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The Evolution of Corporate Governance and Firm Performance in Emerging Markets: The Case of Sellier and Bellot

Finance Working Paper N°. 59/2004

September 2005

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Abstract

This paper investigates the evolution of corporate governance and firm performance in emerging markets. It focuses on Czech ammunition manufacturer Sellier and Bellot (S&B) following voucher privatization in 1993. Exogenously imposed diffuse ownership, combined with legal, capital market, and accounting deficiencies, contributed to poor corporate governance and weak firm performance. It also impeded corporate governance change toward optimal concentrated ownership structure. Five years of dismal accounting and stock return performance, default, and a failed attempt to sell the company passed before a single blockholder acquired control, installed new management, and dramatically improved profitability. This study is one of the first to describe the path of evolution from a suboptimal to an optimal governance structure. Turnaround was accomplished through the adoption of monitoring and incentive mechanisms known to mitigate owner-manager agency conflicts in developed countries. The S&B experience has policy implications for emerging countries undergoing mass privatization.

Keywords: Corporate governance; Ownership structure; Capital markets; Corporation and securities law; Emerging markets; Czech Republic

JEL Classifications: G32, G34, K22

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1. Introduction

The evolution of corporate governance is a particularly important area of finance research because the survival of firms depends on their ability to adapt governance structures to changes in external environments (Kole and Lehn, 1999; Morck and Steier, 2005). However, little is known about corporate governance dynamics, especially for firms in emerging markets that face exogenous shocks like privatization and transition from centrally planned to profit-based economies. Moreover, emerging markets firms often operate in deficient legal, capital market, and accounting systems that could hinder governance change. The inability to quickly adapt governance structure increases the likelihood of firm extinction (Gray, 1996; Grosfeld and Hashi, 2003).

This study investigates the evolution of corporate governance and firm performance in the Czech Republic based on the experience of the ammunition manufacturer Sellier & Bellot (S&B) between 1993 and 2003. The Czech Republic is an ideal example of an emerging market because change from Communism was swift and unexpected, and voucher privatization between 1993 and 1995 exogenously imposed diffuse ownership on firms.[1] Prior literature suggests firms in countries with weak legal systems and poorly developed capital markets tend to have highly concentrated ownership (Shleifer and Vishny, 1997; La Porta et al., 1997, 1998, 2000a, 2000b).[2] Indeed, the Czech Republic was characterized by legal, market, and accounting inadequacies. It had a poorly enforced civil law system that afforded weak protection for shareholders and creditors. Czech capital markets were underdeveloped: the post-Communist government was hostile to capital market regulation, securities were illiquid, and stock prices were unreliable (Glaeser et al., 2001). Cash-poor equity fund managers had difficulty liquidating blocks of shares,

[1] For additional detail on the Czech voucher privatization program, see Hingorani et al. (1997), Claessens and Djankov (1998), and Makhija and Spiro (2000).
[2] Consistent with the international corporate governance literature, we refer to ownership structures that have one controlling shareholder (with greater than 50 percent equity ownership) as "concentrated," and to those that do not as "diffuse."

equityholders and debtholders were unable to monitor effectively, and foreign investors were unwelcome. Czech accounting rules resulted in incomplete disclosure (Makhija and Patton, 2004). Together, these deficiencies impeded corporate governance evolution to the optimal concenrtrated ownership structure suggested by La Porta et al. for Czech firms.[3]

S&B is an ideal subject for the observation of corporate governance evolution in an emerging market. On the one hand, it is a typical Czech firm, neither too big for national politics to influence corporate governance, nor too small for governance changes to be inconsequential.[4] On the other hand, the end of the Cold War and the collapse of existing customer contracts forced S&B to enter foreign competitive markets at a time when the global ammunition and defense industry was in decline (Dial and Murphy, 1995; Goyal, et al., 2002). This made the need for rapid corporate governance adaptation to ensure firm survival particularly acute.

This study is largely based on proprietary information obtained during a series of interviews with the CEO and CFO of S&B, and the Managing Director of the wholly owned S&B Machines subsidiary between the fall of 2003 and the summer of 2005, along with financial statements (including some from a period when the firm was private) and internal company data.[5] We document that between 1993 and 1998, S&B was characterized by dilluted ownership, ineffective board monitoring due to frequent director turnover, and poor alignment of incentives. Return on assets fell from 3.37 percent to -25.38 percent, its return on equity dropped from 4.18

[3] These deficiencies also led to extreme cases of tunneling and looting (Aussenegg and Jelic, 2002; Cull et al., 2002). Tunneling is the Czech expression for the transfer of assets to offshore accounts. It has become a fashionable economic term for the expropriation of the wealth of minority owners by the controlling shareholder. It has been a problem for transition economies undergoing mass privatization. For example, in Bulgarian mass privatization, more than 85 percent of firm value was expropriated by controlling blockholders (Atanasov, 2005). Looting refers to the expropriation of wealth from the firm by its owners after governments or banks guarantee firm debt (Akerlof et al., 1993; Cull et al., 2002). We do not find evidence of tunneling or looting at S&B, but the current CEO of the company told us that the fear of wealth expropriation—namely the unwillingness of shareholders to see their stakes diluted—significantly influenced the behavior of S&B's blockholders before 1999.

[4] S&B's total assets were 1,121 million Czech korunas (CZK) in 1993. The average voucher privatized Czech firm's total assets were CZK 965 million in 1991 (Hingorani et al., 1997).

[5] S&B managers at no point controlled the substance of our analysis. S&B had the right to order the exclusion of any internal data that could damage the firm. Except for several changes of quotations to improve the precision of Czech-English translation, and a few editorial suggestions, S&B management did not request any changes to our study.

percent to -43.00 percent, and the stock lost 87 percent of its value. By 1998, the company was in secondary default, approaching primary default, and equity blockholders finally agreed to put the company up for sale.[6] The inability to sell the company between 1998 and 1999 alerted blockholders that their estimates of equity value were too high. In 1999, one cash-rich blockholder, R.E.M.O. Corporation, was able to gain voting control.[7] R.E.M.O. improved monitoring, created better performance incentives, and hired a new management team. Between 1999 and 2003, S&B's financial performance soared: return on assets increased from 4.71 percent to 13.51 percent, return on equity from 7.37 percent to 16.69 percent, and the stock price increased 261 percent.[8]

This paper makes three contributions. First, S&B performance improvements are consistent with the view that concentrated ownership is optimal for firms that operate in countries with deficient legal, capital market, and accounting systems (La Porta et al., 1997, 1998, 2000a, 2000b, and 2002). [9] More importantly, the S&B case shows these deficiencies impede evolution from suboptimal to optimal governance structure. Czech voucher privatization imposed an artificially diffuse ownership structure on S&B, and was followed by inflated S&B stock prices that gave rise to unrealistic blockholder expectations about company value. It took five years of declining performance, default, and an unsuccessful attempt to sell the company, for blockholders

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[6] In the Czech legal system, primary default occurs when a company is unable to pay its contractual obligations, even if all promised payments to the company were satisfied immediately; it results in the liquidation of the firm. Secondary default occurs when a firm defaults on its obligations only because other firms (its customers, for example) are themselves delinquent on payments; firms in secondary default are typically allowed to continue to operate, although secondary default status sends a powerful negative signal to the firm's stakeholders.

[7] Czech companies are not obligated to disclose the identity of their major shareholders (Glaeser et al., 2001). However, we have reason to believe that R.E.M.O. Corporation is owned by one individual who prefers anonymity. Before 1999, he held stakes in S&B through several affiliated investment companies. Between 2000 and 2002, these holdings were concentrated in R.E.M.O. Corporation. After 2002, the R.E.M.O. stake was once again dispersed into several affiliates still controlled by the current owner. Throughout the paper, we use the terms R.E.M.O. Corporation and current owner interchangeably.

[8] Public trading of S&B shares ceased in October 2001; this stock price increase is based on a repurchase offer for privately held shares in May 2004. All minority shareholder repurchase offers in the Czech Republic must be based on fair-value estimates provided by court-appointed experts.

[9] The S&B case is also representative of general trends experienced by Czech firms. Many of these companies experienced substantial ownership concentration following poor post-privatization performance (Claessens and Djankov, 1999; Aussenegg and Jelic, 2002).

to lower their expectations about share value and for one blockholder with access to external private capital to gain control of the firm. This result contrasts with Kole and Lehn's (1999) finding that outside blockholder ownership is one of the first and presumably least expensive governance structure characteristics to change in the U.S. In this respect, the S&B experience is more than just the story of a successful reorganization undertaken by a majority owner as in the case of General Dynamics (Dial and Murphy, 1995) or the Times Mirror Company (DeAngelo and DeAngelo, 2000).

Second, the S&B experience demonstrates that the adoption of monitoring and incentive mechanisms known to mitigate owner-manager agency conflicts in developed countries can create value in emerging markets. S&B's focus on sales growth, cost cutting, and pay-for-performance incentives after 1999 positively affected performance, consistent with the experience of many U.S. companies (Palepu and Wruck, 1992; Wruck, 1994). However, the necessary catalyst for changes at S&B was the presence of a single majority owner. Before ownership was concentrated in 1999, inexperienced blockholders were unable to agree on management or monitoring strategies. Frequent clashes between blockholders led to many board changes and five CEO replacements in six years, while company performance deteriorated and S&B entered default. These costs of poor performance are the consequence of delayed corporate governance structure change.

Third, the S&B story suggests that effective privatization not only involves rapid ownership transfer but careful securities regulation and legal protection (Glaeser et al., 2001).[10] During the last decade, countries like Russia and Bulgaria launched massive privatization plans modeled after the Czech voucher system. Companies privatized by these methods often endured

[10] Glaeser et al. (2001) claim that Polish strict regulation supervised by a private agency with substantial competences is more efficient than Czech regulation overseen by a governmental agency with weak powers.

governance problems similar to those of Czech firms (Atanasov, 2005). Our study's findings have implications for policy-makers facing mass privatization in transition economies.

The remainder of the paper is organized as follows. Section 2 discusses corporate governance, firm performance, and Czech voucher privatization. Section 3 describes S&B's current organization, its pre-1993 background, and its performance during the periods of diffuse ownership (1993-1998), transition (1999), and concentrated ownership (2000-2003). Section 4 discusses the association between changes in S&B's ownership and performance, and describes monitoring and incentive improvements and the adoption of prudent corporate finance policies, including hedging and reduced leverage. Section 5 evaluates alternative explanations for S&B performance improvements following ownership concentration. Section 6 concludes.

2. Corporate governance, firm performance, and Czech voucher privatization

In this section, we discuss the literature on legal systems, capital markets, corporate governance, and firm performance in the context of Czech voucher privatization. We also discuss post-voucher privatization ownership and performance trends.

2.1. Legal systems, capital markets, corporate governance, and firm performance

Finance literature suggests that legal systems, capital markets, and corporate governance are linked. Relevant components of legal systems include investor protection for equityholders and debtholders, capital market regulation, accounting rules, and enforcement of laws against expropriation and corruption. Investor protection differs among countries, as described in Shleifer and Vishny (1997) and La Porta et al. (1997, 1998, 2000a, 2000b, 2002). Common law countries like the U.S. and U.K. offer strong investor protection. Civil law countries like France offer less protection to investors. German civil law countries, including the Czech Republic, lie somewhere in between. Regulation can be provided by public or private bodies. Evidence suggests that capital market regulation by private rather than public entities better contributes to market efficiency (Glaeser et al., 2001). Similarly, accounting systems whose rules are established by

organizations independent of governments tend to be more informative (Rajan and Zingales, 1998; Ali and Hwang, 2000).

The international corporate governance literature implies that countries with common law, investor-friendly legal systems, effective market regulation, and transparent accounting have larger, more liquid capital markets associated with low information asymmetry (La Porta et al., 1997, 2000a, 200b). Similarly, countries with civil law systems that provide weak protection for investors, minimal capital market regulation, and opaque disclosure tend to have smaller, less liquid, less efficient capital markets. The latter group of countries often endures regular expropriation of investor wealth (Johnson et al., 2000; Desai and Moel, 2004). Weak legal systems and capital markets increase risk and the cost of capital and depress asset values (La Porta et al., 2002; Gompers et al., 2003; Bebchuk et al., 2004; Brown and Caylor, 2004). Shleifer and Vishny (1997) suggest that firms can limit costs associated with weak legal systems and inefficient capital markets by adopting concentrated ownership structures. Blockholders in civil law countries also enjoy disproportionate benefits of control (Dyck and Zingales, 2004; Franks and Mayer, 2001).

Internal governance characteristics, such as monitoring mechanisms and incentive alignment systems, can also protect investors. Boards of directors monitor managers on behalf of shareholders, as noted by Jensen and Meckling (1976), Fama and Jensen (1983), Weisbach (1988), Hermalin and Weisbach (1991), Jensen (1993), Yermack (1996), Rosenstein and Wyatt (1990, 1997), and others. This literature suggests that smaller boards are more effective, and boards with a greater proportion of outside directors are more independent, making them more effective monitors. Compensation can also be used to align the interests of managers and owners. Manager and shareholder interests tend to be more closely aligned when managers receive greater proportions of compensation in the form of incentive-based pay, as suggested by Jensen and Murphy (1990), Smith and Watts (1992), Mehran (1995), and others.

Agency theory suggests that corporate governance mechanisms, such as increased managerial ownership, greater pay-performance sensitivity, and more effective, independent boards that control owner-manager agency conflicts enhance firm operating performance and value (Jensen and Meckling, 1976; Jensen, 1986; Stulz, 1990). The empirical literature suggests that firms with governance structures that protect investor interests tend to be worth more and perform better. Gompers et al. (2003), Bebchuk et al. (2004), and Brown and Caylor (2004) employ composite governance scores to show that governance structures that protect investors are associated with greater value. Yermack (1996) and Anderson et al. (2004) find that firms with smaller boards tend to be more profitable and valuable, with lower costs of debt.

