

PN-ABE-100  
15/08

**SLIVER MACHINES a.s.**

**January 6, 1992**

**Coopers & Lybrand has prepared  
this document for the  
Czech & Slovak American Enterprise Fund  
and the  
United States Agency for International Development**

January 30, 1992

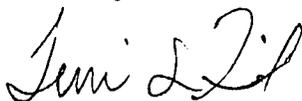
PPC Bureau's Center for Development Information and Evaluation  
PPC/CDIE/DI, ACQUISITIONS  
Room 209, SA-18  
Agency for International Development  
Washington, DC 20523-1802

Re: USAID Contract No. EUR-0014-C-00-1058-00, Delivery Order No. 3.

Enclosed you will find two copies of the final report for Delivery Order No. 3, Sliver Machine. Distribution is in accordance with paragraph C.3.(c)(1) of the Contract and Article IV of the Delivery Order.

If you have any questions regarding this report, please contact me at (202) 822-4401 or Sue-Jean Lee at (202) 822-4377.

Sincerely,



Terri L. Frid  
Associate

**January 2, 1992**

**Mr. Peter J. Tischler  
Director of Country Operations  
Czech & Slovak American Enterprise Fund  
Blanicka 28/1008  
120 00 Praha 2 - Vinohrady, CSFR**

**Dear Mr. Tischler:**

As requested, we have performed limited analyses of certain financial statements and various financial, operating and other data of Sliver Machine a.s. ("Sliver") solely to assist you with your business plan review and assessment of Sliver.

The scope of our activities included the following:

- \* Visiting the Sliver's headquarters in Liberec, northern Bohemia.
- \* Visiting the Tanvald facility of Elitex Chrastava ("Chrastava"), in Tanvald, northern Bohemia, the proposed primary production facility.
- \* Meeting with Sliver management to obtain an understanding of the business plan from the standpoint of corporate structure, the organization of production and sales, contractual relationships formed to implement the business plan, and the main business risks inherent in the strategy.
- \* Meetings with technical and financial management of Tanvald and Chrastava, respectively, to evaluate the capacity of Tanvald to deliver the output and quality required to meet Sliver's business plan.

- \* Meetings and telephone discussions with Industrial Innovators, Inc. (II), and Investa a.s. ("Investa") to assess the feasibility of the marketing plan.
- \* Compiling and analyzing various financial data pertaining to the historical cost structure at Tanvald to evaluate the economics of production with existing equipment.
- \* Reviewing the manufacturing layout and plan proposed to employ the new equipment to assess its efficiency with respect to staffing and other factors of production.
- \* Analysis of the assumptions used to prepare the summary projected statements of operations, cash flows and financial position as of and for each of the five periods ended, December 31, 1995.
- \* Analysis of the major areas of vulnerability and risk within the condensed projected statements referred to above, which may cast doubt on the achievement of those projections.

We believe you understand that the scope of our engagement, as described above, is intended to provide information which might be useful in your assessment of Sliver. However, our procedures set out above do not constitute an audit in accordance with generally accepted auditing standards. Accordingly, we are unable to and do not express an audit opinion on any of the financial statements or other data contained in this report, which sets forth our comments and findings.

With regard to the budgets and projections prepared by Sliver's management as described above, our procedures do not constitute an examination of the compilation of such projections made in accordance with standards established by the American Institute of Certified Public Accountants ("AICPA") and accordingly we do not express an opinion as to whether such projections are presented in conformity with AICPA presentation and measurement guidelines for prospective financial statements, or as to whether the underlying assumptions provide a reasonable basis for their presentation.

Mr. Peter J. Tischler  
January 2, 1932  
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Had we performed additional procedures, conducted an audit of the historical financial statements in accordance with generally accepted auditing standards or made an examination of the compilation of budgets and projections in accordance with AICPA standards, other matters may have come to our attention that would have been reported to you. Furthermore, there will usually be differences between projected and actual results, because events and circumstances frequently do not occur as expected, and those differences may be material.

Because of the confidential nature of the report, it should not be associated with the financial statements of Sliver. This report is solely for your information and should not be referred to or distributed for any purpose to anyone who is not a member of management or the board of directors of Sliver or the Czech & Slovak American Enterprise Fund ("CSAEF"). We have no responsibility to update this report for events and circumstances occurring after the date of this report.

After you have had the opportunity to review this report, we will be pleased to answer any questions you may have.

Very truly yours,

*Coopers & Lybrand*

TPF

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## **I. EXECUTIVE SUMMARY**

This summary presents an outline of this report and identifies key issues to be addressed by Sliver and the CSAEF. However, due to the nature of this project and the detailed information contained in the report we strongly recommend that Sliver and the CSAEF read the whole report.

### **Background and Company History**

Sliver, a joint stock company, has been established for the sole purpose of manufacturing and selling the Sliver Machine in Czechoslovakia. The Sliver Machine - the machine for the production of the sliver - is a sophisticated carding machine which integrates an effective drafting unit at the delivery end. Sliver is an intermediate product in the production of yarn from raw fiber.

The machine was developed by Industrial Innovators, Inc. (II) (formerly Gunter & Cooke) in the United States. The Czechoslovakian textile and textile manufacturing industry has a history of technological innovation and a worldwide reputation for quality. It was this history which resulted in II offering the Czechoslovakian textile industry, through Omnitex, the textile arm of the Czechoslovakian foreign trading company Strojimport, the opportunity to obtain the license for manufacture and sale of the Sliver Machine. In the fall of 1989 an agreement between II, Strojimport Prague and Stimex, Strojimport's Mexican subsidiary, pledging mutual collaboration in the development and exploitation of the Sliver Machine technology was signed.

The collaboration agreement gave Strojimport/Stimex an option to purchase the production and marketing rights for the Sliver Machine. In 1990 they exercised the option, purchasing exclusive rights to manufacture the Sliver Machine and market the product in all territories other than the United States and Canada. When Strojimport was split into two parts, namely Strojimport a.s. and Investa a.s., Investa was legally assigned the II license agreement.

On December 4, 1990 Sliver Machine a.s. was formed with a view to raising the capital required to manufacture and market the Sliver Machine. The company was formally registered on March 1, 1991, with an initial capitalization of Kcs 20 million. In October, 1991, Sliver and Investa signed a sub-licensing agreement, assigning to Sliver the right to manufacture Sliver Machines. At the same time, Sliver secured an agreement wherein Investa has agreed to purchase, and then to sell on, all of the projected 1992 output of 40 machines and thereafter increasing to 120 machines in 1995 and thereafter through 2004. These purchase and sale agreements with Investa are not exclusive, however, and Sliver has retained the right to conclude sales directly with end users at market prices.

### Analysis of Market for Sliver Machines

All Sliver Machines sold through 1995 are expected to be sold through Investa, a state-owned trade corporation with sales of approximately Kcs 10 billion.

Investa's principal markets are in South America and Asia including Pakistan, India, Indonesia, Malaysia, Hong Kong and Taiwan. However, due to the current economic climate and the loss of sales to the Soviet Union, management expects to sell only 200-300 open-end spinning frames in 1992. Based on average yarn counts, an average of four Sliver Machines will be required

for each open-end frame. Thus, demand for the Sliver Machine, or comparable carding technologies, could be as high as 4,800 machines per year worldwide. Based upon current market share the Investa portion of this business could be as high as 1,200 Sliver Machines per year.

This assumes that all open-end frames are purchased for new spinning mill capacity. Obviously, many open-end frames will be purchased as upgrade equipment for existing factories. In these cases the decision to purchase carding and drawing equipment will be independent. It seems that the assumption of an average of four Sliver Machines per open-end frame is aggressive as an estimate of total market potential for the machine; however, due to the marketability of the Sliver Machine as a stand-alone decision, the projection for 150 units sold by 1995 does not seem unreasonable.

Based on discussions with Investa, it appears that a more relevant concern is whether Sliver and hence Chrastava (as discussed below) can produce sufficient machines to satisfy market demand. The potential market appears significantly larger than planned production capacity. However, this raises additional concerns which also arise from the slow build-up in capacity at Tanvald. Successful introduction of the Sliver Machine could bring competitors into the market, particularly if supply cannot meet demand. Consequently, we consider that Sliver Machine should be considering alternative courses of action which will enable them, if necessary, to increase production capacity to satisfy demand.

#### Evaluation of Elitex Chrastava-Tanvald

Sliver intends to subcontract the manufacture of the Sliver Machine to Chrastava. The principal location for manufacture of the Sliver Machine is to be the Chrastava facility at Tanvald with only 15-20% being fulfilled by other Chrastava plants at

Chrastava and Frydlant. This division of work highlights the importance of Tanvald to the success of Sliver. However, we are concerned that as there is insufficient work to sustain Chrastava in its present form, the potentially profitable Sliver Machine contract being used to fund the operations of Chrastava, Frydlant and head office management.

It is for the reasons discussed above that there may be benefits to be gained through privatizing Tanvald alone, rather than as part of Chrastava.

### Income Statement Projections

Summarized below are the actual results for the nine months ended September 30, 1991 and the projected results for the three years ending December 31, 1991, 1992 and 1993 for Tanvald.

	(In thousands)			Nine months ended September 30, 1991 <u>Actual</u>
	Year Ended December 31,			
	<u>1993</u> <u>Projected</u>	<u>1992</u> <u>Projected</u>	<u>1991</u> <u>Projected</u>	
Revenues	Kcs 155,091	Kcs 92,117	Kcs 56,925	Kcs 44,693
Cost of Goods Sold	<u>134,074</u>	<u>86,168</u>	<u>42,510</u>	<u>30,877</u>
Gross margin	21,017	5,949	14,415	13,816
Overheads	(18,426)	(15,132)	(14,219)	(10,363)
Other income	2,309	2,283	2,141	*
Inter-company expenses	(1,200)	(1,000)	(610)	*
Research and development	(2,000)	(2,000)	(2,132)	(1,760)
Interest	<u>(1,700)</u>	<u>(1,700)</u>	<u>(1,695)</u>	<u>(1,366)</u>
Net income/(loss)	Kcs <u>0</u>	Kcs <u>(11,600)</u>	Kcs <u>(2,100)</u>	Kcs <u>327</u>

\* - Included in Revenues

The projections assume zero inflation and exclude the impact of exchange rate movements.

Revenues are principally generated from Sliver Machine sales and assume the manufacture and sale of 40 and 80 units in 1992 and 1993, respectively.

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The projections assume that the sales price to Sliver remains constant in 1992 and 1993 at Kcs 2,060,000. This price has been agreed only for the five verification machines due to be produced by March, 1992. We are aware that Sliver expects this price to reduce for subsequent machines as Chrastava's cost base declines through improved productivity and as a direct result of the capital expenditure plan. Chrastava management is of the opinion that costs should be reduced by approximately 20% by the end of 1992 if the planned capital expenditure occurs in 1991 and the first six months of 1992. In the absence of further information a fixed sales price does not appear unreasonable for the purposes of these projections.

On a basis consistent with the revenue assumptions for the Sliver Machine, material costs are assumed to remain constant. Although wage costs increased during the period to year end 1993, based on our observations, there is clearly an opportunity for significant increases in productivity and efficiency to be achieved. It appears that the direct workforce is only spending 30-40% of its time on productive activities. In this situation there is clearly an opportunity to improve productivity, reduce the workforce and increase pay rates for remaining workers. It appears that through reducing wage expenses, savings could be made at the same time as increasing wage rates for remaining employees.

