopardized further cooperation. 3 subs cited instances of attempts by their suppliers to charge monopoly prices. 4 subs that do not report such problems cite mutual knowledge of costs as a main factor in prevention of monopoly pricing. Only 3 subs report that the long-term nature of their contracting relations as the main factor in conflict resolution. 5 subs report that the recently introduced last-call principle, which liberalized procurement from outside, has been effective in tackling the monopoly pricing problems. Most of them report that due to narrow technical specifications, it is not at all practical to go to outside suppliers. The interviews also revealed that these problems are more pronounced in the subs that are engaged in large scale probing activities.

As mentioned before, the inherited flexibility in production of small batches according to customer's specifications enables probing. It is through these probing activities that S-firms hope to develop new products and find markets for them. In the restructuring of S-firms, often cited managerial and technological innovations are carried out as part of the probing process. Rather than leading the way, these innovations appear as consequences of successful

[16] For example, one sub reported that the deliveries to two other subs were discontinued in 1993, but expected to restart deliveries in 1994.

probing activity. Therefore, the success of restructuring in S-firms do not so much depend on getting owners in place, imposing hard-budget-constraints, but on how much probing activity is created and how efficiently each probe is carried out.

As the above cited results of the interviews indicate, the subs have well-founded fears that the other subs are going to increase their prices, or will not deliver parts of right quality on time. Moreover, they mention that often penalties mentioned in the contracts are not enforceable and they have to rely on improvisation. The probing process seems to be infested by hold-up problems. Below we cite examples of such holdups and how the M&M's center is helping the subs to solve these problems.

TS and OK

Two subsidiaries of M&M, TS and OK, which were merged in 1983 to take advantage of the synergies between them and reseparated in 1990, cannot agree to carry on a common project for over four years now. TS produces rolling mills, heavy presses, and sugar cane mills and OK produces a wide range of industrial gearboxes. After the separation, TS ran aground with the collapse of the CMEA while OK focused on its universal gearboxes, rather than the specialized designs TS requires, and started its own probe into the gearboxes for textile machines. In 1991, TS won a lucrative contract for sugar cane mills in Uzbekistan. TS asked OK to come up with a new designs for gearboxes of the sugar cane mills. OK claims that batches with such orders have always been rather small and it needs assurances that the developed designs will not be thrown away after a few production cycles. Also OK will soon have to replace some of the machinery it uses to produce the types of gears that TS wants. OK has to decide whether to buy new machines or spend the money on developing gearboxes for textile machines (its own probe). Yet OK is not sure whether TS is going to be a reliable customer. For example, there were no sales to TS in 1993, but in 1994, 10% of the sales went to TS. OK claims that the future is still too murky to commit strongly to TS. TS on its part blames OK with foot dragging and does not think very highly of its production quality. TS is trying obtain additional funding and hope to buy gears from outside contractors, but because of its very specific design requirements, it has not been able to do so.

As seen in the example of TS and OK, subs require new parts for experimental runs and may have to change specification frequently. In such an environment when prototypes quickly become obsolete, development lags are long, and cost overrun are very probable, it will not be optimal for the subs to find second sources (see Riordan and Sappington (1989)). As Czech firms do not have the reputation or the size to convince western firms to be their suppliers for experimental runs, they have to rely on their current suppliers – other subs. Even the subs that have worked together in the past, find it hard to give assurances (eg, write contracts) to each other and they refrain from undertaking relation-specific investments. The usual fears are that the partners may not behave or their projects may not be as good as they claim them to be.

Recently, there has been some progress towards the resolution of the long running dispute between OK and TS. The center of M&M hinted that they may get a loan for to finance the sugar mill project. It involves a bit of revenue sharing; TS getting only 60%. With this encouragement and active involvement of the center, the two parties started negotiating again. They are looking into the possibility of modifying the gearbox design to make it more compatible with OK's other probes.

Locomotives

Next we look at the case of the development of the locomotive program for M&M. Loco, the locomotive factory, depended on units in the electro-technical complex for certain electric motors, transformers, and pneumatics. The complex was broken up in 1991 into four units (now subsidiaries) and an operating unit, which was subsequently formally merged into Loco. The break up was in response to a potential Sies' interest in just a few operations within the complex that could be tied to the Energo and Transport JVs. Although the JV was not realized, the separation of the subsidiaries has remained. Loco took over the small operating unit since Loco wanted to support it during the recession for future production needs. Despite their legal autonomy, the subsidiaries and unit share and rent from one another testing labs, work shops, and R&D facilities, while working jointly on product development and new markets. Indeed, Loco's unit sits in the middle of one of the other subsidiary's operations.