Throughout the study period, the Czech Republic was characterized by mediocre investor protection, minimal market regulation, and opaque disclosure. It experienced recurring corruption, tunneling, and looting, and had inefficient capital markets (Glaeser et al., 2001; Johnson et al., 2000; Cull et al., 2002; Makhija and Patton, 2004). Consequently, publicly traded Czech firms would be expected to possess concentrated ownership structures. However, if the Czech government forced companies to adopt diffuse ownership structures as a consequence of voucher privatization, then these companies would be expected to underperform until ownership became concentrated. The potential for wealth expropriation by a controlling investor would similarly be expected to influence the process by which ownership became concentrated. Finally, board structure and incentive systems are anticipated to be some of the mechanisms by which ownership concentration would eventually improve corporate governance and firm performance.

2.2. Czech voucher privatization

The Czech political, financial, regulatory, and legal environments affected the process by which former state-owned enterprises were privatized. The first post-Communist Czech government described itself as a conservative, Chicago-school entity for which legal concerns were secondary. It viewed prolonged state ownership as detrimental to the long-term health of the

Czech economy. Tomas Jezek, the first Minister of Privatization of Czechoslovakia, said that "privatization was a race between economists and lawyers, in which the economists must be one step ahead" (Stroehlein, 1999).[11] Voucher privatization was implemented as the fastest means by which state-owned enterprises could be transformed into publicly traded companies. Voucher privatization also had the advantage of not requiring additional capital from new owners who had been impoverished under Communist rule, as noted by Hingorani et al. (1997). At the same time, the government avoided capital market regulation, which it deemed socialist.

Voucher privatization was accomplished in two waves between 1991 and 1995. Approximately 1,700 firms were transferred from the state to Czech citizens and listed on the Prague Stock Exchange (PSE) without concern for capitalization, float, or trading volume. The book value of privatized equity exceeded U.S. $14 billion, or 10 percent of the Czech Republic's national wealth (Ziljstra, 1998; Filer and Hanousek, 2000). Citizens exchanged their non-tradable "voucher points" for stocks during multi-round auctions. Privatization attracted participation by about 75 percent of eligible citizens, contributing to diffuse ownership structures among voucher-privatized firms.

One feature of Czech voucher privatization that had the potential to mitigate any diffuse ownership problem was its provision for citizens to allocate some or all of their points among the more than 500 Investment Privatization Funds (IPFs). These funds collected more than two-thirds of all available voucher points (Claessens et al., 1996). Some of the largest IPFs collected more than 10 percent of all points, making them potentially influential institutional blockholders (Jensen and Meckling, 1976; Mikkelson and Ruback, 1985; Pound, 1988).

However, the Czech government restricted ownership stakes in newly privatized companies to prevent small groups of individuals from acquiring immediate control. IPFs were

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[11] Czechoslovakia split into the Czech Republic and Slovakia on January 1, 1993. Mr. Jezek later said that he did not mean for this statement to be taken seriously, and instead became an advocate for strict regulation of capital markets and minority shareholder rights.

limited to 20 percent ownership in each firm. This restriction forced large funds to diversify.[12] For example, the investment fund *SIS*, affiliated with the bank *Ceska Sporitelna*, had 120 employees, over 500 issues, and 280 board seats. Fund participation on boards was regarded as supplementary compensation for fund employees rather than a mechanism for effective monitoring. Furthermore, bank-sponsored funds were ineffective monitors on behalf of shareholders because they tended to pursue their own interests as lenders due to the interlocking nature of banks, bank IPFs, and corporate ownership (Makhija and Spiro, 2000; Makhija and Patton, 2004). These problems persisted after voucher privatization, because IPFs lacked cash and could generally only consolidate their positions by making equity block swaps with other IPFs.

Managers tended not to receive significant ownership stakes because of the government's desire to limit any residual influence of former Communist Party insiders. Indeed, after voucher privatization, Czech managers owned on average only 2.5 percent of their firms, compared to 4.5 percent for managers of Russian firms (Hingorani et al., 1997). Foreign blocks were also discouraged because the government did not want to be accused of selling out to foreign interests. Only 1.6 percent of all privatized shares were sold to foreign investors, as noted by Anderson et al. (2001). Consequently, ownership blocks did little to improve the corporate governance of Czech firms. By 1998 the Organisation for Economic Co-operation and Development (OECD) complained that Czech investment funds were unwilling and unable to directly influence company performance, and that Czech firms frequently "…engaged in dubious activities to the benefit of managers or controlling shareholders and to the detriment of the majority of small investors" (OECD, 1998).

Creditors were unable to mitigate the diffuse ownership problem because of deficiencies in the banking system and the virtual nonexistence of a public bond market. Czech banks were

[12] The 20 percent restriction was insufficient to provide IPFs with adequate incentives to monitor managers (Coffee, 1996). However, it temporarily impeded the creation of controlling coalitions of blockholders, such as those that subsequently occurred in Bulgaria (Atanasov, 2005).

inexperienced in free market operations, limiting their ability to monitor debtor firms. Bank loan portfolios were also dominated by loans to financially distressed firms in the aftermath of the collapse of Communism (Cull et al., 2002). When asked whether his banks ever acted as effective monitors, Radek Musil, current CEO of S&B, said, "…bankers show up every other month for a ritualistic review of company financials, sometimes threatening to cease loans and trigger bankruptcy, but all the while knowing they would never do that, and knowing that we knew that they would never do that."

Diffuse ownership combined with underdeveloped capital markets and the limitations of Czech law, regulation, and disclosure to produce poor firm performance throughout the Czech Republic. Newly privatized Czech firms tended not to improve profitability or efficiency, and they performed worse than selectively privatized Polish and Hungarian firms (Harper, 2001; Aussenegg and Jelic, 2002). Post-privatization Czech GDP growth was the smallest of its regional peers, reaching only about 1.5 percent in 1997, and was flat in 1998.

2.3. Ownership and performance following Czech voucher privatization

During the ten years that followed Czech voucher privatization, substantial ownership concentration occurred, consistent with our expectations. A total of 1,611 companies (91 percent of listed firms) were delisted from the PSE between 1995 and 2002, as shown in Table 1, Panel A. Most delistings occurred in 1997 as a result of a PSE directive to delist firms with low trading volume. To estimate the number of company-initiated rather than PSE-initiated delistings, we compare the PSE with its competitor, the RMS System. This over-the-counter electronic system listed all PSE issues, including those delisted from the PSE. Between 1995 and 2000, the number of listings on the RMS System decreased from 1,792 to slightly over 1,000. This decline was almost exclusively attributable to company delisting decisions rather than regulatory pressures associated with low trading volume.

The Czech version of the U.S. Securities and Exchange Commission—the Commission for Securities (*Komise pro Cenne Papiry*)—subsequently forced the RMS System to delist issues with low volumes or floats. The Commission for Securities was created by the new Social Democratic government shortly after the 1998 election in response to the increasingly apparent deficiencies of voucher privatization. The new government viewed regulation with less hostility than its predecessors, although the Commission possessed only a fraction of the powers of its American counterpart (see Glaeser et al., 2001, for a discussion of Czech securities regulation).

Many newly privatized companies generated insignificant trading volumes, resulting in illiquid markets. As shown in Panel B of Table 1, the average daily trading volumes of Czech firms listed on the PSE ranged from 0.08 percent of total market value in 1994 to a high of 0.24 percent in 2000. (By comparison, Nasdaq average daily trading volume was 1.17 percent.) Weak securities law and low trading volumes created an environment where securities prices were not trusted. Consequently, Czech companies tended to ignore the PSE when raising additional capital, relying instead on bank loans.

Ownership concentration was often accomplished by means that would have been unlawful in other countries. These methods included two-tier tender offers, auctioning of non-tendered shares at below-market prices, and transfers of company assets to offshore accounts owned by large shareholders (Coffee, 1998; Cull et al., 2002). Poor or nonexistent laws against such transactions, and weak regulatory and legal enforcement, left many of these activities unpunished even after the Commission for Securities was created in 1998. Nevertheless, company-initiated delistings after 1998 tended to be accomplished with less harm to minority shareholders. S&B's share repurchases did not harm minority shareholders because they occurred after 1998 and were priced at levels that exceeded the current stock price.

3. Corporate governance and firm performance at S&B

Sellier & Bellot's performance tended to improve once its ownership became more concentrated (Claessens et al., 1996). We suggest that S&B's experience is typical of corporate governance and performance changes among successful Czech firms. This section describes S&B's current organization, provides company background (pre-1993), and highlights S&B's periods of diffuse ownership (1993-1998), transition (1999), and concentrated ownership (2000-2003).

3.1. S&B's organization

S&B is one of the world's largest ammunition producers. The company currently exports more than 80 percent of its ammunition production to 75 countries, with revenues approximately evenly split between U.S. dollars and euros. S&B's largest market is the U.S., where it is the fifth largest supplier of sport ammunition. S&B estimates that it possesses approximately 5 percent of U.S. market share, and the U.S. accounts for approximately one-third of S&B's sales.

The company is organized as Sellier and Bellot Joint Stock Company (S&B), with two wholly owned subsidiaries: (1) Sellier and Bellot Trade Joint Stock Company (S&B Trade); and (2) Sellier and Bellot Machines, Ltd. (S&B Machines). S&B is chiefly in the business of manufacturing and distributing ammunition and pyrotechnic products, including shotgun shells, center-fire handgun and rifle cartridges, rim-fire cartridges, pig-slaughtering cartridges, test cartridges, military cartridges, detonating cords, safety fuses, and detonators. S&B Trade is the marketing arm of S&B. S&B Machines manufactures special equipment, tooling gauges, packaging, and other special-use machines. These special-use machines include pressing, forming, and cutting tools, dies, die blocks, cutting and clamping equipment, plastic press moulds, gauges, and precision-engineered parts and equipment. S&B Machines exports approximately 80 percent of its packaging machines, primarily to Central and Eastern Europe.

There are benefits and drawbacks to S&B Machines' current close affiliation to its parent company.[13] S&B Machines performs all maintenance and repair on S&B's unique ammunition production machinery, which requires specialized knowledge. S&B's managers are convinced that S&B Machines should not be sold to a third party because of potential hold-up problems (Klein et al., 1978) exacerbated by the limitations of Czech contract law. On the other hand, S&B and S&B Machines operate in different lines of business, leading to information asymmetry between the two (Jensen and Meckling, 1995). S&B Machines tends to be R&D intensive, with customers based mostly in Eastern Europe, whereas S&B's ammunition manufacturing is not R&D intensive, and customers are based chiefly in the United States and Western Europe. On balance, S&B's management believes that the benefits of keeping the division outweigh the costs.

S&B now employs approximately 1,300 people overall, including about 130 in S&B Machines. Its headquarters and production facilities are in the city of Vlasim, whose population of 13,000 is located about 30 miles southeast of Prague. Current company management claims that S&B's production portfolio is most comparable to that of the Winchester Division of Olin Corporation, even though Winchester is considerably larger.

3.2. S&B background (pre-1993)

S&B was founded in 1825 under authority of the Habsburg monarchy, when the area that now constitutes the Czech Republic was part of the Austrian Empire. Throughout its history, the company's core activity was small arms ammunition manufacturing. Following the Communist coup in 1948, S&B was nationalized, and it became the primary small arms ammunition producer

[13] It is not established in the empirical finance literature whether or not industrial diversification creates value. Lang and Stulz (1994), Berger and Ofek (1995), Comment and Jarrell (1995), John and Ofek (1995), and Lamont and Polk (2002) suggest that U.S. industrial diversification tends to destroy value. Williamson (1975), Gertner et al. (1994), Harris and Raviv (1996), Graham et al. (2002), and Campa and Kedia (2002) suggest that some U.S. firms diversify to create value by establishing efficient internal capital markets. Fauver et al. (2003), suggest diversification creates value for firms in less developed countries with less efficient capital markets and weak legal protection. Khanna and Palepu (2000) show that diversified businesses in India trade at a premium compared to their focused counterparts.

for much of the Eastern Bloc. In 1965, the company diversified its operations into the production of packaging machines. Additional detail on the company's history is contained in the Appendix.

Similar to other companies in former Eastern Bloc countries, S&B's operations were fully controlled by Communist Party authorities during the Communist era (1948-1989). S&B's performance was assessed in terms of its ability to generate production volumes determined by so-called "Five Year Economic Plans." Profit was secondary, as profit creation was not the main goal of the Communist regime. Financial data collection, reporting, and analysis were so poor that no Communist-era financial statements can currently be found at company headquarters. Management positions were filled by Communist Party officials. There were no performance incentives for managers or workers (Stiglitz, 1994).

S&B's primary goal during this period was to fill pre-planned cartridge orders for the Czechoslovak People's Army. Finished goods were immediately shipped to the Army's storage facilities, for which S&B did not receive market-based compensation. Because of its privileged status as a company working for national security interests, S&B never experienced problems obtaining investment funds from central authorities.

After the fall of Communism in late 1989, S&B could no longer rely on orders from the Czechoslovak Army. Following the end of the Cold War, many other defense companies also lost value as their growth opportunities deteriorated (Goyal et al., 2002). This problem was especially pronounced for S&B because Communist planners had routinely overestimated the Army's need for new ammunition, leaving army storage facilities overstocked and the Army unwilling to acquire additional ammunition for many years. Even by 2004, the Czech Army still accounted for less than one percent of total S&B production.

With its primary customer gone, and management largely unqualified, the company was in disarray. In 1993, privatization was expected to lead to improved company monitoring by shareholders, the introduction of more capable managerial talent, and improved performance.

3.2.1. S&B Machines background (pre-1993)

As part of a state-owned monopoly, the packaging machines division furnished machines to every country in the former Eastern Bloc. When the company prepared for privatization between 1992 and 1993, many of the division's most capable employees left, including its R&D and sales staff. Few barriers to entry existed in the industry, so most of the employees who left started their own packaging machines operations, often with specifications they took from S&B's packaging machines division. The high cost of entry into the ammunition manufacturing industry likely explains why S&B's ammunition division did not experience a similar exodus of talent.

3.3. S&B during the diffuse ownership period (1993-1998)

In 1993, S&B was one of 988 Czech firms to become a joint stock company in the first wave of voucher privatization. Approximately 57 percent of outstanding S&B shares were distributed as part of this wave. Between 1994 and 1995, an additional 20 percent of the company's equity was distributed in the second wave. The remaining 23 percent of shares were allocated as follows: 5 percent to the City of Vlasim, 3 percent to a restitution fund (compensation for property expropriated by the Communists), and 1.3 percent to employees. The remaining 13.7 percent was retained by the state and subsequently sold. After privatization was complete, the company's book value of equity was 777 million Czech korunas (CZK), and there were 65,112 shareholders, most of whom owned only a few shares.