The major component of overheads is indirect wages and salaries. As discussed above there is a significant opportunity to improve efficiency and potentially reduce overhead expenses.

We were provided with limited information on the balance sheet due to the nature of the Chrastava accounting systems. The only items separately identifiable by Chrastava management were fixed assets of Kcs 16.8 million and inventory of Kcs 21.6 million.

In order to meet the production requirements of the Sliver Machine a major capital investment programme is being undertaken by Chrastava through equipment leased from Sliver. However, if long term production is to be viable at Tanvald there are a number of issues to be addressed by management:

- Management effectiveness - management needs to make fundamental operational improvements to achieve the required level of production and compete with Western manufactures.
- Labor utilization - an increase in labor utilization from the current levels of 30-40% is necessary. Higher utilization should reduce the costs of production and so provide the opportunity to reward improvements with wage increases.
- Systems development - management needs to develop the appropriate production systems and information flow to enable them to meet their overall objectives by 1995 or earlier.

#### Potential Impact of Privatization

The main area for consideration is the impact of the privatization of Chrastava. Chrastava management intends to submit a privatization plan for Chrastava as an entity, including the plants at Chrastava, Tanvald and Frydlant. We are concerned that such a proposal would result in a perpetuation of the existing bureaucracy and inefficient work practices within the organization. In addition, due to the loss, temporary or otherwise, of markets in the Soviet Union Chrastava has significant financial problems. It appears that management intends to use the Sliver Machine contract to support the Chrastava group thus diverting resources that could be re-invested in the Tanvald operation.

The principal alternative is a proposal to privatize Tanvald separately. Such a plan could be submitted by any Czechoslovakian citizen, but the most realistic proposal would appear to include both Tanvald and Sliver management as principal partners. While this approach has disadvantages as well as advantages, the advantages appear to predominate. In particular, Sliver would have more direct control over the Tanvald operations. This is of particular importance given the significant changes that are required in operational practices at Tanvald to achieve projected production levels.

### Business Risks

The principal business risks are legal/contract, performance, and financial risk. The main area of concern arising from our analysis relates to performance risk, the key element being the ability of Chrastava to achieve the required level of production. As discussed above, we are of the view that Sliver should have a more active role in the operation of Tanvald. The principal financial risks arise from exchange rate movements and inflation. We understand that the Czechoslovakian crown is likely to be devalued in 1992 and this devaluation could be in the region of 10-20%. Historic inflation levels have been low due to price control, however, future trends are difficult to predict given price relaxation on January 1, 1991. Consequently an inflation factor has not been taken into account in the projections prepared by Tanvald and Sliver management.

## Proforma Financial Projections - Sliver

### Income Statement Projections

The projected results of Sliver for the five years ending December 31, 1995 are detailed below:

(In thousands)

	Year ending December 31,				
	1995	1994	1993	1992	1991
Revenues	384,497	307,598	205,065	102,533	-
Less: Cost of goods sold	<u>309,000</u>	<u>247,200</u>	<u>164,800</u>	<u>82,400</u>	-
Gross operating margin	75,497	60,398	40,265	20,133	-
Operating expenses	3,601	3,121	2,572	2,086	722
Rental expenses	169	142	142	115	92
Licensing costs	32,750	29,969	19,287	10,054	4
Depreciation	3,172	2,559	1,729	859	18
Consulting services	420	400	344	320	288
Interest (income)/expense	(2,131)	(1,175)	498	(37)	(660)
Other income	-	<u>(1,262)</u>	<u>(336)</u>	<u>(252)</u>	<u>(70)</u>
Operating income before taxes	37,516	26,644	16,029	6,988	(394)
Taxes	<u>14,835</u>	<u>10,823</u>	<u>7,188</u>	<u>3,290</u>	-
Net income before reserves	22,681	15,821	8,841	3,698	(394)
Transfer to equity reserve	<u>1,118</u>	<u>817</u>	<u>544</u>	<u>252</u>	-
Net income	Kcs <u>21,563</u>	Kcs <u>15,004</u>	Kcs <u>8,297</u>	Kcs <u>3,446</u>	Kcs <u>(394)</u>

The projected results presented above were prepared by Sliver management. The projections do not include inflation and assume a fixed exchange rate for the Czechoslovakian crown (Kcs) against the US dollar of Kcs 31.5.

The projections for sales have been prepared based on the sub-license agreement with Investa, which provides for 40,80 and 120 machines to be sold through 1994 and then a minimum of 120 per year in the period 1995 to 2004. The principal assumptions underlying the projections are a fixed sales price to Investa and a fixed cost of purchase from Chrastava. Management expects the cost from Chrastava to decrease as the benefits of the capital investment program materialize. Based on this scenario, the implicit assumption of a constant gross margin does not seem unreasonable.

The figures prepared by Sliver management have been adjusted to reflect United States generally accepted accounting principals. The principal adjustment relates to leases and, although it defers income recognition to later periods, it does not impact on cash flow.

### Balance Sheet Projections

Based on information prepared by Sliver management, we have prepared proforma balance sheet projections as follows:

	(in thousands)				
	December 31,				
	1995	1994	1993	1992	1991
Cash and liquid investments	Kcs 20,055	Kcs 14,703	Kcs 10,246	Kcs 13,471	Kcs 2,522
Restricted cash	6,000	6,000	6,000	6,000	6,000
Accounts receivable	<u>15,801</u>	<u>12,641</u>	<u>8,427</u>	<u>4,214</u>	-
Current Assets	41,856	33,344	24,673	23,685	8,522
Net investment in leased property	44,968	42,487	39,392	32,573	9,310
Net Property, Plant & Equipment	<u>1,522</u>	<u>4,292</u>	<u>6,853</u>	<u>7,432</u>	<u>6,841</u>
Total Assets	Kcs <u>88,346</u>	Kcs <u>80,125</u>	Kcs <u>70,918</u>	Kcs <u>63,690</u>	Kcs <u>24,673</u>
Liabilities:					
Account payables	12,699	10,159	6,773	3,386	567
Current portion of long-term debt	-	<u>17,000</u>	<u>10,000</u>	<u>10,000</u>	-
Total current liabilities	12,699	27,159	16,773	13,386	567
Government grants received	5,000	5,000	5,000	5,000	-
Long term debt	-	-	17,000	22,000	4,500
Shareholders Equity	<u>70,647</u>	<u>47,966</u>	<u>32,145</u>	<u>23,304</u>	<u>19,606</u>
Total Liabilities and Equity	Kcs <u>88,346</u>	Kcs <u>80,125</u>	Kcs <u>70,918</u>	Kcs <u>63,690</u>	Kcs <u>24,673</u>

### Restricted cash

This represents an amount, equivalent to 30% of the company's share capital, which the company statutes require to be maintained independently from other company funds. This money has been placed on deposit for a period of four years.

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### Accounts receivable and payable

This represents amounts due from Investa/due to Chrastava. We have assumed that at any time, fifteen days sales are outstanding. While this assumption may be aggressive given receivables experience, it reflects both the reality that the bulk of sales will be to Investa and Czechoslovakian law, which requires trade debts to be settled within fifteen days otherwise penalty interest accrues.

### Net investment in leased property

Sliver is using the funds raised through capital and loans to purchase capital equipment which is then leased to Chrastava. The net investment in leased property reflects amounts due from Chrastava in respect of capital equipment leases.

### Long-term debt

The classification between short and long-term debt has been based on management's projections of future repayment dates. This is discussed further within the cash flow analysis.

### Common Equity

Common Equity reflects original subscribed capital of Kcs 20 million and does not include an additional Kcs 7 million in equity commitments awaiting Sliver board approval.

## Cash Flow Projections

The cash flows projected by management can be summarized as follows:

(In thousands)

	Year ending December 31,				
	1995	1994	1993	1992	1991
<b>SOURCES OF CASH FLOW:</b>					
Net income	Kcs 21,563	Kcs 15,004	Kcs 8,297	Kcs 3,445	Kcs (394)
Adjustments for non-cash items					
Depreciation - fixed assets	110	90	83	36	18
Depreciation - start-up costs	3,062	2,469	1,646	823	-
Transfers to equity reserve	1,118	817	544	252	-
Movements in working capital					
Accounts receivable	3,160	4,214	4,213	4,214	-
Accounts payable	<u>2,540</u>	<u>3,386</u>	<u>3,387</u>	<u>2,819</u>	<u>567</u>
Cash flow from operations	25,33	17,552	9,744	3,162	191
Additional sources of cash flow:					
Equity capital	-	-	-	-	20,000
Komerční Banka	-	-	-	17,500	4,500
Ministry of Economic Policy	-	-	5,000	5,000	-
CSAEF	<u>-</u>	<u>-</u>	<u>-</u>	<u>15,000</u>	<u>-</u>
<b>TOTAL SOURCES OF CASH FLOW</b>	<b>25,232</b>	<b>17,553</b>	<b>14,743</b>	<b>40,662</b>	<b>24,691</b>
<b>USES OF CASH FLOW</b>					
Capital expenditures:					
Net investment in leased property	2,481	3,095	6,819	23,263	9,310
Fixed assets	400	-	1,150	250	59
Start-up costs	-	-	-	-	6,800
Software development - Sprecher Energie	<u>-</u>	<u>-</u>	<u>-</u>	<u>1,200</u>	<u>-</u>
<b>CASH FLOW AVAILABLE FOR DEBT REPAYMENT</b>	<b>22,352</b>	<b>14,457</b>	<b>6,774</b>	<b>15,949</b>	<b>8,522</b>
Principal repayments:					
Komerční Banka	-	7,000	10,000	5,000	-
Ministry of Economic Policy	5,000	-	-	-	-
CSAEF	<u>12,000</u>	<u>3,000</u>	<u>-</u>	<u>-</u>	<u>-</u>
<b>Total principal repayments</b>	<b><u>17,000</u></b>	<b><u>10,000</u></b>	<b><u>10,000</u></b>	<b><u>5,000</u></b>	<b><u>-</u></b>
<b>NET FREE CASH FLOW AFTER DEBT REPAYMENTS</b>	<b>Kcs <u>5,352</u></b>	<b>Kcs <u>4,457</u></b>	<b>Kcs <u>(3,225)</u></b>	<b>Kcs <u>10,949</u></b>	<b>Kcs <u>8,522</u></b>

The principal assumptions made by management relate to the receipt of additional funding and the projected timing of repayments. We understand that the Komerční Banka loan has been agreed in principal by the bank, however, we have not seen any written confirmation. Negotiations over the terms of the loan, denominated in Czechoslovakian crowns, have resulted in a proposed funding and repayment schedule. This schedule has been used as a basis for the interest expense and cash repayment projections.

Sliver has applied for a loan and a grant from the Czech Ministry of Economic Policy, both for Kcs 5 million. While we understand that Sliver are still under consideration for both the loan and grant, we have not seen written confirmation of the position.

The projections assume that Sliver receives US dollar denominated loans of Kcs 15 million in 1992 from the CSAEF at an interest rate of 10%. The cash flow projections indicate that funds will be available to repay these loans in 1994 and 1995. It has been assumed that these loans are repaid prior to repayment of borrowings from the Czech Ministry of Economic Policy.