The problem comes when Loco, riddled by old debts and the loss of its main customer (USSR), wants to develop its suburban and long-haul locomotives for new market niches. This at least a 3–5 year project. To do so, Loco needs to reduce its design-to-market time down to two years, to have new advances in component production, financing. But while Loco has been in a slump, the above semi-finished goods and components producers have been working on other products, particularly for trolleybuses, generators, and power plants. How can Loco convince these parties to transfer more resources into the development of parts that Loco needs? Under a strict hierarchy, the center could order the units what to produce. Not only could this cramp newly explored alternative areas of production in the feeder units, but moreover the units would see this as business as usual. Believing that they would not see, as in the past, the monetary and technological benefits from such a program, their incentives for innovation would be stifled. Moreover, since conception and execution are separated, it is likely that the development program is fraught with miscalculations about the units' innovation capabilities.

Here the main producer is asking its suppliers to drop their side activities and focus, once again, on developing parts for it. The suppliers cling to their side activities as important bargaining chips; they do not really expect to get satisfactory results from them. But if they do not give up their side activities, the improvements in the locomotives will not be enough to capture new market niches. Loco is too weak to provide upfront payments or other financial assurances. Third party financiers would probably supply little up-front financing, with continuation contingent on quick results (as venture capitalists do). The component producers are likely to balk or, at best, act with little enthusiasm at Loco's request for them to pour their resources into rapid innovations to get quick results.

The center is trying to develop a solution: they managed to get the parties to locomotive production, including the directorate's strategy unit and internal bank, to meet regularly to generate a medium to long-term development strategy. The team estimated development financing of Kc150 million for 3–5 years. Since no bank will currently lend to Loco, the directorate obtains the loan and distributes it directly into the relevant subsidiaries, charging a small additional interest rate. Annual and semi-annual progress indicators are set for each party to reveal bottlenecks, while the subsidiaries are largely responsible to resolve glitches and take new approaches among themselves. The holding with its informational advantage may lure the other units with a financial commitment. By bringing in all parties from the point of conception, the program can target the intended market niches with a greater degree of certainty and member confidence and pave the way for establishing flexible development parameters.

4.3. Atomization vs. Hierarchy – Limits of Pure Ownership

Could these internal holdup problems be resolved simply through pure ownership forms – in particular, atomization, where each sub is a separate company, and a hierarchy under unitary ownership? Indeed, the CR government had attempted both forms – the rapid privatization of S-firms as wholes and then ordering holding companies to prepare themselves for break-ups in December 1992. Both forms met sharp resistance from both managers and banks. Here we conceptualize how the internal and external holdup problems are interlinked and why pure ownership is an insufficient response.

A hierarchical S-firm coordinates production among its units, internalizes externalities between their investment decisions, and prevents duplication of effort. Its usual drawback is that unwarranted cross subsidization, lack of outside monitoring, and limited autonomy of the units mask inefficiencies. Unless the units have the authority and incentives to cancel their contracts with in-house suppliers, the center could not possibly identify and solve existing problems. Such a flow of information is possible only when each subsidiary has to watch its bottomline. The center's ability to remedy this problem by relaxing its grip on the units is limited. Usually reorganization of an S-firm would require the subsidiaries to probe into different markets with modified products, but the center would capitalize on improvements and distribute potential benefits among the units as it sees fit. As any modifications to the existing products requires concerted action by many units, two problems would appear: first, each unit hesitates to take or join an initiative because of unpredictable rewards; second, to go ahead with any plan, clearance from the center would be required and, as is well known, this process is riddled with inefficiencies due to information asymmetries and possible ratchet effects. Overall, hierarchy can coordinate efforts to generate probes quickly but, because of agency costs, it may fail to generate enough initiatives to start probes.

Atomization, the other polar form of organization, unleashes the creative energy of the units by turning them into independent companies. Independence comes at the cost of losing the benefits of coordination and internalization. Since each spun off firm relies on parts from other spinoffs for its final products, any modifications in the product design requires multilateral concerted action. As our above examples have shown, such concerted action is beset by holdup problems. Even when a joint probe based on incomplete contracts is carried out, the spinoffs will tend to cut back on relation-specific investments and jeopardize the success of the probe (Hart and Moore 1988).