Czech companies were not required to disclose the number or identity of shareholders during this period (Glaeser et al., 2001), so reliable statistics on ownership are not publicly available. Consequently, we rely on S&B's internal shareholder voting and ownership records from the annual shareholders' meetings.[14] These records are summarized in Table 2.

[14] The major strength of this approach is that we track the actual voting of equity blockholders voting at the meetings (either directly or by proxy). One caveat is that we could miss equity blockholders who do not attend the meeting and do not vote by proxy. The only instance where the current CEO believes this could have occurred for a large blockholder is the case of Krusnohorsky Investicni Fond during the 1998 annual meeting.

The continuing divestiture of shares by the Czech Government, the City of Vlasim, and two Slovak-based IPFs account for most of the changes in S&B ownership between the early years (1993-1995) and the later years (1997-1999). During the early years, the Czech Government was the largest blockholder, and the two Slovak IPFs (Prva Slovenska and Vub Kupon) represented the second largest stake. Another important blockholder, Ceska Sporitelna Bank Funds, was owned by one of the four banks providing loans to S&B. Due to the interlocking relationship between the bank, the fund, and S&B, the fund's management was likely to pursue bank interests over those of its shareholders (Makhija and Patton, 2004). The Czech Government's ownership decrease (from 55 percent of common shares voted in 1993 to 34 percent in 1995) reflects its privatization efforts. The divestiture of S&B shares by Slovak IPFs is consistent with an investment home bias that could have occurred following the separation of Czechoslovakia into the Czech Republic and Slovakia in 1993. Several new owners acquired stakes after 1996, and two entities became major share buyers – R.E.M.O. Corporation and Capital Partners. R.E.M.O.'s ownership stake increased from 13 percent to 25 percent of shares voted between 1997 and 1999. Capital Partners increased its holdings from 2 percent to 39 percent between 1997 and 1998. According to S&B's current CEO, Capital Partners was a brokerage company that specialized in relatively short-term speculative share accumulation to create blocks for sale at a higher price. Given their short-term orientation, they provided little monitoring of management, and they had completely divested their S&B shares by 1999. A portion of Capital Partners' holdings appears to have been acquired from Ceska Sporitelna Bank Funds.

R.E.M.O. and Capital Partners were able to increase their stakes because they had access to private capital, unlike IPFs. S&B's current CEO and CFO, Radek Musil and Pavel Kolar, respectively, worked for Expandia (a major IPF) before joining S&B. They said most IPFs had highly dispersed portfolios of stock and little cash after privatization. The IPFs tried to

concentrate their stakes to increase bargaining power and save costs. In the absence of cash, this could only be done by swapping blocks of similar value with other IPFs. Illiquid Czech capital markets made such swaps difficult because of poor price discovery and high information asymmetry. As shown in Table 1, Panel B, S&B's average trading volume as a percent of market value ranged from 0.01 percent to 0.03 percent between 1993 and 1999, substantially less than that of the PSE. The average number of S&B shares traded per day ranged from 14 to 225 shares on the PSE and from 42 to 96 on the RMS System.

Despite some ownership concentration among certain blockholders, S&B's ownership remained dispersed, as evidenced by a low Herfindahl Index that ranged between 0.18 and 0.35 over the period 1993-1999. According to CFO Kolar, "The barrier to faster concentration of ownership was the lack of cash and the inability to persuade trading partners to accept the offer price, and a propensity by IPFs to speculate."

Diffuse ownership, weak legal protection, and less than fully developed capital markets contributed to disagreements between blockholders and managers. After 40 years of Communism, some of the representatives of major shareholders lacked the knowledge and experience necessary to run the firm, yet they wanted a major say in company decisions.[15] At the same time, the IPFs typically had only limited opportunities to substitute qualified replacements for poorly performing representatives. Government restrictions on the size of IPF investment stakes resulted in IPFs with large portfolios and overextended IPF employees serving on boards.

Between 1993 and 1998, S&B had five different CEOs. This turnover was a consequence of ineffective corporate governance. As CFO Kolar said, "Many fund representatives simply wanted to elevate their friends and associates into top management positions." According to CEO Musil, having five different CEOs over six years was unusual and reflected struggles among

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[15] A lack of pressure from investors on fund managers was a contributing factor for the poor governance and performance of IPFs. According to CEO Musil, "Since Czech citizens obtained voucher coupons for free, losses associated with IPFs were often met with apathy on the part of investors."

different groups of owners. He stated, “When the blockholders could not agree on a strategy to turn around the company, firing the CEO consistently appeared to be the low cost, easy to observe solution.” He also said that in S&B’s former “jobs for life” corporate culture, managers who were replaced – some of them appointed to their high position during the previous Communist regime based on Party membership rather than expertise – were typically reassigned to other positions within the company. Rarely was anyone forced to leave the firm.

The diffuse ownership structure of S&B was accompanied by an unstable two-tiered board structure (supervisory board and board of directors), further weakening S&B’s corporate governance. Under Czech law, the supervisory board is elected at shareholder meetings to select members of the company board of directors and monitor their performance. CEO Musil stated, “It was quite typical in the Czech Republic that each owner wanted to have his representatives on the supervisory board and the board of directors.”

Details of S&B’s supervisory board and board of directors reported in Tables 3 and 4 show frequent turnover and changes in board size. The supervisory board, comprising between three and nine members, had a total of 23 different members between 1993 and May 15, 1999 (when Radek Musil became a director). The board of directors had 20 different members, with between five and nine members at any one time, during the same period. In 1998 alone, there were five changes to the board of directors.

Czech companies rarely attracted new equity capital, in part because Czech law required new shares to be priced at least as high as the book value of existing shares. The only year S&B issued new shares after privatization was 1996, when the book value of S&B’s equity increased from CZK 776 million to CZK 1,009 million. Newly issued shares were purchased by existing blockholders at a price above market value to preserve their ownership stakes. Consequently, S&B had to rely on bank loans for the majority of its new external capital.

During the diffuse ownership period, S&B borrowed funds from four banks: Ceska Sporitelna (parent of Ceska Sporitelna Bank Funds, one of S&B's equity blockholders), Komercni Banka, Obchodni Banka, and Zivnostenska Banka. In developed economies, bank monitoring often serves as a governance mechanism to encourage managers to adopt value-maximizing decisions (Fama, 1985; Billett et al., 1995, 2003; Krishnaswami et al., 1999). However, S&B's banks played no such role in the 1990s, since they lacked the necessary experience and expertise to influence company decisions to protect loan values. Banks had existed under the Communist regime, but lending decisions and relationships were motivated by political rather than financial criteria. Additionally, a large portion of the portfolios of Czech banks consisted of underperforming loans, making it difficult for loan officers to devote sufficient attention to each debtor firm. Many Czech banks themselves were subject to severe governance problems or were in the process of undergoing privatization themselves, and had insufficient incentives to motivate employees to pursue bank interests rather than their own interests (Glaeser et al., 2001). S&B CEO Musil notes that the Czech banking system became somewhat more efficient due to consolidation and privatization in the late 1990s.

Firm performance deteriorated between 1993 and 1998, as evidenced by the balance sheets, income statements, and ratios shown in Tables 5 through 7. Profitability declined despite modest improvements in collections and inventory management. While S&B's sales increased 40.89 percent between 1993 and 1998, gross profit increased only 27.53 percent, and net income fell from CZK 36.8 million to a net loss of CZK 312.9 million. Return on assets also fell from 3.37 percent to -25.38 percent, return on equity from 4.18 percent to -43.00 percent, and operating profit per employee from CZK 46,170 to CZK 14,700. Additional bank loans were required to keep the company out of primary default. Leverage increased, as evidenced by increases in total liabilities from CZK 216.9 million to CZK 421.5 million and in the ratio of total debt to operating profits from 1.98 to 18.11. Total liabilities increased from 17.33 percent to

40.98 percent of total assets.[16] By 1997, persistent losses had forced the company into secondary default. By 1998, S&B's owners were concerned about possible primary default and liquidation. In addition, the company's unions declared a "permanent state of strike emergency" in 1997, leaving them ready to sue the company over alleged poor working conditions. (Under Czech law, unions have to declare a "strike emergency" before a strike to allow management time to implement changes to avoid the strike.)

S&B's accounting performance was significantly worse than that of its major publicly listed American competitors during the diffuse ownership period.[17] Table 8 shows that S&B experienced a 40 percent drop in the dollar value of its total assets between 1996 and 1998, whereas Czech currency fell only 19.1 percent against the U.S. dollar over the same period. This compares with a 6 percent increase in total assets for Winchester. S&B's EBIT/assets was only 2.52 percent in 1998, even on the new lower level of assets, compared to 8.07 percent for Winchester and 8.68 percent for ATK Ammunition Division.

S&B's stock also underperformed the Czech stock market and the Aerospace/Defense Products and Services index (the best industry index available). Figure 1 shows that an investment in one share of S&B common stock worth CZK 850 on October 1, 1993 was worth CZK 90.1 on March 31, 1999, for a loss of 89.4 percent. An investment of the same amount in the Prague Stock Exchange 50 Index or the Aerospace/Defense Products and Services index would have yielded gains of 18 percent and 79 percent, respectively.

[16] The current managers claim that S&B was able to secure additional substantial bank loan financing because banks were unwilling to force S&B into bankruptcy for two reasons. First, Czech bankruptcy laws at that time gave creditors little ability to influence bankruptcy proceedings. The distribution of assets was almost exclusively decided by bankruptcy judges and court-appointed trustees, and, apparently, judges and trustees sometimes conspired to extort value from creditors. Second, Czech law did not allow for the resolution of bankruptcy via reorganization. If creditors forced S&B into primary default by refusing to grant additional loans, the company would almost certainly have been liquidated for less than its going-concern value.

[17] Most ammunition manufacturers are either privately held or are small divisions within much larger firms.

Given that S&B's stock performance during the diffuse ownership period was worse than that of its major publicly traded American peers, the Czech stock market, and the Aerospace/ Defense Products Index, S&B's owners were ready for change by late 1998.

3.3.1. S&B Machines during the diffuse ownership period (1993-1998)

As a result of employee defections at the time of privatization, S&B Machines, the packaging machines division, suddenly faced five competitors, two of which were almost as large as S&B Machines. At the same time, poor corporate governance contributed to weak performance at S&B Machines during the diffuse ownership period.

Most of the management and workforce of the S&B packaging machines division were poorly motivated following privatization. The machines division management was convinced that S&B was dominated by ammunition production people who did not respect them. Division workers were unwilling to work more than one eight-hour shift per day, in part because many of them, including the sales staff, worked for the division's competitors at night and on weekends.

During the diffuse ownership period, division management tended to be ineffective. The S&B packaging machines division had too broad a portfolio of products for its size. Delivery periods were a lengthy six months, and prices were high. To reduce average production costs, more machines were produced than ordered, and extras accumulated in inventory. Because innovation in the packaging industry tends to be rapid, extra machines held in inventory soon became obsolete. By 1998, the division had accumulated CZK 80 million worth of unsaleable inventories with a book value of 60 percent of division assets.[18]

[18] Current S&B management believes that the packaging machines division could have eliminated its new competitors by filling all of the demand for one or two years if it had dumped its inventory for half of book value in 1994. Radek Musil also told us that the legacy of bad inventories deterred a sale: "If a new owner wanted to buy the Machines unit, he would not want any of the bad inventories. S&B wouldn't want them either, because we couldn't sell them on our own. As part of S&B, S&B Machines can sell them albeit at heavily discounted prices."

3.4. S&B and S&B Machines during the transition period (1999)

Due to persistently poor performance and an inability to reach a consensus on how best to improve the company, the major blockholders decided in late 1998 to put the company up for sale. The Czech consulting group Patria Finance was hired to help sell the company. Patria Finance mailed information about S&B to potential buyers, but found no interested parties. The information asymmetry between insiders and outside buyers and the poor quality of Czech accounting standards (Copeland and Galai, 1983; Makhija and Patton, 2004) contributed to Patria Finance's inability to sell the firm.

Once it became clear that the firm would not sell, R.E.M.O. Corporation approached other blockholders and purchased some of their stakes. It gained voting control of S&B for three reasons. First, other blockholders lowered their expectations about the values of their stakes and became more inclined to sell them in the wake of the failed effort to sell S&B. Second, R.E.M.O. was the only long-term blockholder with access to the cash necessary to purchase these stakes. Third, R.E.M.O. was already an insider with access to information about the true value of S&B. The current CEO informs us that the remaining major owners then gave R.E.M.O implicit permission to use their votes. The understanding was that R.E.M.O. Corporation would hire a new management team, closely monitor managers to improve performance, and eventually buy the shares owned by the other blockholders.

R.E.M.O. hired Radek Musil as Chairman of the Board and CEO in September 1999; he had been an external director since May 15, 1999. Mr. Musil was 30 years old, held a master's degree in engineering, and had previously worked in various finance and management positions. These positions included experience as a financial analyst with an IPF, Chairman of the Board of a furniture manufacturer, and chief advisor to the CEO of a forest management company. Mr. Musil subsequently hired Pavel Kolar as Vice Chairman of the Board and CFO. Mr. Kolar was 36 years old, had held various accounting and finance jobs, and was a close associate of Mr. Musil.

In 1998, the packaging machines division was reorganized as Sellier and Bellot Machines Ltd., a fully owned subsidiary of S&B, and the CEO hired Rudolf Povolny as Division Manager. Mr. Povolny was 53 years old and had worked as an S&B manager in the past, but had left the company in the 1990s to become business manager of a diversified entertainment company.

3.5. S&B during the concentrated ownership period (2000-2003)

The concentration of decision-making power that occurred under R.E.M.O. Corporation in 1999 was soon followed by a concentration of ownership. Starting in 2000, R.E.M.O. launched a series of private share repurchases from other blockholders at undisclosed prices that current management confirms were well above existing stock prices (likely over CZK 350). By October 2000, R.E.M.O. owned 76.19 percent of all shares outstanding.[19] Table 2 shows that R.E.M.O. held 100 percent of all shares voted at the 2000 annual shareholder meeting. This meeting approved the delisting of S&B from the PSE. Public trading ceased on October 24, 2001.