### Legal Matters

At the time of writing this report, there are two principal legal agreements which have not been signed. These are the lease and Co-operation agreements between Sliver and Chrastava. We understand that the Lease Agreement will be signed when the Komerčni Banka loan is formally approved. The reason for this being that the loan will provide the funding for purchase of the capital equipment to be leased to Chrastava. In regard to the Co-operation Agreement, Sliver management has indicated that it will try to delay signing it until the privatization of Chrastava is complete. This will enable Sliver to assess the impact of privatization on the ability of Chrastava to satisfy its obligations under the agreement.

## II. OBJECTIVES

This report is designed to assist Sliver and the CSAEF in assessing prospects for the success of Sliver and its business plan, by performing the following functions:

- Evaluating the market potential for the proprietary Sliver Machines to be produced and sold by Sliver under sub-license from Investa.
- Evaluating the technical and financial capabilities of Chrastava, and especially its facility at Tanvald, to produce and deliver Sliver Machines to Sliver under a subcontracting agreement.
- Examining the potential impact of privatization of Tanvald, either as a separate entity or as part of an integrated Chrastava group, on Tanvald's capacity to supply Sliver.
- Preparing proforma financial projections for Sliver, under generally accepted accounting principles, to be used as a basis for evaluating Sliver's capacity to service debt and to determine a range of potential values for Sliver as a going concern.

The scope of our activities included detailed discussions with the management of Sliver, management and selling staff of Investa, management of Chrastava, technical and financial management of Tanvald and management of II.

### III. BACKGROUND AND COMPANY HISTORY

#### Description of the Product - Sliver

The production of sliver, an intermediate yarn-thread material, is a critical step in the process of raw cotton or other fibers into finished textiles. Sliver has historically been produced by a three stage process.

In the first step, "carding", flakes of the raw material are separated into single fibers; impurities, short-fibers and dust are removed; fibers are preliminarily aligned for the production of sliver; and a first-pass sliver is produced with the minimum possible irregularities. Due to the normal irregularities encountered, however, the sliver is put through two "drawing" procedures, in each of which, eight strands are intertwined and stretched into one. This blending of sixty-four individual strands into one produces a statistically homogeneous product of uniform quality from raw material of varying production attributes.

This three-stage process of producing sliver has been standard industry practice for nearly 120 years. It was only in the 1960's that significant strides in output volumes and quality were made possible by the introduction of new feeding, roller bearing and control technologies to the sliver production process.

#### The Sliver Machine

The Sliver Machine - the machine for the production of the sliver - is a sophisticated carding machine which integrates an effective drafting unit at the delivery end.

The Sliver Machine produces a good quality sliver suitable for direct feeding to the roving frames or rotor spinning machines while the insertion of the drafting unit into the machine fully eliminates the drawing operation.

The Sliver Machine handles natural fibers, synthetics and blends up to two inches (50mm) staple length. Due to the increased speed of the working rollers and the overall design, the machine achieves an output of up to 68kg of sliver per hour with open-end yarn counts of three to forty depending upon the processed material.

There are stationary, self-cleaning tops applied to the machine in order to achieve the best carding quality, the high circumferential velocity of the rotating parts and the intensive suction of vacuum points in critical parts of the machine effectively remove trash and impurities from the fibers.

In summary, the principal advantages are:

- Elimination of two operations, breaker drawing and finisher drawing, thus reducing overall capital investment and operating expenses.
- Yarn quality compares favorably with the best conventional technology.
- The ability to "dial-in" machine settings allows accurate set-up and quick change over, thus maximizing manufacturing flexibility.

This technology has been tested under full operational conditions using open-end frames and its performance proved to be satisfactory. Further tests of the Sliver Machine have been carried out under normal spinning mill conditions and the results indicate the possibilities of its application for both ring spinning and even "Murata" jet-spinning.

History of Development

The Sliver Machine was designed by Industrial Innovators, Inc. (formerly Gunter & Cooke) in Durham, North Carolina. It has been under development for approximately 25 years, and marketed for the past four by Fiber Controls, which is a part owner of Industrial Innovators, Inc. ("II"). Bob Kholer of Fiber Controls indicated that there are forty machines installed in an Amoco plant in Georgia and eight in an Amoco plant in Canada. There is also a trial installation in a high end quality apparel plant in eastern North Carolina.

The two Amoco plants are producing industrial fabrics where quality is not as critical as for apparel plants. The Sliver Machine is, however, suitable for installations where quality is also critical. The machine controls sliver weights with a plus or minus variance of 1 grain yard to yard. By using a machine in the opening process which drops small amounts of fiber into various chambers the blend quality level is maintained. We understand that the machine is suitable for many types of raw fiber, including cotton, rayons, wools, and polyesters of fiber length of up to two inches.

End products currently being produced in Czechoslovakia at the Kolora 12 plant are:

<u>European textiles</u>	<u>English yarn count</u>	<u>End products</u>
16.5	36/1	Fine collar inserts
29.5	20/1	Collar inserts
25.5	24/1	Institutional sheets

These are all open-end yarn.

## Creation of License Arrangement

The Czechoslovakia textile machinery manufacturing sector enjoys a long history of technological innovation and a worldwide reputation for product quality second to none. Though in recent years that reputation has slipped somewhat due to lack of capital investment, the sector retains a high world standing and a large base of installed machines still in operation. It was principally this market position which led II to approach the Czechoslovakians with an initial offer of a license to produce and market the new Sliver Machine.

The first relevant contacts between II and the Czechoslovakian textile sector began in 1987 and 1988, when Omnitex, the textile arm of the Czechoslovakian foreign trading company Strojimport, was offered by II the possibility of purchasing licences to produce the Sliver Machine. The licenses would allow Omnitex/Strojimport to sell the machines in all markets other than the United States and Canada.

Immediately upon receiving a substantive offer, a team of three technical experts from the Elitex textile complex travelled to the United States to examine the prototype Sliver Machine. During the first half of 1988, the team performed a series of tests on the machines using Czechoslovakian raw materials and Czechoslovakian testing equipment. These tests confirmed the technical and production ratings promoted by II for the Sliver Machine.

In early 1989, negotiations between Mr. Gunther and Mr. Hasbrook of II and the Strojimport/Elitex team began concerning the technical specifications and pricing structure of the proposed licensing agreement. By this time Mr. Urban, now the Director of Sliver Machine a.s., had joined the Elitex team evaluating the Sliver Machine. Following these initial negotiations, another round of production tests was conducted.

In this round, the raw material input was varied in order to verify the Sliver Machine's ability to match the sliver quality of the standard carding-drawing process. Again using typical Czechoslovakian inputs, three separate tests were run with a good quality blend of raw cotton, a bad quality blend of raw cotton and an all synthetic batch, respectively. The tests confirmed the Sliver Machine's ability to deliver sliver of a quality comparable to the industry standard process.

In the fall of 1989, a long and exhaustive series of negotiations commenced in Czechoslovakia between Mr. Gunther, Mr. Hasbrook and the Strojimport/Elitex team, including Mr. Urban, centering around the royalty demands of II. The discussions culminated in the October 6, 1989 signing of an agreement between II, Strojimport Prague and Stimex, Strojimport's Mexican subsidiary, pledging mutual collaboration in the development and exploitation of the Sliver Machine technology. Under the agreement, Strojimport/Stimex agreed to purchase 30% of II's common stock for a price of \$5 million, together with a 12-month option to purchase the production and marketing licenses for the Sliver Machine technology.

On May 24, 1990 Strojimport/Stimex exercised the option, purchasing exclusive rights to manufacture the Sliver Machine and market the product in all territories other than the United States and Canada. The license was granted for royalties only, without any downpayment. The payment of royalties is scheduled to begin three years after the signing of the agreement according to the following schedule: the greater of

- \$500,000 per year, or
- 5% of annual sales value.

The license agreement does not provide for an accumulation of royalties in the period prior to commencement of payments. Sliver management has confirmed that payments relate to revenues post May 24, 1993.

By June 30, 1990, Strojimport had been split into two parts namely Strojimport a.s. and Investa a.s. and discussions begun to decide how best to assign the licensed rights to the Sliver Machine. On September 28, 1990, Investa was legally assigned both the investment in II shares and the license agreement.

#### Formation of Sliver Machine a.s.

Under the Communist regime in Czechoslovakia, textile machinery manufacturing was consolidated under the Elitex textile complex. At its peak Elitex had 20,000 employees. Its research and development staff numbered 1,700 engineers and it possessed a central tooling shop with 300 world-class, qualified toolmakers. Immediately prior to the collapse of Comecon, Elitex had total turnover of Kcs 6 billion, comprising the following:

- \* Kcs 1.0 billion - exports to hard currency countries
- \* Kcs 4.3 billion - exports to Comecon countries plus China
- \* Kcs 0.7 million - domestic sales in Czechoslovakia

On June 30, 1990, the Elitex complex was formally disbanded, reforming as 15 independent companies. With the collapse of Comecon, however, and the uncollectibility of receivables from the Soviet Union, many of these companies -- dependent upon the Soviet Union for 70-80% of their sales -- were rendered insolvent. It was against this backdrop of market and financial dislocation that Sliver was formed.

As noted previously, Mr. Urban had been party, as an Elitex representative, to the technical evaluation of the Sliver Machine from an early stage. In the process he developed an enthusiasm for the project that survived the breakup of Elitex and he continued to seek a means to continue to push the process forward. The first step required towards production-readiness was to convert the technical specifications and drawings from the imperial scale to metric.

When Mr. Urban, together with Mr. Mikula, began looking for financial backers for the conversion they quickly realized that no single Czechoslovakian company had the financial capacity to fund the project. Recognizing that there was some money to be found in individual Czechoslovakian entities and, particularly, in the state-owned trading companies, Mr. Urban, et al, developed the idea of forming a joint stock company by selecting a broad base of strategic partners who would contribute either technical or market expertise in addition to capital.

On December 4, 1990 Sliver Machine a.s. was formed as a joint stock company, according to the relevant Czechoslovakian law governing joint stock companies with foreign stock interest. The company was formally registered on March 1, 1991, with an initial capitalization of Kcs 20 million. At September 30, 1991 Kcs 15,320,000 had been received and the remainder is due to be received by December 31, 1991. The shareholdings can be summarized as follows:

<u>Name</u>	<u>Role</u>	<u>Interest</u>
Stimex	Marketing: Latin America	30%
Investa a.s. Praha	Marketing: All other	15
Elitex, Chrastava	Technical drawing conversion, production	30
Vyzkumny Ustav Textilnich Stroju	Technical drawing conversion (Research institute)	5
Elitex, Liberec	Technical advisory services	5
Elitex, Cerveny Kostelec	Technical drawing conversion	10
Elitex, Usti and Orlici	Technical drawing conversion	<u>5</u>
		<u>100%</u>

From early 1991 through the summer of 1991, the group worked on converting II's technical drawings into metric, as well as on refining certain of the production tolerances. This was an interactive process amongst the group, drawing heavily upon the

former Elitex units, Chrastava (one of whose facilities will be the primary production factory for the Sliver Machine), Cerveny Kostelec and Usti and Orlici (both of whom manufacture open-end spinning frames, with which the Sliver Machine is most easily compatible. The translated metric drawings and specifications were completed in September of 1991, and are the sole property of Sliver Machine a.s.