Long-term relations are often thought to resolve holdup problems faced by the spinoffs (Williamson 1985). The argument is that the value of maintaining an ongoing working relation always outweighs the potential gains from holding up partners. Therefore a purchaser could credibly guarantee their suppliers' returns on their relation-specific investments. As the units of M&M had been working together in a hierarchy, it may be argued that they will not have much difficulty in forging long-term relations. The interviews indicate that as far as ongoing production projects are concerned, the managers register no complaints. But once some units engage in probing, they reconfigure their relations: some suppliers are cut off completely, or one supplier may receive contradictory requests from its customers. Probing breaks up the old relations, and having been in the same hierarchy is of limited value in setting up new relations. In essence, restructuring goes hand-in-hand with constructing a new institutional framework to reconfigure the existing links.

Another remedy to holdup problems is the joint ownership of spinoffs that may hold up one another (Grossman and Hart, 1986). Following atomization, the spinoffs may engage in bidding wars to buy one another. Consequently, as the Coase Theorem suggests, several groups of spinoffs with separate owners, that internalize most sever holdup problems, may emerge. But in the context of the spinoffs from an S-firms, the optimal grouping may be instable and delays in assembling them may have serious costs.

Instability of the optimal grouping of spinoffs is due to the interlinkages: a spinoff of an S-firm supplies parts to more than one other spinoffs (or groupings) and each one of these groups may be interested in buying it. The group that eventually buys the supplier will certainly benefit, but other groups will lose as they will then have to bargain with a supplier who may use its input internally rather than sell. So the takeover by one firm creates supply assurance concerns for others who may then have to cancel some of their probes. Due to this externality, nonintegration may indeed be the best form of pure ownership (Bolton and Whinston 1993), but since the incentive to buy the supplier is still there, it will not be a stable ownership structure. Moreover, the owner of the supplier will be bargaining with more than one interested buyer each of whom is ready to pay an extra premium to stop another buyer from acquiring his firm. To get this premium from the buyers, he will delay the sale by setting arbitrary deadlines. (See Jehiel and Moldovanu 1991 for an interesting example and model.)

Uncertainty about the probes further delays their realization. Different probes may be mutually exclusive; each probe appears as a separate option for a firm. As new information is continuously revealed about these probes, a firm facing multiple probing opportunities would prefer to wait (do nothing) rather than committing itself to one of them (Hayri 1993). Thus setting optimal ownership groups right after atomization would not mean immediate action on the probes. With new information, what was once an optimal grouping may have to be reshuffled, causing further delays and abandonment of some promising probes.

Pure ownership forms are appealing to the government because once the transfer of property rights is completed, they do not require any further government intervention. Unfortunately S-firms cannot be quickly and successfully restructured under any of the pure ownership forms (even when we assume functioning capital markets that allow takeovers).

The banks also rejected pure ownership forms, especially when restructuring of firms like M&M are in perpetual financial distress. As discussed in the first part of the paper, the government supplied only a limited debt relief administered through the banks. As M&M is an important customer and its debts are relatively well secured, the banks preferred to keep M&M's loans on their books. By doing so, the banks turned themselves into the single potential source of funding for the probes (as the debt burden soaked up potential retained earnings). Thus the eventual internal organization of M&M must be suitable to raise external financing. The banks were very reluctant to extend new credit to M&M: they had no information about the probes and, given the fungibility of funds, they were not sure whether the management is launching a new probe or using the loan to finance operating expenses. If the new loans are not to be used for restructuring, the banks would be better off withholding new borrowing and forcing the government and owners to come up with other sources of funding. Banks, therefore, demand an internal organization that is more transparent than a mere hierarchy. They are willing to work with the subs to improve their monitoring. Yet they do not want to delimit the loans and work with the spinoffs of an atomized firm. Atomization could be achieved only by an delimitation of the loans which would be rather arbitrary because of the difficulties in untangling cross collateralization.[17] The banks know that under any delimitation, several units would immediately end up in default. The sudden bankruptcy of units in default would undermine the viability of the probes developed by others. Then the banks would face the extra burden of coordinating bankruptcies and setting up a financial linkages among the just-separated units to keep them afloat till they could contain the damage from bankruptcies.