As ownership became concentrated, the supervisory board and the board of directors stabilized. As shown in Tables 3 and 4, R.E.M.O.'s representatives dominated the supervisory board after May 15, 1999 and the board of directors after September 28, 1999. Shortly after Radek Musil became CEO in 1999, CFO Pavel Kolar and R.E.M.O. representative Jaroslav Kopper became Vice-Chairmen of the board of directors. No further changes in the board occurred between 2001 and 2003.

S&B reduced the number of its banks to two: Zivnostenska Banka and Komercni Banka. These banks were among the first to be privatized, and proved to be more willing to work with and respond quickly to S&B's needs. Komercni Banka is now owned by the French firm Société Générale, giving it access to foreign branches and speeding up transactions.

[19] Both R.E.M.O. and the other blockholders likely benefited from additional repurchases. Under Czech law in the 1990s, only 10 percent of votes cast were necessary to call extraordinary shareholder meetings, so R.E.M.O.'s acquisition of more shares reduced the likelihood of these kinds of disruptions. Meanwhile, selling blockholders realized premiums and avoided possible expropriation. We found no evidence that R.E.M.O. engaged in wealth transfers through asset stripping, transfers, or similar activities, although the possibility of expropriation likely helped motivate remaining shareholders to sell their stakes.

S&B's performance improvements after 1999 are apparent from Tables 5 through 7. Between 1999 and 2003, return on assets increased from 4.71 percent to 13.51 percent, return on equity from 7.37 percent to 16.69 percent, and operating profit per employee from CZK 53,400 to CZK 89,100. During the same period, leverage decreased noticeably, with total liabilities falling from CZK 370 million to CZK 241 million and the ratio of total debt to operating profit from 4.88 to 1.95. According to current management, 2003 results would have been even better but for the adverse effect of a declining U.S. dollar.

S&B's accounting performance during the concentrated ownership period approximated that of its major American competitors. S&B was competitive despite a declining U.S. dollar. Moreover, increased associated with wars in Afghanistan and Iraq primarily benefited U.S. manufacturers. As shown in Table 8, S&B's dollar value of total assets increased by 55 percent between 1999 and 2003, compared to a 15 percent decrease in Winchester and a 180 percent increase for ATK Ammunition Division. S&B's EBIT/assets increased from 7.91 percent to 10 percent, compared to increases from 12.73 percent to 15.71 percent for Winchester, and from 11.65 percent to 18.23 percent for ATK Ammunition Division.

S&B's improving performance after 1999 was not simply the consequence of an improving Czech stock market or the global defense industry. Figure 2 shows that an investment in one share of S&B common stock worth CZK 121 on January 1, 2000 was worth CZK 437.30 in May 2004, representing a gain of approximately 261 percent. Offer prices for widely held shares that the new owner purchased after the company went private increased from CZK 157 in October 2001—the delisting market price was CZK 126—to CZK 302 in September 2002, CZK 352 in December 2002 and CZK 437.30 in May 2004.[20] An investment of the same amount in the

[20] Since post-delisting S&B repurchase offers involve minority shareholders, it is not immediately clear whether the offer price reflects intrinsic value or abnormal returns (e.g. bribes) to small holdout investors. Czech law mandates that minority shareholder repurchase offers must be based on fair-value estimates provided by court-appointed experts. According to CEO Musil, S&B has never lobbied for changes in expert estimates. Mr. Musil also claims that after 2000 the minority shareholders had no influence.

Prague Stock Exchange 50 Index or the Aerospace/Defense Products and Services index would have produced gains of 61 percent and 80 percent, respectively.

S&B successfully launched new strategies to increase sales and decrease costs. Bank debt was dramatically reduced, and the company ceased to be in secondary default. Since 1999, the unions have not launched protests against management. Management also implemented programs to mitigate foreign exchange rate risk. These changes are detailed in Section 4.

3.5.1. S&B Machines during the concentrated ownership period (2000-2003)

Performance improvements at S&B Machines during the concentrated ownership period paralleled those of S&B. After years of losses, the subsidiary has generated profits every year since 2000, as shown in Tables 9 through 11. Sales increased 41.9% in 2000 and a further 28.5% in 2001 before dropping off somewhat, and inventories were reduced significantly. By generating profits and decreasing assets, especially inventories, S&B Machines gradually reduced its original CZK 105 million debt to S&B. By 2003, the subsidiary had repaid approximately CZK 45 million. Based on discussions with company managers in January 2005, the subsidiary's performance continues to improve, and its debt to S&B has been reduced to CZK 50 million.

4. Discussion of S&B corporate governance and firm performance improvements

In this section, we discuss three factors that contributed to performance improvements at S&B following ownership concentration: improved performance monitoring, better incentive alignment (both monetary and non-monetary), and the adoption of prudent corporate financing policies. A preponderance of the improvements at S&B occurred after ownership was concentrated. Moreover, the current owner and managers believe that S&B's turnaround was accomplished as a result of changes in ownership and related changes in management and corporate governance.

4.1. Monitoring

An important role of corporate governance is the monitoring of managers on behalf of owners by boards of directors (Jensen and Meckling, 1976; Stulz, 1990). Similarly, an important function of management is to monitor subordinate employees. S&B introduced a two-faceted monitoring mechanism whereby managers were monitored closely by a board dominated by the new owner's representatives, and the new managers closely monitored sales and spending activities by subordinates.

4.1.1. The monitoring of top managers by the board

The composition and structure of the board was unstable prior to the concentration of ownership at S&B. Before R.E.M.O. acquired control, S&B was governed successively by four different boards and three different chairmen during the first nine months of 1999. Once the new owner took over and set up his board and management team, changes in senior management and board membership ceased. The current five-member board is small, suggesting board efficiency (Yermack, 1996). There are only two insiders on the board: Mr. Musil (Chairman and CEO) and Mr. Kolar (Vice-Chairman and CFO). The remaining three members of the board are representatives of S&B's controlling owner. This outsider-dominated board enables the controlling owner to force management to act in his interests, consistent with evidence that such boards adopt policies that benefit shareholders (Brickley et al., 1994).

Most major decisions, such as bank contracts, large acquisitions, and substantial purchases, are approved by the CEO, and often by the board. In addition, the monitoring of managers now includes regular monthly meetings between the CEO, the CFO, and the owner's representatives. Company officers give periodic reports on performance at these meetings. According to CFO Kolar, the owner typically gives managers freedom to choose strategies to improve company performance, but insists on material results.

The new owner is especially interested in maximizing accounting performance while improving overall worker productivity, measured as operating profit per employee. Not surprisingly, these two performance characteristics have improved noticeably since the new management team was hired. As discussed above and shown in Table 7, return on assets, return on equity, and other measures of accounting performance have improved dramatically since 1998. Similarly, operating profit per employee increased from CZK 14,700 in 1998 to CZK 89,130 in 2003. This was achieved by increasing sales, improving cost controls, and reducing the workforce. Wallace (1997) also shows that managers of American companies tend to improve precisely those characteristics that owners use to judge managerial performance.

4.1.2. The monitoring of employees by top management

The strategy of increasing sales and reducing costs to bring the company out of secondary default was closely monitored by management and the board. Regular monthly meetings between the CEO, CFO, director of marketing, and trade director (the person most responsible for marketing) were instituted to discuss new marketing strategies. Volume increases were stressed. Strategies and goals for each client country for the coming weeks and months were discussed. Price sheets were compared with those of competitors. Monetary incentives were created for various geographic regions. The performance of foreign dealers was closely observed, and underperforming dealers were replaced for the first time in the company's recent history. The success of the new sales growth strategy is apparent from Table 6. Sales between 1999 and 2003 were higher than during any year between 1993 and 1998, and peaked in 2002 at CZK 1.3 billion.

To cut costs, improved reporting and personal responsibility for financial performance were introduced. The CFO was made directly responsible for input purchases, and was compensated based on input cost decreases. He was given the right to review and question any cash outlay that exceeded CZK 10,000 (at the time, about U.S. $300). For cost control, the company required every order to be signed by the person who ordered the cost to be incurred, his

or her supervisor, and the CFO. As part of their cost cutting initiative, the CEO and CFO instituted a new requirement to obtain competing bids from several potential suppliers for input materials. None of these policies existed before ownership concentration. In December 2003, CEO Musil estimated the savings from these procedures to be between 15 and 20 percent of total costs. Similarly, CFO Kolar believed that these procedures generated a 20 percent decline in the cost of raw materials. For example, the input cost price for brass and lead is the sum of the world commodity price plus local manufacturing costs charged by S&B suppliers. S&B has no control over commodity prices, but they substantially reduced local manufacturing costs. Between 2001 and 2004, these costs declined by 29.16 percent for brass and 20.31 percent for lead.

4.2. Incentives

The finance literature suggests that stronger alignment of incentives, especially provisions that increase pay-performance sensitivity, tend to enhance value (Jensen and Murphy, 1990; Kole, 1997). A substantially greater focus on the provision of monetary and non-monetary incentives for managers and employees is one of the strategies that the new owner and his management team employed at S&B during the period of concentrated ownership.

4.2.1. Monetary incentives

The new S&B owner and management team employed a three-pronged approach when establishing performance incentives. This approach included a new bonus structure, the threat of dismissals, and revision of work norms to motivate low-level employees.

The new bonus structure replaced a pre-1999 system. Under the old structure, top management compensation included progressive and variable components. On paper, bonuses ranged from 60 percent for senior managers to 100 percent for top managers. In reality, bonus triggers were set unrealistically high, so they were almost never achieved, nullifying their potential benefits. Both Mr. Musil and Mr. Povolny hypothesize that bonus structures were unimportant in the old S&B. They had little ability to attract quality managers not only because

triggers were unattainable but because managers cared more about employment stability than compensation. When Mr. Musil became CEO, he reset bonus triggers to achievable levels. Under the new bonus structure, bonuses were tied to accounting measures such as profit, inventory, accounts receivable, and profits per employee. Each manager was assessed against three or four targets. The four top managers (CEO, CFO, Sales Director, and Technical Director) are eligible for 100 percent bonuses, plus other performance bonuses announced by the board. An additional 15-20 employees are eligible for 100 percent bonuses, 60 for 60 percent bonuses, and 30 percent of remaining employees are eligible for 22 percent bonuses. CFO Kolar notes that financial incentives for top management are extremely important, bonuses are high, and profits affect almost everybody. By 2000, 90 percent of available bonuses were paid.

The threat of dismissal was also new. Before 1999, poorly performing managers were rarely forced to leave the company. Instead, they were relocated to other, relatively well paid positions—a practice reminiscent of the Communist period when the state guaranteed full employment, effectively preventing firms from displacing employees. Without a credible threat of dismissal, there was little motivation for managers to perform. Mr. Musil and Mr. Povolny described changing this aspect of the corporate culture as one of their biggest challenges, one that drew heated protest and criticism. Nevertheless, poorly performing managers have been forced to leave the company since 2000.

Even junior-level employees were threatened with dismissal if they did not perform. According to Mr. Povolny, the strengthening of discipline among workers was a major factor in the rapid turnaround of the S&B Machines subsidiary. Before he was hired as subsidiary manager, many workers felt no need to work more than one eight-hour shift, even for overtime or to meet strict customer deadlines. As soon as he took over, Mr. Povolny fired the worst-performing workers, setting an example for remaining employees. He also hired temporary foreign workers from the former Soviet Union to replace some of the local workforce, motivating

existing employees to work harder. This strong stance was used only during the first few turnaround years. S&B Machines employed no more than 20 to 25 foreign workers out of a total of 80 employees. However, the threat of dismissal worked, and the profitability of S&B Machines improved.

S&B does not reward lower-level employees with stock under an employee stock ownership plan. However, new management introduced an updated work norms reward system in 2003. Under the old system, workers were penalized for not meeting their norms, but would not receive extra compensation if they exceeded them. When work units exceeded their norms, bonuses could be paid, but foremen had discretion over bonus distribution. At the beginning of 2003, foreman discretion was removed, and each worker was told precisely what the norms were. Norms were simultaneously tightened to between 115 and 120 percent of their former levels. The system now rewards and penalizes each worker for individual rather than work-unit performance.

4.2.2. Non-monetary incentives

According to CEO Musil, non-monetary incentives have been more important at S&B than monetary ones. Non-monetary incentives include the return of decision-making power to appropriate levels, along with effective control and monitoring and timely feedback. In Mr. Musil's view, the improvement of working conditions for employees was paramount. He told us that "…by working conditions, I mean workers need to have clearly defined tasks, know precisely what to do each day, be properly trained for their jobs, and have raw material inputs always available. Assignments cannot be changed too often or hastily, and evaluations have to be clearly defined and fair."

Non-monetary incentives may have been even more important for the S&B Machines division. The success of this subsidiary depended in large part on the creativity of its R&D staff, since packaging machines technology evolves quickly and the division must react to emerging trends by designing new and improved machines. After 1993, S&B Machines had a relatively

young and inexperienced R&D workforce. They were definitely not the star performers, most of whom had left to start up competing firms. Nevertheless, Mr. Povolny claims that after 1999 the performance of many of the engineers who stayed with S&B Machines substantially improved, and many of them have since become top industry performers. Non-monetary factors are believed to have brought about this change. While small monetary incentives were provided, younger professionals were challenged to be creative, fueling performance improvements. In addition, development times have been reduced from six months to one.

Finally, Mr. Musil deliberately strived to improve the relationship between S&B and its unions. Before 1999, unions were radical. The company operated under a permanent strike emergency regime. The unions sued the company, claiming adverse working conditions. After the new management team took control, the relationship between S&B and its unions improved. Mr. Musil attributes much of this turnaround to fair and just treatment of employees. Equally important was S&B's assumption of the social roles formerly provided by unions. For example, Mr. Musil now sponsors the extremely popular company-wide soccer league, and allows employees free access to the company's fish ponds and hunting forests.