During the conversion process it was agreed that the following technical contributors would also provide capital to Sliver as follows:

<u>Name</u>	<u>Role</u>	<u>Contribution</u>
Sprecher Energie	Computer control systems supplier	Kcs 5 million
Industrial Innovators	Licenser	Kcs 2 million

This will increase the equity capital to Kcs 27 million and dilute existing holdings.

On October 18, 1991, Sliver signed a sub-licensing agreement with Investa, assigning to Sliver the right to manufacture Sliver Machines. Sliver has purchased these rights for \$1.2 million, to be settled according to the following payment schedule:

1992	\$ 320,000
1993	320,000
1994	320,000
1995	<u>240,000</u>
	<u>\$1,200,000</u>

In addition, the agreement requires Sliver to make annual royalty payments to Investa, scheduled to begin three years after the signing of the agreement, according to the following schedule: the greater of

- \$500,000 per year, or
- 5% of the sale price to Investa of each machine.

Similar licenses to manufacture can be granted by mutual agreement of Investa and Sliver. Sliver management considers its position protected, however, by possession of the completed set of metric technical drawings. The drawings represent a barrier to entry in the short-term. An alternative manufacturer would have to spend a comparable period to the eight months spent by Chrastava in converting the drawings. Additional barriers arise from the experience gained through manufacture of the prototype and verification series. This includes the development of reliable sources of supply for castings and machine parts but more importantly the advanced control system commissioned from Sprecher Energie. In addition, Investa has an effective equity interest of 45% in Sliver as Stimex is 60% owned by Investa.

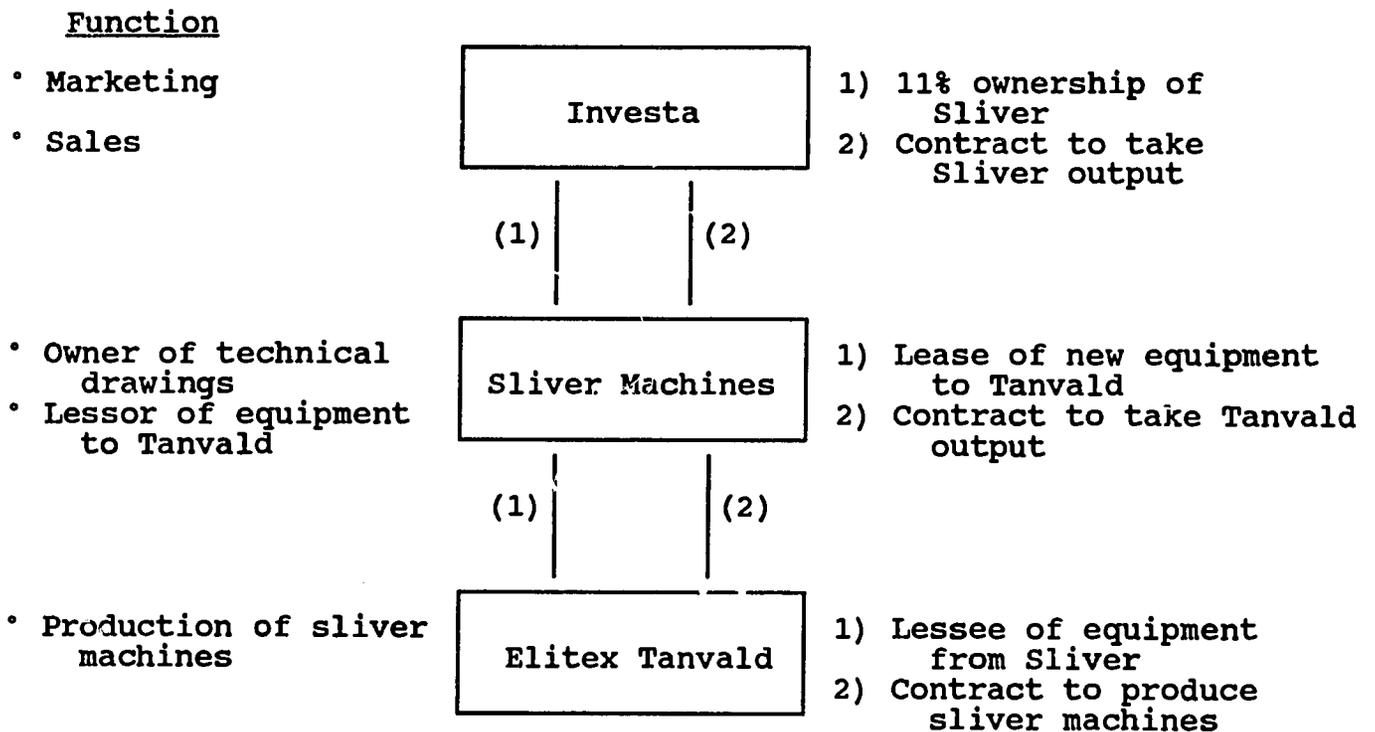
At the same time, Sliver has secured an agreement wherein Investa has agreed to purchase for a specified price, and then to sell on, all of the projected 1992 output of 40 machines. In addition, Investa has agreed to take 80 and 120 machines in 1993 and 1994, respectively, and thereafter a minimum of 120 machines per year until 2004. These purchase and sale agreements with Investa are not exclusive, however, and Sliver has retained the right to conclude sales directly with end users at market prices.

Production of a prototype Sliver Machine is currently underway at the Chrastava facility at Tanvald. This machine will be run and tested parallel to an imperial United States machine currently installed at a manufacturing facility, Kolora 12. The prototype and the five additional machines expected to be produced by March 1992 will be assembled using existing equipment at Tanvald, pending purchase and delivery of the new machining equipment contemplated by the proposed transaction.

The diagram below summarizes the proposed business structure and relationships among the parties required to deliver sliver machines to market.

**Sliver Machines**

**Business Structure and Relationships**



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#### IV. ANALYSIS OF MARKET FOR SLIVER MACHINES

The comparative merits of the Sliver Machine have been demonstrated in the economic study of a Spanish customer which was obtained by the Jardy Company representing the Czechoslovakian Foreign Trade Corporation, Investa, in Spain. It is a comparison of traditional technology, comprising a carding machine producing 40kg per hour, first passage of drawing running 500m per minute, second passage of drawing running 500m per minute and an open-end spinning machine, Autocoro, running 80,000 or 85,000 rpm, on one side and the Sliver Machine technology, with carding production of 40kg per hour and an open-end spinning machine BDA 10N running 75,000 rpm, on the other side.

The economic study comparing the traditional open-end spinning technology with that utilizing the Sliver Machine under the conditions given above was carried out for the production of yarns of three different finenesses. The material used was 100% cotton. The summarized results are as follows:

<u>Metric yarn count 40, 100% cotton, production 280kg per hour</u>	<u>Technology of carding drawing, Autocoro</u>		<u>Technology of SM, BDA-10N</u>		<u>% of savings</u>
1. Investment costs	ESP591,000,000	\$5,578,000	ESP461,000,000	\$4,351,000	22%
2. Power consumption kW per hour	666		482		27
3. Number of workers required for five-shift operation	20		15		25
4. Annual maintenance costs	ESP28,885,000	\$273,000	ESP14,810,000	\$140,000	48

These results illustrate the financial benefits derived from using the Sliver Machine.

In addition to the test summarized above, the Spanish study included tests using Metric Yarn counts of 22 and 54 which indicated similar levels of saving.

We discussed the performance of the Sliver Machine with Borden Manufacturing where an earlier version of the Sliver Machine has been in actual production for over a year. This has been used to produce open-end yarn with a count of 14/1. We understand that the machine has met all expectations for quality and productivity with no complaints from customers. Borden Manufacturing support the view that savings of \$0.03 per pound (refer IV-4) can be achieved from labor productivity and quality improvements. In addition, further savings are possible from reduced investment costs (two draw frames cost approximately \$100,000), floorspace and power consumption.

The quality claims of II are also supported by a masters thesis written by Gregory L. Russell for the Institute of Textile Technology. In his thesis, Mr. Russell concludes:

"The sliver from the Gunter & Cooke Sliver Machine with no additional drawing processes resulted in open-end yarns of comparable strength and quality when compared to the conventional yarn manufacturing system."

If quality is "comparable" then it is a reasonable conclusion that total cost must be lower with the Sliver Machine since investment costs, labor, floorspace and power are all lower than with conventional technology.

#### Market Analysis

All Sliver Machines sold through 1995 are expected to be sold through Investa, a state-owned trade corporation with sales of approximately Kcs10 billion. Approximately 90% of sales relate to the textile industry with the majority of these sales being open-end spinning frames. We understand that Investa expects to sell approximately 300 open-end frames in 1991. This compares

with current worldwide demand for open-end frames of approximately 1200 frames per year. These sales relate to replacement of existing equipment and the installation of complete new plants. Historically, Investa has not been able to offer a complete line for producing yarn as they have not had access to carding machines. They see the Sliver Machine providing them with an integrated product line which can be offered to new factories, or as a replacement for existing machinery. Investa envisages that the ability to offer an integrated product line will result in increased market share for their products.

Investa's principal markets are in South America and Asia including Pakistan, India, Indonesia, Malaysia, Hong Kong and Taiwan. This reflects the changing demographics of the textile industry. The industry in Western Europe and North America is suffering from a downturn as a significant amount of capacity is moving to developing countries where labor and other costs are lower. Management is of the opinion that they are better established in these markets than a number of their major competitors. Due to the current economic climate and the loss of sales to the Soviet Union, management expects to sell only 200-300 open-end frames in 1992. Based on average yarn counts, four Sliver Machines would be required for each open-end frame (average 200 rotors). Thus, demand for the Sliver Machine could be as high as 4,800 machines per year worldwide. Based upon current market share the Investa portion of this business could be as high as 1,200 machines per year.

This analysis assumes that all open-end frames are purchased for new spinning mill capacity. Obviously, many open-end frames will be purchased as upgrade equipment for existing factories. In these cases the decision to purchase carding and drawing equipment will be independent of the decision to purchase the Sliver Machine. Conversely, the Sliver Machine offers sufficient advantages over conventional technology to warrant consideration

for purchase in mills which already own state-of-the-art open-end spinning equipment. The elimination of two drawing processes can result in a significant reduction in product cost (II estimate a \$.03 per pound cost reduction). It seems that the assumption of four Sliver Machines per open-end frame is aggressive as an estimate of total market potential for the machine; however, due to the marketability of the Sliver Machine as a stand-alone decision, the projection for 150 units sold by 1995 does not appear unreasonable.

We are not aware of any technology currently under development which is better than the Sliver Machine. However, since textile companies are traditionally conservative about adopting new technology, conventional technology is likely to be the strongest source of competition for the Sliver Machine. A number of manufacturers (Rieter, Marzoli, Trutzschler, Holingsworth, Savio and Toyoda) are producing high speed cards which will compete with the Sliver Machine using the conventional drawing process.

However, based on discussions with Investa it appears that a more relevant concern is whether Sliver Machine and hence Chrastava can produce sufficient machines to satisfy market demand. The potential market appears significantly larger than planned production capacity. However, this raises additional concerns which also arise from the slow build-up in capacity at Tanvald. Successful introduction of the Sliver Machine could bring competitors into the market, particularly if supply cannot meet demand. Consequently, we consider that Sliver Machine should be considering alternative courses of action which will enable them, if necessary, to increase production capacity to satisfy demand.