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[17] The collateral for a loan to sub A may well be the building of sub B. Untangling debts would then require that sub A gets the title to sub B's building.

Thus it is no surprise that the banks helped the process that gave subsidiaries separate accounts and substantial independence while the center retained the responsibility for the existing loans. By taking advantage of the transparency of the subsidiaries, the banks agreed to work with them. So far most of credits to the subs are short-term loans secured by liens on their receivables, but it is nonetheless an integral part of the independence of the subs.

4.4. IMBR

By creating a forum for the management and the banks to settle their differences about restructuring and continuously pushing for decentralization, the government helped to create the back bone for the **intricate monitoring based restructuring (IMBR)** of M&M. What is IMBR? It is a monitoring structure which attempts to resolve the external and internal hold-up problems simultaneously. The government delegates authority to reorganize the firm to Mr. M, who then gives decision-making powers to the subs. At the same time, the banks receive the authority to monitor both Mr. M and the subs through two-level debt financing. This process of delegation coincides with formation of dual monitoring and bargaining triangles: a) the government, Mr. M, and the banks exchange information in deliberating each party's contribution to debt restructuring and financial transparency; b) the firm center (Mr. M), the banks and the subs exchange information through the resolution of internal debts, transfer prices, and project finance.

Let us now illustrate the three main components of IMBR at M&M: internal reorganization, two-level debt financing, and government's insistence on decentralization.

a) Mr. M carved out 36 subsidiaries with independent and new financial accounts. The links between the holding and the subsidiaries are no longer through formal overarching divisions or mandated production programs. Horizontal links are liberated; the subs have options to expand directly outside the boundaries of the firm for suppliers and sales through the "last call" mechanism.[18] Coordination and conflict resolution occurs through negotiating forums and the center's discretionary powers of coercion. First, the center convenes regular strategy meetings for related subsidiaries as well as meetings for subsidiary managers of the same internal units to resolve the internal and

[18] The requirement to buy supplies from other subs was abolished; instead the subs are required to make a last to the other to see if they can match the terms offered by outsiders.

external debts and production breakdowns, share information on new technologies and markets, and negotiate the holding rules on transfers, debt payments, and internal sub-contracting. Multi-party negotiations are set up to discuss each parties' plans, their feasibility, and receive preliminary assurances. With the information obtained through these channels, the holding sets indicative benchmarks for debt ratios, cash flow, employment, productivity and energy use. Subsidiaries have much leeway to discuss and resolve directly among themselves production changes, new customers, and supply and payment problems. Second, in many stalled initiatives, the center managed to bring everyone back to the negotiating table. The power of the center is mostly derived from its leeway in determining the rents and the royalties. In these respects, the subs have little bargaining power. So far the center uses its power sparingly, by increasing the rents and royalties slowly, similar to the way RPI-X is used in regulation.[19]

b) Since the government relied on the banks to realize the second component of privatization, M&M remained heavily indebted. As a result, the subs were chronically short of funds and unable to finance probes and projects on their own. This made it very difficult for the subs to cooperate with one another. The center's main contribution here is to offer project financing alternatives to coax them into making compromises. Since the center owns all the real estate, the center secures big loans from the banks. It reissues these loans to the subs. In that sense the center engages in re-intermediation. An important part of IMBR is that the subs now have the opportunity to get loans directly from the banks. Otherwise, their autonomy would be undermined in negotiations with the center and other subs.

All loans to M&M were made by two banks. These two banks took different approaches in restructuring their loans and by doing so created a two-level debt financing system for M&M: One of the banks has kept all of its outstanding loans on the accounts of the holding directorate. These loans had been mainly large investment loans for such programs that had the most serious problems during the recession. This bank believes that debt service can be better secured by the holding directorate in case that the programs do not improve. At the same time, this bank allows its regional directorate to open direct relations with the subsidiaries for future lending. The other bank has delimited most of its loans directly among the subsidiaries in October 1993. It claims that the delimitation allows it to develop more rapidly closer relations with the

[19] The regulator allows the regulated firm to increase its price X% less than the increase in the retail price index (RPI). Thus the firm is forced to increase efficiency in order to retain its profitability.

subsidiaries. The past loans give this bank a base to monitor directly the development of the subsidiaries and to have direct access to the subsidiaries cash flow for debt service, before payments are made to the directorate.