According to Mr. Musil, unions were aware of the company's financial problems in 1999 and the decline in the ammunition industry. As a result, they did not object to layoffs and increased monitoring when presented with a workable recovery plan, especially after seeing the top managers responsible for the company's problems being forced to leave. Between 1999 and mid-2004, the number of employees at S&B fell from 1,520 to under 1,300. The unions have accepted these changes for three reasons: laid-off employees were given four months of salary as severance pay; the low unemployment rate in Vlasim (three percent) makes it easy for displaced workers to find new jobs; and inflation-adjusted wages for remaining S&B employees have increased. Improved relations between S&B and its workforce and unions have contributed to S&B's turnaround.

4.3. Financing

Current S&B management took over a highly levered company in 1999. Accordingly, one of the primary tasks assigned to the new managers was the reduction of financial risk. This goal was accomplished by adopting a more prudent corporate financing policy that included a substantial reduction in leverage and the introduction of a currency hedging program.

4.3.1. Leverage

When the new owner assumed control of S&B and hired his CEO in 1999, the company was already in secondary default. Leverage reduction was one of the most important tasks assigned to the new management team. Increased profits and cash flows were used by the company to repay much of its outstanding debt. Currently, S&B's leverage is minimal and the company maintains substantial unused debt capacity, including credit lines that greatly exceed foreseeable borrowing needs. In December 2003, Mr. Musil noted that S&B could immediately repay all of its outstanding debts. S&B also reduced the number of banks from which it borrows from four to two. Banks now offer loans to S&B under the most favorable terms.

According to CFO Kolar, S&B's policy of substantially reducing leverage was introduced at the insistence of the new owner, who had most of his wealth tied up in S&B stock. R.E.M.O.'s representatives directly monitor loan utilization by the company. The owner pursues a cautious approach to capital structure because he felt threatened in 1999 when the firm was in secondary default. Of course, S&B's low reliance on debt means that the company may not be fully utilizing its interest tax shield (Modigliani and Miller, 1963). High ownership concentration—spurred by the inability of Czech law to protect minority shareholders—led S&B to adopt a capital structure with a higher than necessary cost of capital, potentially destroying value.

However, the leverage policies of S&B are not substantially different from those of many U.S. corporations. A majority of U.S. corporations significantly underutilize debt, as shown by

Graham (2003). In addition, Mr. Musil suggests that the overall business trend in the ammunition industry has been one of decline over the past few decades, and that the industry tends to be cyclical. This means that profitable growth opportunities are limited, and as soon as they appear, they need to be financed quickly. Mr. Musil claims that S&B's low reliance on debt gives him the flexibility to raise necessary capital on advantageous terms (Damodaran, 2002), even during a downturn. In this regard, current S&B leverage policies may be optimal.

4.3.2. Currency hedging

Approximately 80 percent of S&B production is exported to 75 countries, but the company collects most of its sales revenue in three currencies: Czech korunas (CZK), U.S. dollars, and euros. Company profits are therefore exposed to movements in foreign exchange rates. They are also affected by the prices of key raw materials, such as lead and brass.

Between 1999 and 2004, the U.S. dollar lost 27 percent of its value against the Czech koruna, as shown in Figure 3. This exchange rate movement negatively affected S&B's reported performance because the U.S. is its largest market. The performance of S&B was also negatively affected by price increases in lead and brass, as shown in Figure 4. Between 1999 and 2004, lead prices increased 37 percent, and brass prices increased 22 percent.

The combined effect of changes in exchange rates and lead and brass prices on the profitability of S&B is shown in Figure 5. This figure demonstrates that S&B's performance over the period 2003-2004 was adversely affected by changes in exchange rates and input prices over which the company had little control. If exchange rates and prices of lead and brass had stayed constant, then the performance of S&B would have improved every year after 1999.

The theoretical literature suggests that some firms hedge against foreign exchange rate risk because of taxes, contracting costs, or agency conflicts. Reduced cash flow volatility could reduce taxes and costs associated with external financing, debt, and bankruptcy (Smith and Stulz, 1985; Froot et al., 1993). Because bankruptcy was a major risk facing the company at the time the

new owner assumed control, S&B's management now tries to smooth cash flows by limiting foreign exchange rate risk. Currency hedging has the potential to add value to international companies, as shown by Allayannis et al. (2003).

Until recently, the market for foreign exchange derivatives was largely nonexistent in the Czech Republic. Consequently, S&B instituted a policy of indirect hedging. After 1999, and for the first time in its history, S&B tried to match the currencies it uses to pay for raw materials such as lead and brass with the currencies it receives in exchange for its final products. U.S. dollar (euro) output revenues are matched with U.S. dollar (euro) input costs, keeping input costs proportional to output revenues.

Since 2003, S&B has expanded its hedging to include euro forward contracts. The company is now fully hedged against the effects of increases in the euro against the Czech koruna. Interestingly, it is not using forwards to hedge against decreases in the value of the U.S. dollar. Consequently, S&B is effectively speculating that the U.S. dollar will appreciate.

S&B recently participated in several large forward trades. Euro transactions are now covered for 2005-06, and the U.S. dollar is no longer hedged. Indirect hedging by matching input and output currencies has become even more prevalent. S&B convinced two more major suppliers to accept this practice. However, this method has its own limitations because taxes and salaries are still paid in korunas. Adverse changes in commodity prices have also taken their toll since 2003. While input commodities are not hedged, the CEO told us that he believes hedging adds to company stability.

5. Alternative explanations for S&B performance improvements after 1999

This paper suggests that S&B performance improvements after 1999 are attributable to the concentration of ownership and associated monitoring and incentive improvements. In this section, we evaluate three alternative explanations for these performance changes.

5.1. European Union accession

In theory, S&B performance could have improved after 1999 in anticipation of the accession of the Czech Republic to the European Union (EU). Presumably, membership in the EU would benefit exporters such as S&B by lowering tariffs and increasing demand. Because the Czech Republic did not join the EU until 2004, EU participation would be unlikely to explain accounting performance improvements documented in Table 8 for the periods prior to 2003.

In practice, S&B faced no barriers to European free trade before 2004, so the accession to the EU neither harmed nor helped S&B according to CEO Musil. Consequently, anticipated EU participation probably does not explain stock return performance.

5.2. Superior inside information captured by R.E.M.O. prior to concentrating ownership

Had R.E.M.O. possessed superior inside information about S&B, such as anticipated large orders for S&B products, he could have capitalized on this information by purchasing equity from less informed blockholders. Subsequent performance improvements would not necessarily have been the consequence of better monitoring due to new ownership structure.

R.E.M.O. was a well-informed investor with positive expectations about the future value of S&B, as evidenced by his acquisition of additional shares. However, CEO Musil recalls that the new owner did not receive material private information prior to his acquisition of these additional shares. Moreover, S&B did not attract any new material orders in the period immediately after R.E.M.O. took control.

According to Mr. Musil, two additional factors contributed to S&B performance improvements post-1999. The first was a publicly known advantageous CZK/U.S. dollar exchange rate until 2001. The second was the outbreak of war in Afghanistan and Iraq. R.E.M.O. would not have had private information about these events.

5.3. Influx of capital provided by R.E.M.O.

Had R.E.M.O. supplied cash to S&B, S&B performance improvements could have been partially attributable to increased liquidity. However, R.E.M.O. never contributed additional equity. According to CEO Musil, this policy was expressly stated from the moment he was hired.

6. Conclusion

The most important lesson from the S&B case is that corporate governance structure change is impeded when legal systems, capital markets, and accounting standards are deficient. Voucher privatization, inflated stock prices, and unrealistic blockholder expectations contributed to the inability of S&B to optimally concentrate ownership. It took five years of declining performance, default, and an unsuccessful effort to sell the company before a blockholder with access to cash could buy out S&B's other blockholders and make the necessary changes to improve company performance.

The second lesson from the S&B experience is that performance turnaround of an emerging market company can be swiftly accomplished once ownership is concentrated. Improvements can be accomplished by adopting monitoring and incentive mechanisms that control owner-manager agency conflict in developed countries. S&B's superior performance under the new owner is consistent with existing research that suggests concentrated ownership is optimal in economies with legal, market, and accounting inefficiencies (Shleifer and Vishny, 1997; La Porta et al., 1997, 1998, 2000a, 2000b, and 2002).

Finally, this paper has important policy implications for emerging market countries. Specifically, effective privatization requires not only timely change in ownership, but also legal protection, careful securities regulation , and transparent accounting.

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Appendix: Sellier and Bellot's History

1825 – Austrian Emperor Franz I authorizes Louis Sellier to make percussion caps for the infantry in a new factory in Prague. Jean Maria Nicolaus Bellot soon joins the company.

1829 – A subsidiary plant founded in Schonebeck, Prussia.

1830 – Production exceeds 60 million percussion caps.

1835 – S&B becomes Austria's official supplier of percussion caps.

1837 – Production exceeds 156 million percussion caps.

1870 – Cartridge production commences, and over the next few years, annual output grows to 10 million cartridges.

1884 – A subsidiary plant is founded in Riga, Latvia, and soon meets the demand for percussion caps for all of Russia and Scandinavia.

1893 – Sellier and Bellot's first trademark is listed in Prague.

1895 – Production was expanded to include hunting cartridges and copper primers for ammunition production.

1914-1948 – During the First World War, rifle and handgun cartridges were produced for the Austrian Army, and the Steyr 9mm cartridge was developed and put into production.

1918 – S&B is the primary handgun cartridge supplier for Czechoslovakia. The company develops a monopoly on silver azide, leading to industrial detonator production.

1936 – S&B relocates from Prague to Vlasim to meet growing demand.

1938-1945 – S&B provides ammunition for German Army.

1945 – S&B is nationalized to become a state ammunition monopoly.

1964 – Anti-friction bearing production begins.

1965 – Packaging machine production begins (this division later becomes the subsidiary Sellier and Bellot Machines, Ltd.).

Appendix (contd.)

1992 – S&B becomes a joint stock company, with 70 percent of production eventually being exported to over 70 countries.

1998 – S&B receives ISO 9001 certification.

November 9, 1998 – Packaging machines division is spun off into the Sellier and Bellot Machines, Ltd., subsidiary.

May 15, 1999 – Radek Musil is first listed as a member of the board of directors in the 1999 Annual Report.

September 28, 1999 – Radek Musil becomes Chairman/CEO, and Pavel Kolar first appears on the board.

January 2000 – Rudolf Povolny is hired by the CEO as Managing Director of Sellier and Bellot Machines, Ltd.

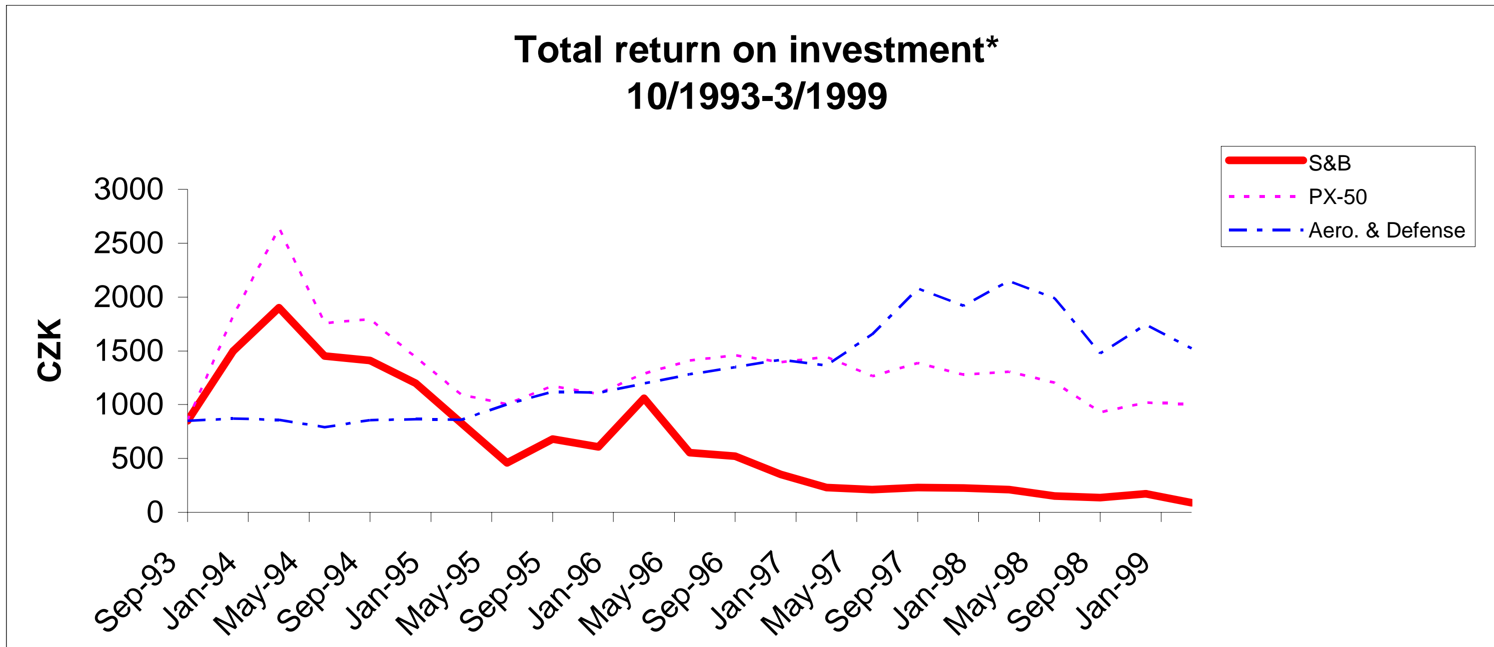
December 8, 2000 – Delisting of S&B from Prague Stock Exchange is approved at annual shareholder meeting. The majority owner, R.E.M.O. Corporation, held 76.19 percent of all shares at that time. (http://ipoint.financininoviny.cz/detail.php?article=3287)

October 24, 2001 – Trading of S&B shares ceases. (http://ipoint.financininoviny.cz/detail.php?article=8093)

2002 – S&B is named the second-most admired company among all machinery companies in the Czech Top 100. (http://ipoint.financninoviny.cz/detail.php?article=11652)

(Source: www.sellier-bellot.cz)