## **V. EVALUATION OF ELITEX CHRSTAVA - TANVALD**

Sliver intends to sub-contract the manufacture of the Sliver Machine to Elitex Chrastava ("Chrastava"). Chrastava is a state-owned corporation based in Chrastava, northern Bohemia, with four principal operations located at Chrastava, Tanvald, Frydlant and Liberec. These plants employ approximately 2,000 people. Czechoslovakia is in the process of privatizing the majority of its state-owned operations in two waves, Chrastava forming part of the second wave. The process of privatization requires that company management submit a proposal for privatization of the company. There is a deadline for submission of these proposals after which other Czechoslovakian citizens have sixty days in which to submit alternative proposals if they desire. We understand that Chrastava management proposes to submit a privatization plan incorporating Chrastava, Tanvald and Frydlant. The operation at Liberec manufactures grinding equipment for the bijouterie business and is due to be sold to a foreign enterprise before November 30, 1991.

We understand that Chrastava faces severe financial problems. These are due principally to the political upheaval and economic crisis in the former Soviet Union. Historically, 80-90% of its sales were to the Soviet Union. It appears that management considers the Sliver Machine to be an opportunity to replace some of these lost sales and contribute towards securing the future of Chrastava. The manufacturing contract for Sliver Machine will generate work for all three plants, although the assembly and the majority of the machining work will be performed by Tanvald. In 1992, it is anticipated that 15-20% of the contract will be fulfilled by Chrastava and Frydlant.

This division of work highlights the importance of Tanvald to the success of Sliver. However, we are concerned that as there is insufficient work to sustain Chrastava in its present form, the

potentially profitable Sliver Machine contract will be used to fund the operations of Chrastava, Frydlant and head office management. This drain on resources and the bureaucracy associated with head office management could impair the development of Tanvald and delay the necessary "ramp-up" in production to meet, at a minimum the required shipments under the Investa contract but more importantly the overall market perceived by Investa which appears to be significantly higher than current production targets.

It is for the reasons discussed above that there may be benefits to be gained through privatizing Tanvald alone, rather than as part of Chrastava.

In view of the possibility of preparing an independent privatization plan for Tanvald we have performed limited financial and operational analyses of that plant. The financial analysis is based on information prepared by Tanvald management which was subsequently reviewed by Mr. Skacha of Chrastava. This information consists of actual results for the first nine months of 1991, projections for the years ending December 31, 1991, 1992 and 1993 and balance sheet detail relating to fixed assets and inventory as at September 30, 1991. We were informed that it is not possible to separate receivables and payables for Tanvald from those of the whole of Chrastava due to the structure of the accounting system. We discussed this information, including the underlying assumptions, with Mr. Skacha. The operational analysis was performed based on a visit to the Tanvald facility and discussions with both Chrastava and Tanvald personnel associated with the Sliver Machine project.

## Financial Analysis

### Income Statements

Detailed below are the actual results for the nine months ended September 30, 1991 and the projected results for the three years ending December 31, 1991, 1992 and 1993 for Tanvald.

	(In thousands)			Nine months ended September 30, 1991 <u>Actual</u>
	Year Ended December 31,			
	<u>1993</u> <u>Projected</u>	<u>1992</u> <u>Projected</u>	<u>1991</u> <u>Projected</u>	
Sales	Kcs 155,091	Kcs 92,117	Kcs 56,925	Kcs 44,693
Cost of Goods Sold				
Materials	111,550	66,450	23,321	17,300
Power	5,000	5,000	3,900	2,309
Other material costs	2,000	1,800	2,720	2,231
Direct labor	7,406	5,566	5,244	3,926
Employment taxes	3,818	2,852	2,688	2,034
Depreciation	4,300	4,500	4,190	3,077
Change in inventory	-	-	447	-
Cost of Goods Sold	<u>134,074</u>	<u>86,168</u>	<u>42,510</u>	<u>30,877</u>
Gross margin	21,017	5,949	14,415	13,816
Overheads				
Wages and salaries	8,694	6,534	6,156	4,609
Employment taxes	4,482	3,348	3,155	2,388
Fuel	500	500	497	261
Repairs and maintenance	1,000	1,000	700	648
Transport	1,000	1,000	1,000	414
Telephone	400	400	400	242
Supplies	700	700	690	500
Travel	400	400	400	)
Rent	700	700	700	) 1,301
Other	550	550	521	)
	<u>2,591</u>	<u>(9,183)</u>	<u>196</u>	<u>3,453</u>
Other income	2,309	2,283	2,141	*
Inter-company expenses	(1,200)	(1,000)	(610)	*
Research and development	(2,000)	(2,000)	(2,132)	(1,760)
Interest	<u>(1,700)</u>	<u>(1,700)</u>	<u>(1,695)</u>	<u>(1,366)</u>
Net income/(loss)	Kcs <u>0</u>	Kcs <u>(11,600)</u>	Kcs <u>(2,100)</u>	Kcs <u>327</u>

\* - Included in Sales

The projections assume zero inflation and exclude the impact of exchange rate movements.

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## Revenues

Projected revenues for 1992 and 1993 can be analyzed as follows:

	(In thousands)	
	<u>Year ended December 31,</u>	
	<u>1993</u>	<u>1992</u>
Sliver Machine	Kcs 126,160	Kcs 63,080
Tienters	17,800	17,800
Spare parts	3,800	3,800
Intercompany	3,800	3,800
Other	<u>3,531</u>	<u>3,637</u>
	Kcs <u>155,091</u>	Kcs <u>92,117</u>

Revenues relating to Sliver Machine are based on the manufacture and sale of 40 and 80 units for 1992 and 1993 respectively. In the current Chrastava plan for production of the Sliver Machine the sales value of work attributed to each Chrastava plant can be summarized as follows:

	(In thousands)
Tanvald	Kcs 1,577
Frydlant	315
Chrastava	<u>8</u>
	1,900
Corporate overhead allocation	<u>160</u>
Sales price to Sliver	Kcs <u>2,060</u>

This analysis indicates the relative importance of each plant to manufacture of the Sliver Machine.

The projections assume that the sales price to Sliver remains constant in 1992 and 1993 at Kcs 2,060,000. This price has been agreed only for the five verification machines due to be produced by March, 1992. We are aware that Sliver expects this price to reduce for subsequent machines as Chrastava's cost base declines through improved productivity and as a direct result of the

capital expenditure plan. Chrastava management is of the opinion that costs should be reduced by approximately 20% by the end of 1992 if the planned capital expenditure occurs in 1991 and the first six months of 1992. In the absence of further information a fixed sales price does not appear unreasonable for the purposes of these projections.

#### Cost of Goods Sold

The most significant component of cost of goods sold is raw material. The increase in the proportion of raw material required in 1992 and 1993 compared with 1991 is due to the high percentage of raw material and bought-in components required for the Sliver Machine. We understand that in excess of 50% of the raw material and components will be imported. These imports include the electronic control unit from Sprecher Energie of Austria. Raw material and component requirements at Tanvald are based on Kcs 1,042,000 per machine throughout the projection period. When considered in conjunction with a constant selling price this assumption does not appear unreasonable.

Direct labor costs have been determined as a pro-rata of total costs based on an average direct labor workforce of 106 out of total employees of 230. The significant increase in labor costs in 1993 reflects a general upgrading of wage levels which Chrastava management considers will be necessary to meet union demands. Although management informed us that there are savings resulting from the "learning-curve" effect incorporated within the projections, consideration does not appear to have been given to linking wage increases to improved worker efficiency and productivity. There is clearly an opportunity for significant increases in productivity and efficiency to be achieved. Based on standard costings for the Sliver Machine it would appear that the direct workforce is only spending 30-40% of its time on productive activities. In this situation there is clearly an opportunity to improve productivity, reduce the workforce and

increase pay rates for remaining workers. It appears that wage expenses are overstated and savings could be made at the same time as increasing wage rates.

The increase in power costs over 1991 is due to actual price increases during 1991 rather than increased consumption. The Czechoslovakian government liberalized the majority of prices on January 1, 1991. This policy has resulted in significant price increases during 1991 with some prices doubling or tripling.

### Overheads

The principal component of overhead costs is wages and salaries and the associated employment taxes for indirect labor. These costs are projected to increase, as for direct labor, due to an upgrading of salary levels in 1993. As discussed above, there is significant opportunity to improve productivity which could result in reduced total overhead wages and salaries and better compensation for remaining employees.

The remaining overhead costs remain constant during the projection period despite of the higher volume of activity. This would appear unrealistic although due to the overall significance of these costs any difference is unlikely to be material. The rent expense of Kcs 700,000 per year relates to the lease of capital equipment from Sliver. This expense and more significantly the total cash flow is understated. Under the terms of the lease agreement, Chrastava will make a payment equivalent to the depreciation on the equipment, any interest expense incurred on borrowings taken out specifically to purchase the equipment and the cost of insuring the equipment. The cash receipt included in the Sliver projections is Kcs 5,504,000 and Kcs 9,194,000, of which Kcs 1,517,000 and Kcs 2,163,000 has been recognized as income and so should represent the expense to Tanvald, for 1992 and 1993 respectively. The balance of the payments reflect repayment of the lease principal. While part of these amounts will relate to equipment installed at Chrastava and Frydlant, a significant proportion will relate to Tanvald.

## Balance Sheet

As discussed above our balance sheet information is extremely limited. Management supplied information relating to fixed assets and inventory which can be summarized as follows:

(In thousands)  
September 30, 1991

Fixed assets:	
Land and buildings	Kcs 18,600
Plant and equipment	<u>35,300</u>
	53,900
Accumulated depreciation	<u>37,100</u>
Net book value	Kcs <u>16,800</u>
Inventory:	
Raw material	Kcs 12,900
Work in progress	8,400
Finished goods	<u>300</u>
	Kcs <u>21,600</u>

Land and buildings represent the factory site and buildings in Tanvald. Land represents Kcs 1.1 million of cost and net book value.

Although some pieces of equipment have been bought in the last ten years, the majority of the plant and equipment is significantly older. Consequently, an inordinate amount of manual labor is required to ensure products are of an acceptable quality. This problem is being addressed through the Kcs 72 million capital expenditure project funded by the Sliver Machine. The value to the business of a large proportion of existing equipment is thus limited.

## Inventory

Inventory relates to existing production, purchasing for the Sliver Machine not having commenced. Management informed us that inventory is valued based on an average cost basis, materials bought pre and post January 1, 1991 being segregated due to the significant increase in prices arising from price liberalization. The level of raw material is very high for current production levels and represents an inefficient use of both financial resources and physical space.

## Other Assets and Liabilities

Due to the lack of information relating to other assets and liabilities it has been necessary to make certain simplifying assumptions, principally for valuation purposes. In this regard, accounts receivable and payable are assumed to be zero. This assumption is not unreasonable for accounts receivable as 80-90% of sales were to the Soviet Union. In view of the economic situation in the Soviet Union payment of these receivables has to be considered remote, these conditions warranting a 100% reserve against such receivables. The assumption in respect of accounts payable is less likely to be representative although there is a requirement to pay creditors within 15 days or incur penalty interest. However, with Chrastava's current financial problems there is a strong likelihood that they are behind in their payments. Overall, any mis-statement is unlikely to be material in the context of using asset value as an indicator of the value of the operation (refer Appendix).

## Operational Analysis

We met with each department head and certain key staff members from Chrastava and Tanvald who could contribute to inquiry of the Sliver Machine project.