The two-level debt financing avoids the pitfalls of atomization that could lead to premature bankruptcies. It came about as the government pressed the banks to get involved. Part of the tender deal was that they can take off the debt write-offs from the purchase price of the shares. The banks used this provision sparingly and insisted that they get better information about the operations of the subs. Although the banks pressed for transparency, they did not want atomization. They were on the same side as the management and the owners on the atomization issue. If they wanted atomization, they could have taken advantage of the government ultimatum to break up S-firms and present the government with a plan to delimit the loans among the subs. There is no doubt that armed with such a plan, the government would push harder for atomization.

c) The government agreed in principle to write off the debts from the nuclear program and pay for the locomotives. The government linked the purchase price of Mr. M's shares to these financial contributions to M&M and inversely to Mr. M's progress with restructuring. The government reduced the criteria of this progress to decentralization of M&M. For government atomization would end cross-subsidization; and the "too big to fail" tension would be relaxed. This was seen as a better way to preserve value than going into details of restructuring. The government also linked the purchase price of the banks' shares to their debt relief contributions. With enhanced transparency through decentralization and this direct incentive, the banks get involved. Additionally, by having two of its representatives on the board of M&M for over a year, the government enhanced its abilities to prevent the center from abusing its discretionary powers of rents and royalty payments and to monitor the cooperation between Mr. M and the banks.

The IMBR system performs a bit different from the pure ownership models. It modifies the pure ownership by transferring some residual control rights of the owners to the government (that maintains some authority although it is no longer a shareholder) and, more importantly, by limiting the center's residual control of the subs to a few well defined mechanisms and thus giving the residual control rights of the subs to the managers. Yet this reassignment of partial rights on the assets is never static. The mutual monitoring responsibilities of the parties always result in a new reassignment. The exact distribution of residual control rights are in a constant flux. The fundamental problem of an S-firm's restructuring is the tradeoff between generating enough probes (achieved by independent ownership of the subs) and providing incentives to invest in these probes (achieved by joint ownership of the subs). The first is basically an agency problem, as the contracts about probing activity are necessarily incomplete, these agency problems are remedied in IMBR by assignment of some residual control to the managers of the subs by limiting that of the owner's (ie, center). Yet this somehow reduces the effectiveness of the coordination and execution mechanisms of the holding. But in this respect the IMBR seems to outperform atomization.

The center mimics the long-term relations among the subs by monitoring their activities and getting interested parties together. The center possesses unique information and has departments specializing in foreign trade and financing. Based on its powers on the subs, the center can provide assurances to investing parties. The difference from a hierarchy is that the center here is not ordering but merely facilitating the agreements among autonomous subs. Again what makes the center a facilitator rather than an executer is the monitoring by the government and banks to insure subs' autonomy. Yet the center still has powerful links and discretion over the subs that distinguish it from a disinterested third party arbitrator.

The center redistributes financial resources in the group by "taxing" subs through rents and royalties and making loans through the internal bank. This creates some internal liquidity that relieves temporary cash flow problems. Combined with its activities as a monitor, the center is positioned to assess appropriate levels of taxation and impose appropriate conditionalities to the liquidity loans. Excesses are prevented by the monitoring of the government and the banks. The banks have working relations with the subs and could potentially object to excessive taxation.

5. Concluding remarks

From the start of the reform period in the then Czechoslovakia, the dual components of privatization – the transfer of ownership from state to private hands and the preservation of the value of the assets – appeared to come into conflict. The effects were twofold. First, as the banks attempted to clean their portfolios and maintain their client base, they were unable to close or pro-actively intervene into industrial firms. By the time the amended bankruptcy law was implemented, the few banks had positioned themselves as the only senior creditors, in turn effectively blocking any intervention by external actor to the firm. Second, the main alternative financial and organizational resource for S-firms were JVs. JVs essentially were a framework, in which the Czech and foreign firms would agree to negotiate their differences and the division of risks and benefits over time. The difficulties of JVs without active government support and the Klausians' refusal to provide it led to an impasse. Restructuring was then possible only via probes. The generation of probes required cooperation among the subs, and since they could only use incomplete contracts as a framework of cooperation, holdup problems emerged.