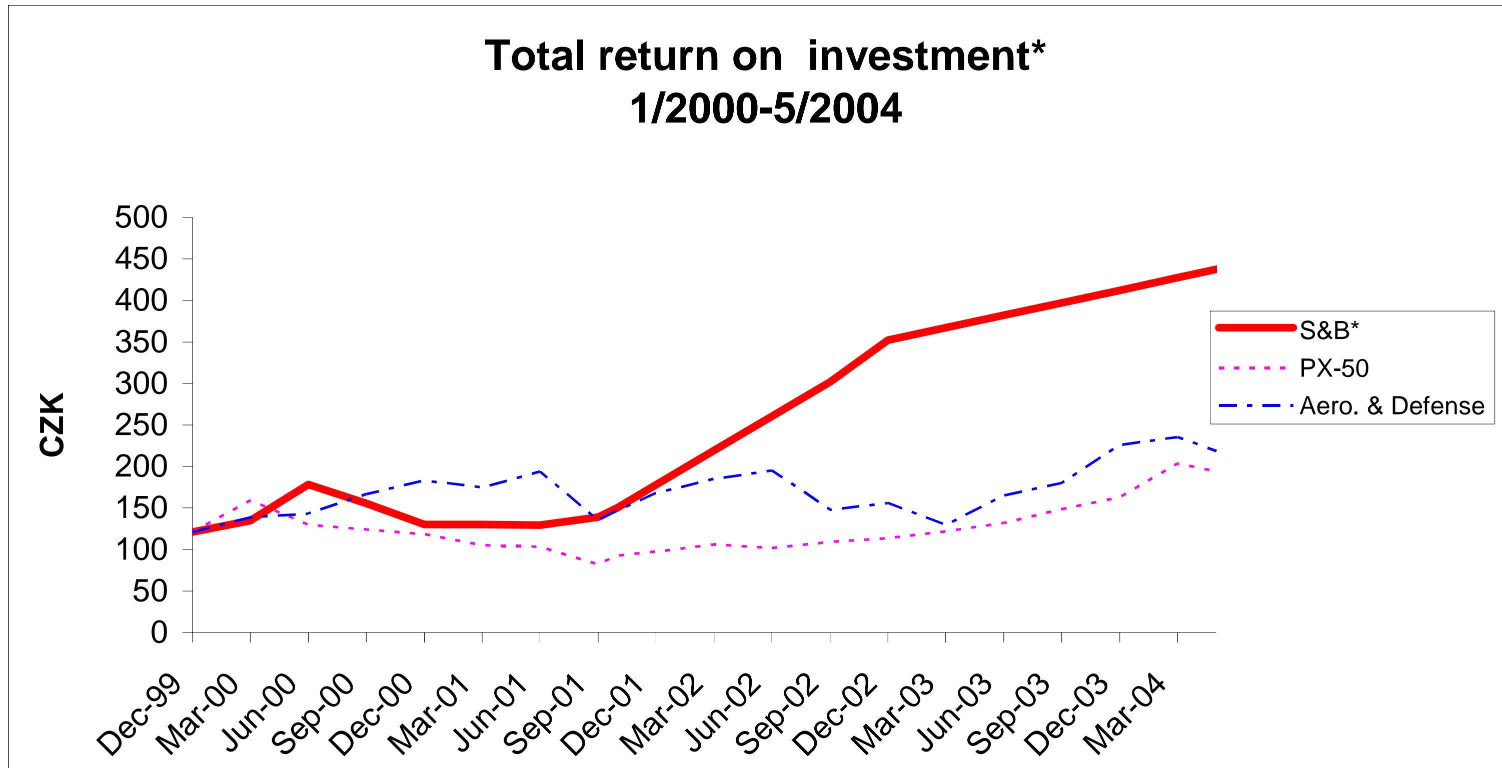
Figure 1
Comparison of S&B, Prague Stock Exchange 50 Index, and S&P Aerospace Defense Index, 1993-1999



Cumulative return from 10/1993 to	12/1993	12/1994	12/1995	12/1996	12/1997	12/1998	3/1999
S&B	76.5%	41.2%	-28.7%	-58.6%	-73.6%	-79.8%	-89.4%
PX-50	114.3%	69.4%	29.5%	64.0%	50.5%	19.8%	18.0%
Aerospace/Defense Products & Services Index	2.4%	1.8%	30.7%	66.4%	125.8%	104.9%	79.2%

* Cumulative performance is measured starting at the end of September 1993 S&B stock price of CZK 850.

Figure 2
Comparison of S&B, Prague Stock Exchange 50 Index, and S&P Aerospace Defense Index, 2000-2004



Cumulative return from 01/2000 to	12/2000	12/2001	12/2002	12/2003	5/2004
S&B**	7.4%	46.8%	190.9%	240.7%	261.4%
PX-50	-2.3%	-19.4%	-5.9%	34.6%	60.6%
Aerospace/Defense Products & Services Index	51.3%	38.8%	28.9%	86.6%	80.4%

* Cumulative performance is measured starting at the end of December 1999 S&B stock price of CZK 121.
** S&B total returns are based on extrapolated prices after delisting (10/2001) based on subsequent repurchase prices.

Figure 3
The evolution of exchange rate changes, 1999-2004

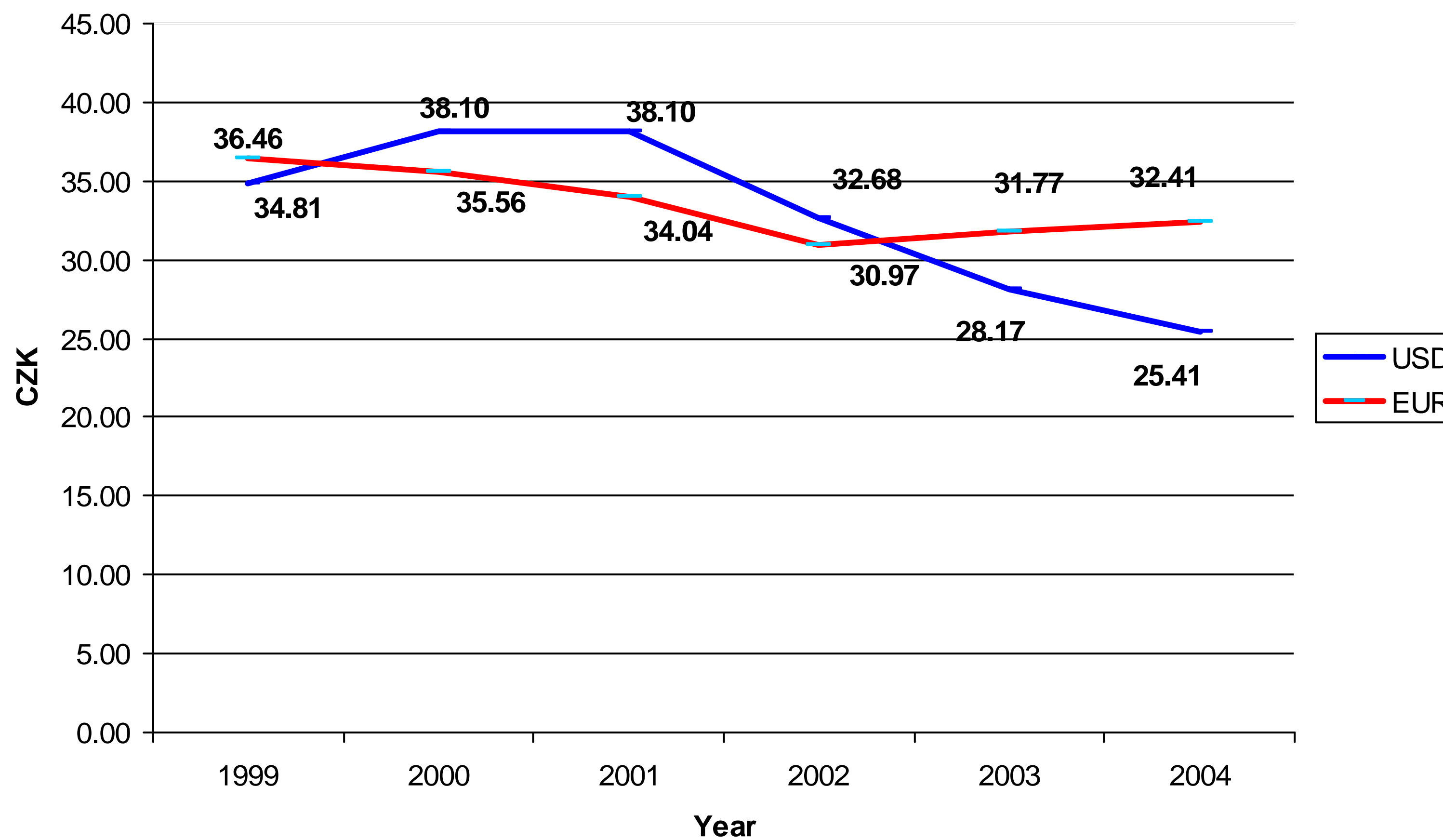


Figure 4
Brass (MS70) and lead prices (in CZK) per metric ton, 1999-2004

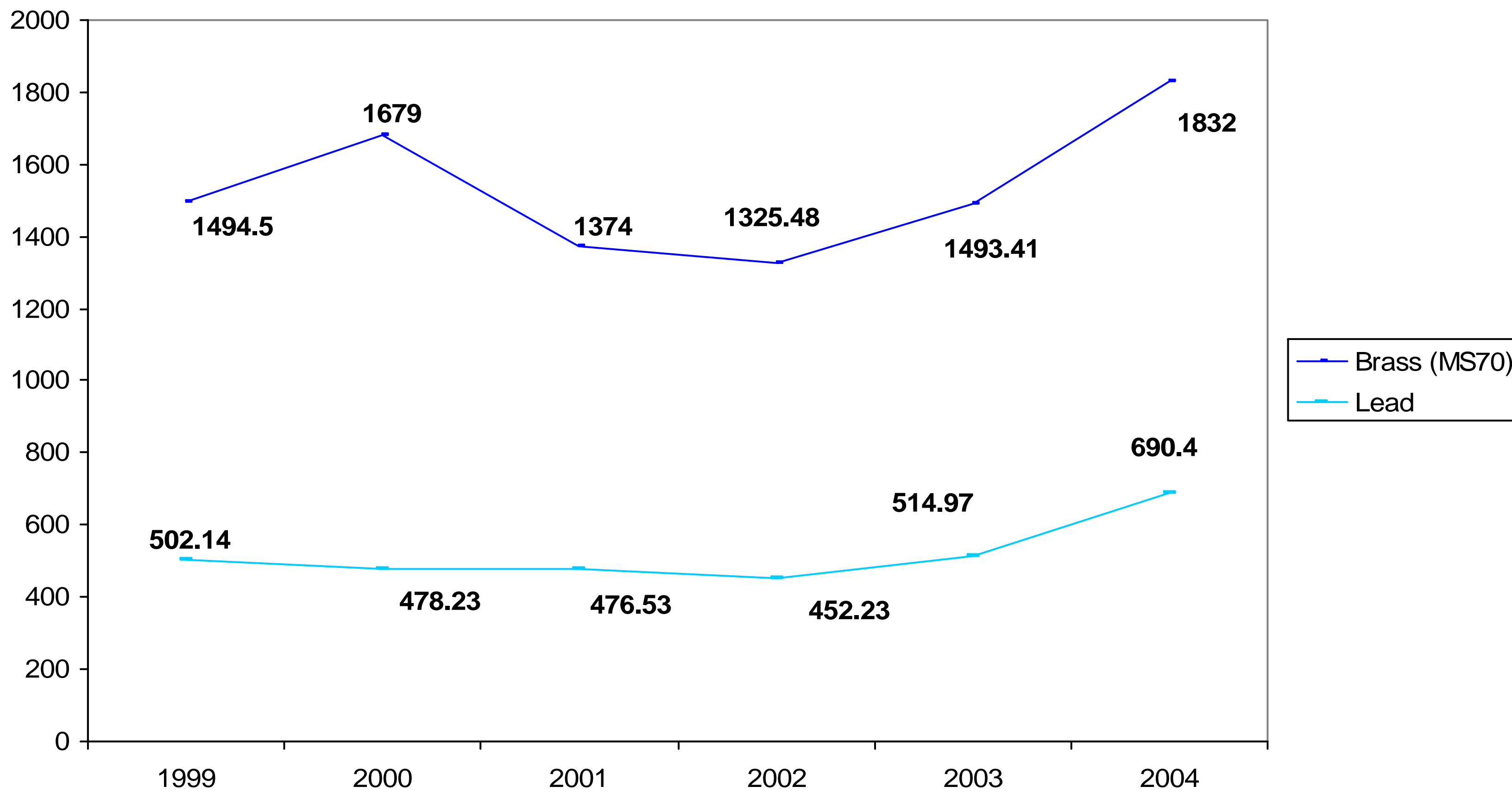
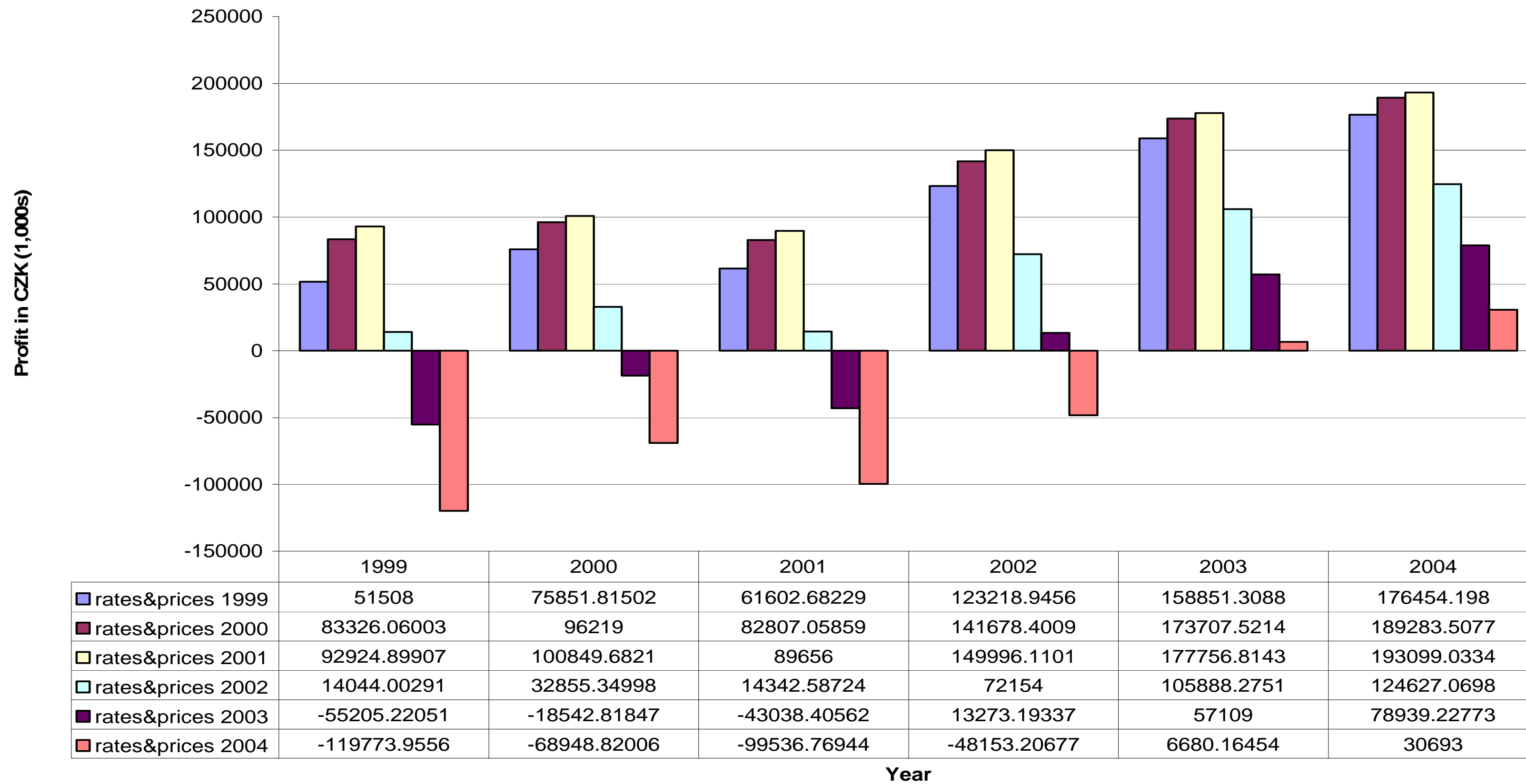