## Technical Evaluation

The key area in which Tanvald personnel have demonstrated their abilities is the conversion of the technical drawings, received from II, from imperial scale to metric. During this process, the drawings were reviewed and re-evaluated. Critical engineering considerations and decisions have been validated by computer aided design software (CAD). This capability is not available at Tanvald but the need has been supported by Chrastava. It should be noted that where drawing dimensioning has not been on a one-to-one basis, a slight tightening of tolerances has occurred. This action could have an adverse impact on the cost of manufacture, in particular as a result of quality control measures. This may be from either additional expense to satisfy tolerances that may not be essential or from re-engineering effort to correct any interference fit problems that may be encountered during prototype assembly.

The engineering process overall, however, appears to have been more than just the faithful copying of a set of drawings, in that consideration has also been given to re-evaluation of key design criteria and assumptions. This approach should benefit the manufacturing process and help to ensure a quality product. The benefits should be apparent with the prototype assembly due to be finished in early November.

It is an indication of the skill of the machine operators that required tolerances can be achieved during the prototype manufacturing process considering the 28 year average age of the equipment. In manufacture of the prototype, alternative

approaches and methods have been utilized and assessed in manufacturing parts and in the assembly process. The resultant parts and processes were assessed for desired quality and then the approved production process was selected for subsequent production requirements. Quality control has been achieved by inspection stamp-off of each operation, and 100% final inspection of finished components.

### Facility

The Tanvald plant is located about 30 km outside Liberec, the physical structure being constructed in 1837. Although we did not perform a detailed inspection of the buildings, they appear sound and we were assured that the structure will support an eight ton overhead crane that is planned for final assembly of the Sliver Machine. This will replace the existing three ton crane which management asserts is not capable of the control required to facilitate the efficient assembly of the Sliver Machine. During prototype production, and until the crane is replaced, the lifting requirements are to be handled by fork lift trucks currently being procured. Management also intends to upgrade the spray paint area. The current area is dirty and dangerous and, for example, it would not pass inspection in the United States in terms of occupational safety or health. The proposed equipment layout in support of inventory and work-in-process storage and feeder shop arrangement was reviewed by observation and by planned layout documentation. Given the long narrow structure of the facility, it appears that maximum advantage has been taken of a straight-through product flow.

The age of the physical structure and its long narrow shape places a number of limitations on plant operations. The space will accommodate the required equipment and storage during manufacture of the prototype and validation series, however, with production ramp-up there may be space and operational problems. In-process storage under production volumes is limited at best.

It is important that greater use be made of "cube" or vertical storage possibilities by the introduction of pallet storage racks in the assembly area. The fork lift trucks due to be purchased should be able to service these pallet storage racks.

#### Equipment/Implementation Plan

During prototype component production, multiple approaches to each part's manufacture were tried and the results compared for process selection. In addition, machine to machine routing and operational sequencing at each machine was varied to find the most efficient sequence to produce each item. Although this approach ensured quality parts for the prototype, it does not address process capability, in terms of repeatability, for long production runs (process control by statistical methods was not in evidence). The quality of components during prototype production was assessed by inspection stamp-off after each operation and 100% final inspection before use or stocking. Sampling techniques and machine output quality run chart utilization should be considered for incorporation into the production process before quantity production runs commence.

It is questionable whether the existing equipment could sustain quality production at estimated levels beyond 1994. In recognition of this, capital machines have been planned for procurement. The overall capital expenditure plan of Sliver amounts to Kcs 72 million in the period to December, 1995 and includes equipment at Tanvald, Chrastava and Frydlant. This compares with a Chrastava proposal of Kcs 78 million to ensure production of the Sliver Machine. We understand that the difference of Kcs 6 million will be supplied by Chrastava during 1993 and 1994. We were not informed as to the source of funds for this investment. The capital investment program has been prioritized. For example, there are five machines very important to production requirements due to be purchased in 1991 and 1992. Two of them are already on site, a brake press and a turret

lathe. The lathe is in place, but not yet released for production. The brake is basically located but not yet installed. Plans for three others are as follows:

- A surfacing lathe to be supplied in the first quarter of 1992; site preparation, installation, and testing are due to be completed within two months of receipt. This machine is planned to be on line no later than the end of May 1992.
- A grinding device for the surfacing lathe in the second quarter of 1992. Installation and testing is planned for one month after receipt.
- A balancing machine is also planned for procurement in the second quarter of 1992. It is planned to be operational one month after receipt on site.

The production schedule for 1992 is planned as follows:

Production

January	-
February	2
March	3
April	-
May	-
June	4
July	4
August	6
September	6
October	6
November	6
December	<u>6</u>

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Sliver intends to spend Kcs 37 million on capital equipment in 1992. Kcs 22 million will come from the Komerčni Banka loan and has been allocated to specific items which are required most urgently (Exhibit 1). The remaining Kcs 15 million represents

the CSAEF loan of which Kcs 10 million will be spent on a testing room (location yet to be determined) with the balance being unallocated. We understand that this will be allocated as soon as the loan is confirmed.

The plans for 1992 appear to be ambitious. For example, the surfacing lathe is a special order item that has, we are informed, a firm procurement lead time of five months. Further, that lead time will not start until the contract is signed together with a 10% down payment. This places the timing need for contract execution at no later than the end of October 1991. At the time of writing we are not aware of any procurement contracts having been signed. At risk is production start-up in June 1992 without the planned capability/capacity at Tanvald.

It is important that contingency plans be developed by Tanvald management for the June 1992 production start-up. The plans should show the make or buy cost trade-offs for each part considering the potential need for continuing the methodologies employed during manufacture of the five verification machines.

In the longer term there are a number of critical machine requirements where required capacity exceeds that available. The principal areas are as follows:

<u>Machine Area</u>	<u>Machine hours for production of 120 units</u>	
	<u>Available</u>	<u>Required</u>
(1) Numerically controlled horizontal drill press	14,800	29,580
(2) Milling machine	14,800	19,200
(3) Final assembly	18,500	19,200
(4) Painting	7,400	9,600

The solutions to these constraints (as presented by Sliver management) are:

- (1) Reassignment of portion of work to other machine centers;
- (2) Purchase of additional milling machines;
- (3) New crane and hire more people; and
- (4) New paint system.

While the capital items are included in the capital expenditure projections, it is important that management address these requirements as soon as resources are available.

#### Procurement

The management of the procurement function at Tanvald is currently based on a product build "lot" quantity effort based on material identification and specification from engineering and management's build plans for six month periods. As an example, details of the forty Sliver Machines planned for 1992 have been supplied to the purchasing group as an extended, engineered bill of materials with directions to contract requirements so as to support production build lot quantities of twenty units twice during the next year.

We were informed that major sub-contracting, as in the case of the 32 bit electronic control units to be purchased from Sprecher Energie of Austria, are handled separately through direct management negotiation. We understand that due to the current state of the Czechoslovakian economy, it is essentially a buyers market for standard materials and components. There are a few, hard-to-get, special items that will cause some problems in terms of requiring bulk orders, price, or overseas procurement.

Overall however, we were given to understand that no requirement was so exotic as to cause other than normal procurement challenges.

### Feasibility of long-term Production at Tanvald

When considering future performance of the facility at Tanvald we have concerns in a number of areas:

- Management effectiveness

As the Tanvald plant gears up to produce the Sliver Machine, management needs to take the opportunity to make fundamental operating improvements which will allow the company to achieve the required level of production and compete with Western manufacturers.

We recommend a vigorous five-step improvement plan which can be summarized as follows:

- Improve procedures for housekeeping/workplace organization.
- Initiate a plan for skills training:
  - Job skills
  - Statistical Process Control
  - Problem-solving
  - Management methods
- Eliminate non-value-added activities
- Implement Total Quality Management
- Implement effective procedures for materials management and inventory control.

## Labor utilization

The Tanvald plant employs approximately 230 people of which 106 are direct labor. Based on 106 employees and a working year of 1,850 hours, Tanvald will require an additional 39 people to achieve 1994 production of 120 machines. This can be demonstrated as follows:

Estimated labor hours for 120 machines	267,360
Direct labor hours available (based on current staffing of 106 people)	<u>196,100</u>
Additional hours required	<u>71,260</u>
Additional people required	<u>39</u>

As recently as 1990 there were 350 people employed at the factory, consequently there should not be a problem in obtaining the necessary labor hours to reach annual production of 120 machines in 1994 or 150 machines in 1995. However, the larger issue is the effective utilization of all the human resources. We observed, and management verified, labor efficiency in the range of 30-40%. Obviously, efficiency will have to increase to 70-80% for the factory to become competitive. As this occurs, there should be a shift in the mix from non-value-added to value-added jobs in the factory, direct labor employees increasing as a percentage of total employees.

## Systems development

Tanvald management is looking at an integrated computer system to enhance communications between engineering and manufacturing. There was not time to seriously review the system with regard to the needs of the business. What was

presented however, did not seem to have any provision for lead time offset or time phasing of material requirements. This element is of little consequence for small quantity production in a small business. It becomes a significant consideration as the business grows. It will be of particular importance if Tanvald produces significant amounts of other products, in addition to the Sliver Machine, as indicated by management. However, it is our opinion that management should focus on making fundamental operational improvements before automating business functions through a new computer system.

## VI. POTENTIAL IMPACT OF PRIVATIZATION

### Chrastava as a Group

As indicated in Section V, it is the responsibility of company management to submit a privatization proposal for that entity. We discussed the proposals for privatization with Mr. Skacha of Chrastava. We understand that the World Bank, through the IFC, have been involved in considering the options for privatization of Chrastava. The IFC has stated that they will participate in a privatization plan for Chrastava plants at Chrastava, Tanvald and Frydlant if a partner can be found. Currently, Chrastava has not found a partner. The IFC set a deadline for a privatization proposal to reach them of October 31, 1991 such that the proposal could be submitted to the relevant Ministry by November 30, 1991. If a partner cannot be found, Chrastava management will go ahead with the same privatization plan based on coupons rather than funding from the IFC and a partner.

Based on our understanding of the financial condition of Chrastava, there is some doubt about the future viability of the group in its current form. This concern was also expressed by Mr. Jirman, Director of Chrastava, given the current state of the worldwide textile industry.

We are concerned that the revenues generated from the Sliver Machine contract will be used to support inefficient and loss making operations at Chrastava and Frydlant, and to an extent at Tanvald, and an inappropriate corporate overhead structure rather than being used for investment purposes and to promote research and development. In addition, as discussed in Section V, there needs to be a significant change in approach and philosophy if Chrastava are to satisfy the production requirements under the

contract with Sliver. While this is not impossible in a privatized group, there is a risk that old attitudes perpetuate and restrict the benefits that could be derived from the Sliver Machine contract.

### Tanvald

We are not aware of any intention to submit a privatization plan for Tanvald as a stand-alone entity. Such a proposal would represent a competitive bid against the proposal from Chrastava management. Mr. Skacha expressed concern that such a bid may arise and that it would be viewed favorably by the Ministry. While there are certain negative features to such a proposal, the benefits outweigh them, particularly if Sliver is involved in some respect.

#### (a) Benefits

Sliver management is well aware of the problems of Tanvald which arise from a lack of investment and a management totally reliant on Chrastava. Independent privatization of Tanvald may provide Sliver management with more influence over, what we consider to be, the principal risk in the Sliver Machine project, namely the ability of Tanvald to satisfy market demand for the product. In addition, this approach will ensure that any profits generated by Tanvald are reinvested in its operations rather than utilized elsewhere within the Chrastava operation to fund loss making operations and support an excessive head office management structure.