We have discussed how pure ownership forms, which rely on a once for all assignment of property rights, fail to generate probes quickly enough. As the banks, voucher owners, and managers opposed it, the outcome of a forced breakup by the government was doubtful. The government's attempt to create new actors (Mr. M as owner/manager, banks as equity holder/creditors) resulted in a delegation of authority to Mr. M to reorganize the firm under the mutual monitoring of the banks and government. We call the resulting internal organization and the supporting external arrangements IMBR (intricate-monitoring based restructuring) – dual monitoring triangles, which collapsed the boundaries of the firm but kept information and resources circulating by intertwining the risks and responsibilities of the external (including the government) and internal parties to the assets.

IMBR allows an unorthodox limitation of control rights, effectively decoupling them from ownership, so that they could be continuously modified and traded among the actors, including the subs. No one deliberately designed IMBR: the government insisted on breakup and forced Mr. M's center to grant more independence to subs. The banks, who were to provide all important marginal funds to sustain probes, wanted transparency within the company but shunned a breakup. The center, Mr. M, insisted on maintaining some kind of whip over the subs to alleviate holdups among the subs and deal with financial distress. As a result, the residual control rights of the center, as the owner of the subs, is truncated. Whatever is left of it is exercised under the scrutiny of the banks and the government. Although the subs can use credit from the banks under the banks' two-level involvement with M&M, they have to go through the center for large loans.

IMBR is not though a mechanical system. The recent troubles and allegations of fraud at Poldi Steel, for instance, indicates that the government can not simply put the actors in place, write the incentive contracts, and walk away. Rather IMBR, or any form of collective action resolution/government weaning away of its ownership rights, appears to require a credible forum for the parcelling and frequent trading of control rights, risks, and benefits to generate the commitment from the banks and managers to begin small steps toward refinancing and production reorganization. It begins with government delegation of authority to the parties and continues with its credible evaluation and support of them. Only then can the parties find the breathing room to learn to be both independent and collaborative.

As the government steps out of IMBR, in our case M&M, it is difficult to say whether the restructuring and growth of the firm will come to a halt. So far it has not. M&M's debt has fallen to 45% of its 1992 level, 1994 revenues are up 43% on 1993, employment is increasing, and newly developed ventures in Russia, China and the US look promising. It appears that the frequent collective evaluation venues for the subs, center, and banks – the negotiations over internal and bank debt and evaluation of common and independent projects, for instance – maintain the sharing of information and risk necessary for conflict resolution and probing. The recent revisionist work on Japanese and Chinese industrialization support this. (See for instance, Sabel 1993; Cui and Gan 1995)

But one point on the horizon may be worth watching. M&M apparently wants to avoid using IB and KB for investment financing, preferring to find foreign sources or use it own. Its announced Kc2 billion investment for 1995 will be financed mainly from the EBRD and its retained earnings. Will this sever the banks monitoring links? It may not as they provide roll over short and medium term credits to the subs and the center for in-process working capital. Indeed the recent research on German bank shows this form of lending may be essential for continuing the discursive relationship and learning between banks and firms. (Sabel et. al. 1994; Edwards and Fischer 1994.) Till then IMBR with government monitoring seems to have revived a company whose obituary was written a long time ago.

Table 1
Stratification of Total and Risky Loans By Sector, 1992–94
(in millions Kc)

	12/31/1992		12/31/1993		9/30/1994	
	Total Loans	Share% NonFin	Total Loans	Share% NonFin	Total Loans	Share% NonFin
NonFin. Inst'ns	484,085	--	520,563	--	567,609	--
Manufacturing	186,741	38.6%	198,033	38.0%	215,748	38.0%
Chemical	18,668	3.9%	20,812	4.0%	20,278	3.6%
Steel & Engineering	82,556	17.1%	84,064	16.2%	85,659	15.1%
Electrical	16,615	3.4%	15,119	2.9%	15,743	2.8%
	Risk Loans	Share% NonFin	Risk Loans	Share% NonFin	Risk Loans	Share% NonFin
NonFin. Inst'ns	103,942	--	142,117	--	222,404	--
Manufacturing	52,238	50.3%	61,523	43.3%	81,839	36.8%
Chemical	3,281	3.2%	2,315	1.6%	2,985	1.3%
Steel & Engineering	28,880	27.8%	35,123	24.7%	41,424	18.6%
Electrical	7,799	7.5%	8,386	5.9%	8,832	4.0%

Source: Czech National Bank

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