Figure 5
Profit evolution as a function of exchange rate changes and input materials (brass and lead) price changes, 1999-2004



	1999	2000	2001	2002	2003	2004
rates&prices 1999	51508	75851.81502	61602.68229	123218.9456	158851.3088	176454.198
rates&prices 2000	83326.06003	96219	82807.05859	141678.4009	173707.5214	189283.5077
rates&prices 2001	92924.89907	100849.6821	89656	149996.1101	177756.8143	193099.0334
rates&prices 2002	14044.00291	32855.34998	14342.58724	72154	105888.2751	124627.0698
rates&prices 2003	-55205.22051	-18542.81847	-43038.40562	13273.19337	57109	78939.22773
rates&prices 2004	-119773.9556	-68948.82006	-99536.76944	-48153.20677	6680.16454	30693

Table 1
Key Czech securities trading, volume, and events data 1993-2003

Panel A: Number of securities traded on the PSE at 31 December

	1993	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*
Number of issues	982	1,055	1,764	1,750	412	402	290	245	186	153	146
Continuous market	8	47	82	70	78	43	38	35	33	25	32
Once-a-day market			6	53	60	99	84	71	62	59	54
Unrestricted market	974	1,008	1,676	1,627	274	260	168	139	91	69	60

Panel B: Trading volume

Year	Average daily trades as a percentage of total value		S&B average number of shares traded per day	
	PSE	S&B	PSE	RMS System
1993	n/a	0.01%	66	n/a
1994	0.08%	0.02%	132	n/a
1995	0.11%	0.02%	146	42
1996	0.19%	0.03%	225	91
1997	0.20%	0.02%	95	59
1998	0.17%	0.02%	89	96
1999	0.13%	0.01%	14	78
2000	0.24%	0.01%	4	138
2001	0.15%	0.02%	1	156
2002	0.17%	n/a	n/a	n/a
2003	0.16%	n/a	n/a	n/a

Panel C: Events affecting the number of securities issues

Date	Event
April 6, 1993	Seven securities issues were registered on the Exchange on the opening day of trading.
June 22, 1993	622 share issues from the first wave of coupon privatization were introduced.
July 13, 1993	333 share issues from the first wave of coupon privatization were introduced.
March 1, 1995	674 share issues from the second wave of coupon privatization were introduced.
1994-1995	A gradual registration of other securities issues (particularly shares of investment funds) that were not produced by coupon privatization.
May 2, 1996	The highest number of securities issues ever registered on the Exchange (1,792 issues). However the market remained non-transparent and liquidity was low.
1997	1,301 securities issues were gradually excluded from the Exchange's Free Market due to their inability to meet the requirements set by the Exchange. This measure contributed to higher transparency of the market.
September 20, 1999	An additional 75 share issues were excluded from the Free Market as a further measure aimed at increasing transparency of the market.
2001-2002	As a result of an amendment to the Securities Act that tightened the terms for admitting and keeping securities in public markets, and an amendment to the Investment Companies and Investment Funds Act, other share issues, which did not meet the spread and liquidity requirements set by the Exchange Chamber, were excluded.

(Source: Prague Stock Exchange http://www.pse.cz/burza/10_let.asp?include=10_let_cp_en.htm)

Table 2
Sellier and Bellot shareholder voting record, 1993-2004

The number of Sellier and Bellot shares voted at annual shareholder meetings between 1993 and 2004 are reported by shareholder and year. Data are compiled from company voting records (incomplete for 1996). The largest stakes are shown in bold.

Shareholder	*Owner type*	*Year*											
		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Czech Government (Golden Share)	Gov.	1											
Czech Government*	Gov.	**295,268**	**285,416**	**133,327**									
City of Vlasim	Local gov.	38,830	38,830	38,830	30	30							
Ceska Sporitelna Bank Funds	Bank IPF	82,376	82,903	82,076	90,055	90,055							
Prva Slovenska**	IPF	70,009	70,009	70,009									
Vub Kupon**	IPF	26,668	25,718	25,718									
Kvanto Duchodovy	IPF	15,813		25,852									
R.E.M.O. or affiliates	Individual	2,540			12,632	75,264	85,048	**187,126**	**331,444**	**774,870**	**393,510**	**624,122**	**566,527**
Moravskoslezsky	IPF	1,892		1,912									
IKS KB Fond	Bank IPF		1,871	2,499	2,666								
Ceskomoravsky Narodni If.	IPF		1,812										
Jiri Hanak, Ing.	CEO			9,702									
Capital Partners	Broker			2,270	12,500	12,836	**210,614**						
Krusnohorsky Inv.	IPF				70,285	**171,381**		185,581					
Universal Banka	Bank IPF				100,064	100,064	100,064	100,064					
CERTUM Penzijni	IPF				9,072	67,548	34,000	111,086					
IF Credit	IPF				29,000	29,000							
Forestinvest	IPF				12,725	14,837	6,065	6,065					
Fond pro Prosperitu Prumyslu	IPF				10,050	10,065	48,162	48,162					
Penzijni Fond Vysehrad	IPF					2,399		90,274					
Atlantik Financni Trhy	IPF												
Penzijni Fond	IPF						29,000						
Investicni Fond TERCIER	IPF				15,015		13,600	13,600					
IS Investway	IPF				2,998		5,999	13,768					
Delta Securities	IPF						1,045						
Shareholder-Universal	IPF				166,810								
Small shareholders (<=1,000)	Misc.	2,986	3,665	4,428	38,490	96	20			500			2,100
Total		536,382	510,224	396,623	573,998	573,575	533,617	755,726	331,444	775,370	393,510	624,122	568,627
HHI = sum of squares of proportion of ownership stakes based on shares voted		0.35227	0.36651	0.20571	0.18353	0.17950	0.23242	0.17980	1.00000	0.99871	1.00000	1.00000	0.99263

** The Czech government also possessed 28, 831 shares under a different issue number as of 08/04/1995.*
*** Funds incorporated in Slovakia.*

Table 3
Sellier and Bellot supervisory board, 1992-2003

Sellier and Bellot supervisory board members are shown for the period May 1992- December 2003. C, VC, M, and ER denote Chairperson, Vice-Chairperson, Member, and Employee Representative. The Czech titles Ing., JUDr., PhDr., Mgr., RNDr., and Dr. refer to Master's degrees in various disciplines.

	Dates (mmddyy)																						
Director	050192-062292	062392-123192	010193-062993	063093-123193	010194-062994	063094-123194	010195-080495	080595-123195	010196-052896	052896-112996	112996-123196	010197-061897	061897-123197	010198-022898	030198-070798	070898-123198	010199-051599	051599-092899	092899-123199	010100-123100	010101-123101	010102-123102	010103-123103
Milan Benes, Ing.	M																						
Vladimir Handl, Ing.	M																						
Jiri Sladkovsky, Ing.	M																						
Vaclav Drda, Ing.		C	C	C	C	C																	
Jiri Kuchar, Ing.		ER	ER	ER	ER	ER	ER																
Jan Kaderavek		ER	ER	ER	ER	ER	ER																
Josef Valjent, JUDr.				M	VC	VC																	
Zdenek Cervenka, PhDr.				M	M	M	M	VC	VC	VC													
Josef Oravkin, Mgr.					M	M	M	M	M														
Frantisek Vlasak, RNDr.							C	C	C	C	C	C	C	C	C	M	M						
Vladimir Broukal								M	M	M													
Jiri Nemec								ER	ER	ER	ER	ER	ER	ER	ER	ER	ER	ER	ER				
Frantisek Stetina								ER	ER	ER	ER	ER	ER	ER	ER	ER	ER	ER	ER				
Miroslav Lestina										M	M	M	M	M	M								
Pavel Prochazka, Ing.										ER													
Jiri Stanek, JUDr.										M	M	M	M	M	M								
Jindrich Valis, JUDr.										M													
Frantisek Fefjar, Ing.											VC	M											
Oldrich Chronc, JUDr., CSc.*													**M**	**M**		**M**	**M**	**M**	**M**	**M**	**M**	**M**	**M**
Vaclav Pudil, Dr.															VC	C	C						
Josef Homola, Ing.*																**VC**	**VC**	**C**	**C**	**C**	**C**	**C**	
Miloslav Soldat, Ing.*																		**VC**	**VC**	**VC**	**VC**	**VC**	**VC**
Vincent Strebel, Ing.*																		**VC**					
Ladislav Odvarka, Dr.*																			**M**	**M**	**M**	**M**	**M**
Karel Hrdinka																				M	M	M	M
Ludek Malek																				M	M	M	M
Tomas Nebesky*																							**C**
Supervisory board size	3	3	3	5	6	6	5	6	6	9	6	6	6	6	6	6	6	6	6	6	6	6	6

* R.E.M.O. Corporation representatives (in bold).

Table 4
Sellier and Bellot board of directors, 1992-2003

Sellier and Bellot board of directors members are shown for May 1992-December 2003. C, CP, CO, VC, and M denote Chairperson, Chairperson and President, Chief Executive Officer, Vice-Chairperson, and Member. The Czech titles Ing., JUDr., PhDr., Mgr., RNDr., and Dr. refer to Master's degrees in various disciplines.

	Dates (mmddyy)																										
Director	050192-062292	062392-123192	010193-062993	063093-123193	010194-062994	063094-123194	010195-080495	080595-123195	010196-052896	052896-112996	112996-123196	010197-061897	061897-121597	**121597-123197**	010198-022898	030198-070798	070898-080998	081098-122098	122198-123198	010199-051599	051599-062899	062899-092799	092899-123199	010100-123100	010101-123101	010102-123102	010103-123103
Jiri Hanak, Ing.	C	C	C	CP	CP	CP	CP	CP	C	CO																	
Milos Dolezal, Ing.	VC																										
Karl Kopecek, Ing.	CO																										
Frantisek Bubenicek, Ing.	M	M	M																								
Pavel Popovic, JUDr.		VC	VC																								
Josef Trnka, Ing.		CO	CO	CO	CO	CO	CO																				
Peter Kraus, Ing., CSc.			M																								
Antonin Svitil, Ing., CSc.				VC	VC	M	M																				
Frantisek Bartusek, Ing.				VC	VC	VC	VC	VC	VC																		
Josef Majtan, Ing.				M	M	M	M	M																			
Vlastimil Sindylek, PhDr.				M	M	M	M	M	M																		
Frantisek Drbohlav, JUDr.				M	M																						
Josef Benes, Ing., CSc.						M	M	M	M	M	M	M	M	M	M	M	VC	VC	VC	M							
Jiri Popelka, Ing.								CO	CO																		
Jindrich Valis, JUDr.								M	M																		
Miroslav Vanek, Ing.								M	M	M	M	M	M	M													
Oldrich Chronc, JUDr., CSc.								M	M							VC											
Jiri Dvorak, Ing., Dr.										VC	C	C	C	C	CP												
Vladislav Briza, Ing.										M	M	M	M														
Peter Cermak, MUDr.										M																	
Tomas Endl, Ing.										M	M	M	M	M	M	M											
Frantisek Fejfar, Ing.										M																	
Tomas Nebesky, JUDr.										M	M	M	M	M	M	M											

Table 4 (contd.)