#### (b) Disadvantages

If Sliver elects to play a significant role in Tanvald it will place a large burden on management's time. Although it may be possible for Sliver to recruit the appropriate

personnel to operate the Tanvald facility there will be an inevitable drain of Sliver management's time. In addition, Tanvald is projected to make losses in the short-term until production of the Sliver Machine reaches an economically viable level. Although there are opportunities for reducing workforce numbers and overheads which could curtail these losses significantly, they will nonetheless have to be funded in the short-term. If Sliver funds these losses it may reduce surplus funds available for investment in capital equipment. This will need to be evaluated to ensure that it does not have an adverse impact on both the operations of Tanvald and Sliver, particularly if the resulting reduced investment translates into an inability to satisfy existing production targets.

If Tanvald is separated from the Chrastava group it may find it more difficult to sub-contract work to Chrastava and Frydlant when requirements exceed the capacity of Tanvald on a stand-alone basis. This problem may be resolved through the use of external parties, however, the flexibility of a group operation will be lost and management will have to go through a quality evaluation of each new supplier and ensure that technical standards are satisfied.

### Suppliers

One of the main suppliers of components (castings) for the Sliver Machine will be Skoda. Our view is that the impact of privatization on other suppliers can only be beneficial to Chrastava. We understand that no one supplier is so important that the materials or components could not be procured from an alternative supplier at competitive rates. In the post

privatization economy, competition should increase resulting in better quality and probably lower prices as companies adjust to the forces of open competition. This can only be to the benefit of Chrastava and Sliver.

### Investa

While there is a real risk with many companies that privatization will result in a major upheaval and disruption of operations this is less of a concern with Investa. They are a large trading company that is used to open markets and direct competition through their involvement in export markets. Thus, disruption should be limited and, with a 45% equity stake in Sliver, they have a vested interest in the success of the Sliver Machine.

## VII. BUSINESS RISKS

### Legal/Contract Risk

At the time of this report two principal contracts remain to be signed, namely the Lease Agreement and the Co-operation Agreement between Sliver and Chrastava. We have interpreted these contracts based on the intentions of Sliver management, and based our analysis thereon. This was necessary as the financial projections include different terms relating to lease payments when compared with the draft lease contract. Clearly any variation in these contracts could have an impact on our analysis.

As discussed in Section IX of this report the Lease and Co-operation agreements favor Sliver. There is a risk that the burden on Chrastava may be too severe, resulting in an inability to meet their contractual obligations. This is yet another reason in support of the view that Sliver should undertake steps to invest in Tanvald, the Chrastava facility primarily responsible for the Sliver Machine.

### Performance Risk

Performance risk arises from the ability of Sliver to meet its contractual obligations to Investa. Under current proposals this burden is shifted to Chrastava by virtue of the proposed manufacturing contract. However, it is worth noting that the draft contract does not preclude Sliver from awarding manufacturing contracts to other manufacturers either in Czechoslovakia or abroad.

As discussed in Section V there is a genuine risk that Chrastava will not be able to satisfy its obligations to Sliver. The key issues to be addressed by Chrastava to ensure that such risks are minimized are:

- Management effectiveness
- Labor utilization
- Systems development

These areas are discussed in more detail in Section V.

### Financial Risk

- Komerčni Banka loan - Kcs 22 million - We have been informed by Sliver management that this loan has been approved by Komerčni Banka. However, at the date of writing, management does not have written confirmation of this loan.
- Ministry of Economic Policy - The projections include receipt of a Kcs 5 million grant and a Kcs 5 million interest free loan from the Czech Ministry of Economic Policy. Management has informed us that discussions with the ministry indicate that Sliver is still under consideration for a loan and grant but this is dependent on the ministry receiving additional funding. We have not seen any documentation to support this position at the date of this report.
- Exchange rate - The proforma projections for Sliver assume a constant exchange rate. There is likely to be a devaluation of the Czechoslovakian crown in 1992 which could be in the region of 10-20%. This will increase the cost to Sliver of dollar denominated payments which are principally the license and royalty payments to Investa. In an uncertain economic environment there is a risk of further devaluation of the currency in future years.

- Inflation - The projections exclude the impact of inflation. While this factor does not diminish the usefulness of the projections, there is a risk that inflation could impact costs and revenues to different degrees resulting in either squeezed or increased margins. In addition, if Czechoslovakia experiences high inflation without a corresponding devaluation of the currency, Sliver's costs may increase while it finds it difficult to negotiate a higher selling price to Investa whose sales are denominated in US dollars.

## VIII. PROFORMA FINANCIAL PROJECTIONS - SLIVER

### Proforma Income Statement

The projected results of Sliver for the five years ending December 31, 1995 are detailed below:

	(In thousands)				
	Year ending December 31,				
	1995	1994	1993	1992	1991
<b>Revenues</b>					
Machine sales - Investa	Kcs 496,125	Kcs 396,900	Kcs 264,600	Kcs 132,300	Kcs -
Less: Direct selling costs	<u>111,628</u>	<u>89,302</u>	<u>59,535</u>	<u>29,767</u>	<u>-</u>
Net revenues - Sliver	384,497	307,598	205,065	102,533	-
Less: Cost of goods sold	<u>309,000</u>	<u>247,200</u>	<u>164,800</u>	<u>82,400</u>	<u>-</u>
Gross operating margin	75,497	60,398	40,265	20,133	-
<b>Operating expenses:</b>					
Research and development	1,000	1,000	1,000	1,000	50
Office equipment	23	21	14	12	10
Fuel	64	64	32	32	32
Repairs/maintenance	20	20	12	12	10
Telephone/telex	52	44	36	28	22
Wages/salaries	712	568	568	424	280
Employment taxes	376	304	294	222	140
Advertising	500	500	200	50	50
Operational expenses	40	40	20	20	-
Travel	764	520	366	266	116
Supplies	<u>50</u>	<u>40</u>	<u>30</u>	<u>20</u>	<u>12</u>
	3,601	3,121	2,572	2,086	722
Rental expenses	169	142	142	115	92
Licensing costs	32,750	29,969	19,287	10,054	4
Depreciation	3,172	2,559	1,729	859	18
Consulting services	420	400	344	320	288
Interest (income)/expense	(2,131)	(1,175)	498	(37)	(660)
Other income	<u>-</u>	<u>(1,262)</u>	<u>(336)</u>	<u>(252)</u>	<u>(70)</u>
Operating income before taxes	37,516	26,644	16,029	6,988	(394)
Taxes	<u>14,835</u>	<u>10,823</u>	<u>7,188</u>	<u>3,290</u>	<u>-</u>
Net income before reserves	22,681	15,821	8,841	3,698	(394)
Transfer to equity reserve	<u>1,118</u>	<u>817</u>	<u>544</u>	<u>252</u>	<u>-</u>
Net income	Kcs <u>21,563</u>	Kcs <u>15,004</u>	Kcs <u>8,297</u>	Kcs <u>3,446</u>	Kcs <u>(394)</u>

The projected results presented above were prepared by Sliver management. The projections do not include inflation and assume a fixed exchange rate of the Czechoslovakian crown (Kcs) against the US dollar of Kcs 31.5.

## Revenues

All Sliver sales are projected to be to Investa with unit sales reflecting the provisions of the sub-license agreement between Sliver and Investa dated October 14, 1991. This agreement requires that Investa purchase, as a minimum, 40, 80 and 120 units in 1992, 1993 and 1994 respectively and thereafter 120 units per year until 2004. The projections include sales of 40, 80, 120 and 150 in 1992, 1993, 1994 and 1995, respectively. The sales price has been established for the initial five verification machines to be supplied under the contract at Kcs 2,550,000 with the price of future machines being subject to negotiation. This compares with a net sales value to Sliver of Kcs 2,563,313 included in the projections. A fixed price is assumed throughout the projection period.

The initial contract price was determined after considering the likely market price of the machine. Management considers that its retail price is approximately US\$130,000. However, it will be necessary to offer lower prices in certain markets depending on local conditions, resulting in an average sales price of US\$105,000. Sliver management's latest view is that US\$100,000 may be a more realistic figure. The net sales revenue to Sliver is determined by deducting an amount (22.5% of gross sales value) to cover Investa's marketing and selling costs. Based on the fixed exchange rate this results in net revenue of Kcs 2,563,313 per machine for Sliver which has been incorporated into the projections.

The prospects for the Sliver Machine and the ability of Investa to achieve the anticipated level of sales are considered in Section IV of this report. However, based on our discussions with management and available market information the principal factor affecting the ability to achieve projected unit sales appears to be the capacity to produce the machines rather than the size of the available market.

### Cost of Goods Sold

Sliver intends to sub-contract the manufacture of the Sliver Machine to Chrastava. The terms of this agreement are currently subject to negotiation. The draft agreement provides for a price of Kcs 2,060,000 for the five verification machines with future prices being subject to negotiation. The projections assume that this price remains unchanged during the projection period. We have no reason to suppose that the price will be any different for the first five machines as Chrastava management is basing their projections on the same figure.

As the projections assume that the net sales price and the cost of goods sold remain constant throughout the projection period the gross margin is unchanged. While the underlying assumptions, resulting in a constant gross margin, may not be strictly correct the net result does not appear unrealistic. In terms of constant prices, the price charged by Chrastava should decrease over time as the benefits of the capital investment program are realized and through improved employee productivity. As a result of the close link between Investa and Sliver, it is likely that a part of any cost saving achieved by Sliver will be reflected, in part, in the price negotiated between them. In these circumstances, the approach of Sliver does not appear unreasonable.

### Operating and Rental Expenses

Operating and rental expenses have been projected on a line-by-line basis. Changes are based on the anticipated level of annual activity. Sliver currently employs four people and this is expected to increase to ten in 1995.

## Licensing Costs

Licensing costs can be summarized as follows:

(In thousands)

	Year ending December 31,				
	1995	1994	1993	1992	1991
License fees	Kcs 7,800	Kcs 10,000	Kcs 10,000	Kcs 10,000	Kcs 0
Royalties (due in \$US)	24,806	19,845	9,187	-	-
Custom fees, insurance	<u>144</u>	<u>124</u>	<u>100</u>	<u>54</u>	<u>4</u>
	Kcs <u>32,750</u>	Kcs <u>29,969</u>	Kcs <u>19,287</u>	Kcs <u>10,054</u>	Kcs <u>4</u>

The major components of licensing costs relate to the purchase of the sub-license from Investa to manufacture the Sliver machine and the requirement to pay royalties under that sub-license. The sub-license cost US\$1.2 million and is payable in three annual installments of US\$320,000 commencing in 1992 and a final payment of US\$240,000 in 1995. Royalties are payable at 5% of net sales on a quarterly basis subject to a minimum annual payment of US\$500,000.

## Depreciation

Depreciation can be analyzed as follows:

(In thousands)

	Year ending December 31,				
	1995	1994	1993	1992	1991
Fixed assets	Kcs 110	Kcs 90	Kcs 83	Kcs 36	Kcs 18
Start-up costs	<u>3,062</u>	<u>2,469</u>	<u>1,646</u>	<u>823</u>	-
	Kcs <u>3,172</u>	Kcs <u>2,559</u>	Kcs <u>1,729</u>	Kcs <u>859</u>	Kcs <u>18</u>

Fixed asset depreciation relates to fixtures, fittings and motor vehicles. Amortization of start-up costs is based on the level of sales such that costs are fully amortized over a four year period in accordance with Czechoslovakian regulations.