	Dates (mmddyy)																										
050192-062292	050192-062292	062392-123192	010193-062993	063093-123193	010194-062994	063094-123194	010195-080495	080595-123195	010196-052896	052896-112996	112996-123196	010197-061897	061897-121597	121597-123197	010198-022898	030198-070798	070898-080998	081098-122098	122198-123198	010199-051599	051599-062899	062899-092799	092899-123199	010100-123100	010101-123101	010102-123102	010103-123103
Karel Kopecek, Ing.											CO	CO	CO	CO	CO	CO	CO										
Josef Homola, Ing.															M	VC											
Petr Dedek, Ing., Dr.																C	C	C									
Bohuslav Popelka, Ing.																	VC	CO	CO	CO	CO	CO					
Ludek Tichy, Ing.																	M	M	VC	VC	VC						
Jan Chabera, JUDr.																		M	M	M							
Jaroslava Svacinova, Ing.																			M	M							
Maxmilian Deutsch, Ing.																					C	C					
Ivo Bastyr, Ing.																					M	M	M				
Radek Musil, Ing.*																					M	M	CO	CO	CO	CO	CO
Jiri Zelenka, Ing.*																						M	M	M			
Pavel Kolar, Ing.*																							VC	VC	VC	VC	VC
Vincent Strebel, Ing.*																							VC				
Jaroslav Kopper, Ing.*																								VC	VC	VC	VC
Jiri Radosta, Ing.*																								M	M	M	M
Milan Meduna, Ing.*																									M	M	M
Board size	4	4	5	7	7	7	7	8	8	9	7	7	7	6	6	7	5	5	5	5	5	5	5	5	5	5	5

* R.E.M.O. Corporation representatives (in bold).

Table 5
Sellier and Bellot balance sheet as of December 31 (in CZK thousands), 1993-2003

	1993	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*
Assets											
Current assets											
Cash and near cash	30,962	21,870	14,081	52,002	16,642	6,499	21,893	22,836	23,948	4,575	6,955
Accounts receivable	144,659	223,708	229,470	193,781	217,019	127,923	207,389	230,991	251,122	257,582	270,350
Inventories	257,483	275,251	325,339	260,604	245,622	220,527	135,242	160,775	179,547	186,659	197,855
Other current assets										3,300	
Total current assets	433,104	520,829	568,890	506,387	479,283	354,949	364,524	414,602	454,617	448,816	475,160
Long term assets											
Long term investment assets	5,400	5,648	6,279	249,368	227,595	1,475	22,791	17,691	17,634	17,634	132,069
Long term intangibles	7,462	5,927	4,752	4,050	4,975	12,991	4,112	7,746	12,646	3,482	2,495
Long term tangibles	672,933	681,054	727,550	684,169	706,363	633,421	619,300	593,670	597,437	639,280	651,280
Total long term assets	685,795	692,629	738,581	937,587	938,933	647,887	646,203	619,107	627,717	660,396	785,844
Other assets	2,217	6,125	8,066	8,217	19,457	25,514	14,853	15,800	14,038	7,421	5,261
Total assets	1,121,116	1,219,583	1,315,537	1,452,191	1,437,673	1,028,350	1,025,580	1,049,509	1,096,372	1,116,633	1,266,265
Liabilities											
Current liabilities	83,007	151,726	169,897	195,862	195,807	148,392	118,752	113,143	161,899	160,170	105,904
Long term liabilities			1,500	1,500	1,500	1,500	1,500	1,500	1,500	24,767	28,420
Bank loans	122,220	167,411	244,627	275,824	278,337	234,176	208,367	165,326	103,677	65,969	104,453
Other liabilities*	11,710	13,148	17,812	62,439	42,185	37,396	41,709	29,189	19,217	3,236	2,718
Total liabilities	216,937	332,285	433,836	535,625	517,829	421,464	370,328	309,158	286,293	252,770	241,495
Owners' equity											
Base capital	776,743	776,743	776,743	1,009,000	1,009,000	1,009,000	1,009,000	1,009,000	1,008,916	1,008,916	1,009,000
Current year profit (loss)	36,806	23,523	-15,333	-197,057	3,564	-312,928	48,338	85,183	69,860	53,828	160,922
Prior years' profits (losses)	11,842	16,112	37,859	22,526	-93,128	-89,742	-402,670	-356,749	-275,828	-209,535	-158,651
Other equity	78,788	80,920	82,432	82,097	408	556	584	2,917	7,131	10,654	13,499
Total owners' equity	904,179	887,298	881,701	916,566	919,844	606,886	655,252	740,351	810,079	863,863	1,024,770
Total liabilities and owners' equity	1,121,116	1,219,583	1,315,537	1,452,191	1,437,673	1,028,350	1,025,580	1,049,509	1,096,372	1,116,633	1,266,265

* Czech accounting standards do not require listing of leases. In 1998, S&B leases were CZK 49 million; by 2003, they were 0.

Table 6
Sellier and Bellot income statement for the year ending December 31 (in CZK thousands), 1993-2003

	1993	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*
Revenues											
Sales	668,216	770,097	792,259	675,022	881,127	941,482	1,139,571	986,832	1,177,320	1,266,224	1,064,681
Cost of goods sold	333,130	389,899	399,726	432,872	525,904	514,183	656,057	564,620	718,576	725,000	586,169
Gross profit	335,086	380,198	392,533	242,150	355,223	427,299	483,514	422,212	458,744	541,224	478,512
SGA and other expenses	233,967	312,413	358,803	407,317	335,138	401,367	402,376	318,685	348,558	401,687	351,944
Operating profit (loss)	101,119	67,785	33,730	-165,167	20,085	25,932	81,138	103,527	110,186	139,537	126,568
Financing profit (loss)	-58,195	-38,041	-48,610	-45,107	-30,773	-319,385	-29,043	-19,287	-26,124	-67,260	45,796
Pre-tax profit (loss)	42,924	29,744	-14,880	-210,274	-10,688	-293,453	52,095	84,240	84,062	72,277	172,364
Tax received (paid) on ordinary income	-3,253	-6,270	0	10,225	-4,233	-390	6,010	-7,099	-18,878	-18,403	10,903
Income before extraordinary items	39,671	23,474	-14,880	-200,049	-14,921	-293,843	58,105	77,141	65,184	53,874	161,461
Extraordinary items (net)	-2,865	49	-453	2,992	18,485	-19,085	-9,767	8,042	4,676	-46	-539
Net income	36,806	23,523	-15,333	-197,057	3,564	-312,928	48,338	85,183	69,860	53,828	160,922

Table 7
Sellier and Bellot financial ratios, 1993-2003

	1993	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*
Profitability ratios											
Return on sales = net income/sales (1)	5.51%	3.05%	-1.94%	-29.19%	0.40%	-33.24%	4.24%	8.63%	5.93%	4.25%	15.11%
Asset turnover = sales/ average total assets (2)	61.25%	65.80%	62.50%	48.78%	60.98%	76.36%	110.96%	95.11%	109.73%	114.43%	89.36%
Leverage = total assets/total equity (3)	123.99%	137.45%	149.20%	158.44%	156.30%	169.45%	156.52%	141.76%	135.34%	129.26%	123.57%
Return on equity = return on sales x asset turnover x leverage (1 x 2 x 3)	4.18%	2.76%	-1.80%	-22.56%	0.39%	-43.00%	7.37%	11.64%	8.81%	6.29%	16.69%
Return on assets = net income/average total assets	3.37%	2.01%	-1.21%	-14.24%	0.25%	-25.38%	4.71%	8.21%	6.51%	4.86%	13.51%
Operating profit/average total assets	9.27%	5.79%	2.66%	-11.94%	1.39%	2.10%	7.90%	9.98%	10.27%	12.61%	10.62%
Average no. of employees	2,190	2,300	1,896	1,644	1,667	1,764	1,520	1,410	1,426	1,505	1,420
Operating profit per employee (in CZK thousands)	46.17	29.47	17.79	-100.47	12.05	14.70	53.38	73.42	77.27	92.72	89.13
Leverage ratios											
Debt ratio = (long term debt + bank loans)/(long term debt + equity)	0.14	0.19	0.28	0.30	0.30	0.39	0.32	0.22	0.13	0.10	0.13
Debt to common equity = long term debt/owners' equity	0.14	0.19	0.28	0.30	0.30	0.39	0.32	0.23	0.13	0.11	0.13
Total debt to operating profit	1.98	4.05	11.36	-2.93	26.22	18.11	4.88	3.28	2.70	1.93	1.95

Table 7 (contd.)

	1993	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*
Activity ratios											
Days receivables = average receivables/(sales/365)	64.52	87.30	104.39	114.43	85.09	66.86	53.70	81.07	74.73	73.32	90.49
Days inventory = average inventory/(cost of goods sold/365)	255.33	249.36	274.21	247.04	175.67	165.45	98.97	95.68	86.43	92.18	119.72
Liquidity ratios											
Cash + marketable securities / total assets	0.03	0.02	0.01	0.04	0.01	0.01	0.02	0.02	0.02	0.00	0.01
Quick ratio=(cash + receivables)/(current liabilities)	2.12	1.62	1.43	1.25	1.19	0.91	1.93	2.24	1.70	1.64	2.62
Current ratio = current assets/current liabilities	5.22	3.43	3.35	2.59	2.45	2.39	3.07	3.66	2.81	2.80	4.49
Working capital/sales = (average current assets – average current liabilities)/sales	0.49	0.47	0.48	0.53	0.34	0.26	0.20	0.28	0.25	0.23	0.31

Table 8
Comparison of Sellier and Bellot and its major American competitors, 1996-2003

Sellier and Bellot statistics are compared with those of its major American competitors (Winchester and ATK Ammunition Division) for the period 1996-2003. Competitor information is available only from 1996.

	1996	1997	1998	1999	2000	2001	2002	2003
CZK/USD exchange rate	27.2	31.7	32.4	34.8	38.1	38.1	32.7	28.2
Total Assets ($ million)								
Winchester	152	155	161	165	156	142	135	140
ATK Ammunition Division			224	143	154	172	363	401
Sellier and Bellot	53	45	32	29	28	29	34	45
Total Sales ($ million)								
Winchester	256	252	266	286	277	269	283	303
ATK Ammunition Division	438	483	464	405	346	494	497	706
Sellier and Bellot	25	28	29	33	26	31	39	38
EBIT ($ million)								
Winchester	-2	-4	13	21	20	7	16	22
ATK Ammunition Division			19	17	18	38	58	73
Sellier and Bellot	-6	1	1	2	3	3	4	4
EBIT/Assets								
Winchester	-1.32%	-2.58%	8.07%	12.73%	12.82%	4.93%	11.85%	15.71%
ATK Ammunition Division			8.68%	11.65%	11.68%	21.91%	15.86%	18.23%
Sellier and Bellot	-11.37%	1.40%	2.52%	7.91%	9.86%	10.05%	12.50%	10.00%

Table 9
Sellier and Bellot Machines balance sheet as of December 31 (in CZK thousands), 1999-2003

	1999	2000	2001	2002	2003
Assets					
Current assets					
Cash and near cash	1,330	15,056	4,500	928	6,432
Accounts receivable	8,825	12,381	11,037	16,662	16,391
Inventories	82,521	67,063	60,289	64,417	57,483
Other current assets	0	0	0	0	0
Total current assets	92,676	94,500	75,826	82,007	80,306
Long term assets					
Long term investment assets	0	0	0	0	0
Long term intangibles	8,677	8,789	8,934	8,861	9,665
Long term tangibles	30,583	26,971	38,797	31,017	28,197
Total long term assets	39,260	35,760	47,731	39,878	37,862
Other assets	66	1,792	2,355	1,216	1,277
Total assets	132,002	132,052	125,912	123,101	119,445
Liabilities					
Current liabilities					
Short term debt to S&B	105,238	89,937	73,471	70,593	59,694
Other short term liabilities	10,501	23,166	21,232	20,682	23,958
Total short term liabilities	115,739	113,103	94,703	91,275	83,652
Long term liabilities	0	0	0	0	0
Bank loans	0	0	0	0	0
Other liabilities	161	431	493	1,052	3,929
Total liabilities	115,906	113,534	95,620	96,305	87,581
Owners' equity					
Base capital	35,100	35,100	35,100	35,100	35,100
Current year profit (loss)	-18,933	2,422	11,774	482	5,019
Prior years' profits (losses)	-11	-19,004	-16,824	-9,515	-9,724
Other equity	-60	0	242	729	1,469
Total owners' equity	16,096	18,518	30,292	26,796	31,864
Total liabilities and owners' equity	132,002	132,052	125,912	123,101	119,445

Table 10
Sellier and Bellot Machines income statement for the year ending December 31 (in CZK thousands), 1999-2003

	1999	2000	2001	2002	2003
Revenues					
Sales	73,538	104,310	133,962	113,500	123,055
Cost of goods sold	37,072	50,944	60,260	54,204	59,722
Gross profit	36,466	53,366	73,702	59,296	63,333
SGA and other expenses	45,353	43,961	54,527	49,747	52,507
Operating profit (loss)	-8,887	9,405	19,175	9,549	10,826
Financing profit (loss)	-10,129	-6,970	-7,485	-9,067	-5,807
Pre-tax profit (loss)	-19,016	2,435	11,690	482	5,019
Tax received (paid) on ordinary income	0	0	0	0	0
Income before extraordinary items	-19,016	2,435	11,690	482	5,019
Extraordinary items (net)	23	-13	84	0	0
Net income	-18,993	2,422	11,774	482	5,019

Table 11
Sellier and Bellot Machines financial ratios, 1999-2003

	1999	2000	2001	2002	2003
Profitability ratios					
Return on sales = net income/sales (1)	-25.83%	2.32%	8.79%	0.42%	4.08%
Asset turnover = sales/average total assets (2)		79.01%	103.86%	91.16%	25.37%
Leverage = total assets/total equity (3)	820.09%	713.10%	415.66%	459.40%	374.86%
Return on equity = return on sales x asset turnover x leverage (1 x 2 x 3)	0.00%	13.08%	37.94%	1.78%	3.88%
Return on assets = net income/average total assets		1.83%	9.13%	0.39%	1.03%
Operating profit/average total assets		7.12%	14.87%	7.67%	2.23%
Leverage ratios					
Total debt to operating profit		12.20	5.45	10.05	8.49
Activity ratios					
Days receivables = average receivables/ (sales/365)		37.10	31.90	44.54	49.02
Days inventory = average inventory/(cost of goods sold/365)		535.86	385.69	419.87	372.51
Liquidity ratios					
Cash + marketable securities / total assets	0.01	0.11	0.04	0.01	0.05
Quick ratio=(cash + receivables)/(current liabilities)	0.09	0.24	0.16	0.19	0.08
Current ratio = current assets/current liabilities	0.80	0.84	0.80	0.9	0.96
Working capital/sales = (average current assets – average current liabilities)/sales		-0.20	-0.14	-0.12	-0.05

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