## Consulting Services

Consulting expenses can be analyzed as follows:

(In thousands)

	Year ending December 31,				
	1995	1994	1993	1992	1991
ELITEX consulting services	Kcs 250	Kcs 250	Kcs 250	Kcs 250	Kcs 250
Consulting/advisory services	50	50	12	12	12
Other	<u>120</u>	<u>100</u>	<u>82</u>	<u>58</u>	<u>26</u>
	Kcs <u>420</u>	Kcs <u>400</u>	Kcs <u>344</u>	Kcs <u>320</u>	Kcs <u>288</u>

Consulting services include accounting, legal and other general advisory and related services. Other services represent a reserve for unplanned expenditure.

## Interest

Interest income and expenses can be analyzed as follows:

(In thousands)

	Year ending December 31,				
	1995	1994	1993	1992	1991
Komerční Banka	Kcs -	Kcs 524	Kcs 2,361	Kcs 1,180	-
Restricted cash	(1,200)	(1,200)	(1,200)	(1,200)	(660)
CSAEF	600	1,350	1,500	1,500	-
Lease income	<u>(1,531)</u>	<u>(1,849)</u>	<u>(2,163)</u>	<u>(1,517)</u>	-
	Kcs <u>(2,131)</u>	Kcs <u>(1,175)</u>	Kcs <u>498</u>	Kcs <u>(37)</u>	Kcs <u>(660)</u>

Sliver are in the process of negotiating a Kcs 22 million loan from Komerční Banka. We understand that this will be at a basic fixed interest rate of 14% with provision for additional fees of up to 0.5%. Sliver has projected its interest expense based on the anticipated repayment terms of the loan using an interest rate of 15%. Interest on restricted cash (refer below) has been calculated at 20%. This rate is too high, currently the deposit is earning interest at approximately 16%. Using a more reasonable interest rate of 15% would reduce interest income by Kcs 300,000 per year. Interest on the anticipated loan from the CSAEF has been calculated using an interest rate of 10%. Lease income represents interest received on equipment leased to Chrastava. The projections do not include interest earned on surplus cash balances other than the restricted cash. Interest rates on such balances are in the region of 3-4%.

## Other Income

Other income can be summarized as follows:

(In thousands)

	Year ending December 31,				
	1995	1994	1993	1992	1991
Prototype rent	Kcs -	Kcs 1,262	Kcs 336	Kcs 252	Kcs -
Other	-	-	-	-	70
	Kcs -	Kcs <u>1,262</u>	Kcs <u>336</u>	Kcs <u>252</u>	Kcs <u>70</u>

Prototype rent represents payments received from Kolora for use of the prototype Sliver Machine. This will be used for commercial production.

## Income Tax

Sliver qualifies for the lower rate of tax applicable in Czechoslovakia of 40%. This is because 30% of its equity is owned by an overseas operation, namely Stimex. However, we understand that there is a possibility of tax reform in 1993 where the present two tier tax structure is expected to be reduced to a single rate, which is likely to fall somewhere between the current rates of 40% for ventures with a foreign interest of 30% or more and 55% for Czechoslovakian companies.

## Proforma Balance Sheet

(In thousands)

	December 31,				
	1995	1994	1993	1992	1991
Cash and liquid investments	Kcs 20,055	Kcs 14,703	Kcs 10,246	Kcs 13,471	Kcs 2,522
Restricted cash	6,000	6,000	6,000	6,000	6,000
Accounts receivable	<u>15,801</u>	<u>12,641</u>	<u>8,427</u>	<u>4,214</u>	<u>-</u>
Current Assets	41,856	33,344	24,673	23,685	8,522
Net investment in leased property	44,968	42,487	19,392	32,573	9,310
Property, Plant & Equipment:					
Property and equipment	1,976	1,576	1,576	426	176
Less: depreciation	<u>454</u>	<u>344</u>	<u>254</u>	<u>171</u>	<u>135</u>
	<u>1,522</u>	<u>1,232</u>	<u>1,322</u>	<u>255</u>	<u>41</u>
Start-up costs	8,000	8,000	8,000	8,000	6,800
less: depreciation	<u>8,000</u>	<u>4,938</u>	<u>2,469</u>	<u>823</u>	<u>-</u>
Net start-up costs	<u>-</u>	<u>3,062</u>	<u>5,531</u>	<u>7,177</u>	<u>6,800</u>
Total Assets	Kcs <u>88,346</u>	Kcs <u>80,125</u>	Kcs <u>70,918</u>	Kcs <u>63,690</u>	Kcs <u>24,673</u>
Liabilities:					
Account payables	12,699	10,159	6,773	3,386	567
Current portion of long-term debt	<u>-</u>	<u>17,000</u>	<u>10,000</u>	<u>10,000</u>	<u>-</u>
Total current liabilities	12,699	27,159	16,773	13,386	567
Government grants received	5,000	5,000	5,000	5,000	-
Long-term debt	-	-	17,000	22,000	4,500
Common Equity	20,000	20,000	20,000	20,000	20,000
Retained earnings	47,916	26,353	11,349	3,052	(394)
Equity reserve	<u>2,731</u>	<u>1,613</u>	<u>796</u>	<u>252</u>	<u>-</u>
Total Liabilities and Equity	Kcs <u>88,346</u>	Kcs <u>80,125</u>	Kcs <u>70,918</u>	Kcs <u>63,690</u>	Kcs <u>24,673</u>

Proforma projected balance sheets have been prepared based on income statement and cash flow information prepared by Sliver management. These projections do not reflect additional equity commitments totalling Kcs 7 million yet to be approved by Sliver's board (see **Common Equity** below). Where additional simplifying assumptions have been made, these are enumerated below.

### Restricted Cash

This cash balance represents 30% of the common equity of Sliver. Under the regulations of the company, a cash balance of 30% of the initial common equity of the company has to be maintained. This money has been placed in a bank account for a four year period thus earning a higher rate of interest.

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### Accounts Receivable and Payable

Czechoslovakian law requires that trade debts be settled within fifteen days otherwise interest accrues on the outstanding balance. The projections assume that fifteen days of purchases and sales are outstanding at each year end.

### Net Investment in Leased Property

The net investment in leased property represents amounts due from Chrastava for equipment leased to them by Sliver. Under the lease provisions Chrastava are charged for depreciation on the equipment as if it were owned by Sliver, interest payments on loans taken out directly to finance the acquisition of capital equipment and insurance costs relating to the equipment incurred by Sliver.

### Property and Equipment

Property and equipment principally relates to buildings, fixtures, fittings and motor vehicles. The significant increase in 1993 reflects management's opinion that Sliver may need to acquire its own office space. Under Czechoslovakian regulations, fixtures, fittings and motor vehicles can be depreciated at 12% per year as Sliver has less than 100 employees. Larger companies are required to use lower rates of depreciation. Buildings are depreciated over 50 years.

### Start-up Costs

Start-up costs in 1991 include expenditure on the conversion of technical drawings from imperial to metric scale of Kcs 2,300,000 and costs incurred in manufacture of the prototype equipment of Kcs 4,500,000. In 1992, additional expenditure relates to development costs reimbursed to Sprecher Energie for the new electronic control unit.

## Debt

The analysis between short-term and long-term debt is based on a repayment schedule associated with the loan from Komerčni Banka and anticipated repayment of funds received from the CSAEF and the Czech Ministry of Economic Policy. We understand that the Kcs 22 million loan from Komerčni Banka has been agreed in principal, however, we have not seen any documentation to support this statement. In addition to the bank loan, Sliver has applied for a Kcs 5 million grant from the Ministry of Economic Policy and an interest free loan in the same amount. These applications have been made under the Program for the Promotion of Industrial Manufacture in the Czech Republic. We understand that Sliver applied for additional funding from the ministry but were unsuccessful. We have been informed by management that Sliver is still in line to receive the above amounts although this is dependent on the ministry receiving additional federal funding. Once again, there is no documentation to support this position. Management informed us that in the event of failure of the application to the ministry it would be necessary to look for alternative sources of funding. Any such sources would have a financing cost, unlike the ministry funds.

## Common Equity

The existing equity of Sliver is Kcs 27 million. At September 30, 1991, Kcs 15,320,000 had been received in cash. The balance is due by December 31, 1991 and has been assumed received at that date. While we have no reason to doubt the receipt of the remaining funds, Kcs 2 million is due from Chrastava which appears to have financial problems arising from the collapse of the Soviet Union market. Chrastava has already paid Kcs 4 million and consequently management is assuming that the remainder will be received.

The projections do not reflect additional equity commitments. Sprecher Energie has agreed to subscribe for new shares with a value of approximately Kcs 5 million. In addition, as part of their overall collaboration, II has agreed to subscribe for new shares of approximately Kcs 2 million. These offers are subject to board approval by Sliver in November, 1991. Assuming that these amounts are approved, the funds from Sprecher Energie are likely to be received in the first quarter of 1992 with the funds from II being received over a period of time.

### Equity Reserve

The equity reserve represents an allocation of retained earnings. Under Czechoslovakian law, a company is required to establish a non-distributable reserve of 10% of common equity. This has to be established over a period of time through setting aside 5% of post tax profits annually. The total balance should be restricted to Kcs 2.7 million in 1995, based on common equity of Kcs 27 million. If common equity increases, the amount to be set aside increases correspondingly.

## Proforma Cash Flow Statement

(In thousands)

	Year ending December 31,				
	1995	1994	1993	1992	1991
<b>SOURCES OF CASH FLOW:</b>					
Net income	Kcs 21,563	Kcs 15,004	Kcs 8,297	Kcs 3,446	Kcs (394)
Adjustments for non-cash items					
Depreciation - fixed assets	110	90	83	36	18
Depreciation - start-up costs	3,062	2,469	1,646	823	-
Transfers to equity reserve	1,118	817	544	252	-
Movements in working capital					
Accounts receivable	3,160	4,214	4,213	4,214	-
Accounts payable	<u>2,540</u>	<u>3,386</u>	<u>3,387</u>	<u>2,819</u>	<u>567</u>
Cash flow from operations	25,233	17,552	9,744	3,162	191
Additional sources of cash flow:					
Equity capital	-	-	-	-	20,000
Komerčni Banka	-	-	-	17,500	4,500
Ministry of Economic Policy	-	-	5,000	5,000	-
CSAEF	-	-	-	<u>15,000</u>	-
<b>TOTAL SOURCES OF CASH FLOW</b>	<b>25,232</b>	<b>17,553</b>	<b>14,743</b>	<b>40,662</b>	<b>24,691</b>
<b>USES OF CASH FLOW</b>					
Capital expenditures:					
Net investment in leased property	2,481	3,095	6,819	23,263	9,310
Fixed assets	400	-	1,150	250	59
Start-up costs	-	-	-	-	6,800
Software development - Sprecher Energie	-	-	-	<u>1,200</u>	-
<b>CASH FLOW AVAILABLE FOR DEBT REPAYMENT</b>	<b>22,352</b>	<b>14,457</b>	<b>6,774</b>	<b>15,949</b>	<b>8,522</b>
Principal repayments:					
Komerčni Banka	-	7,000	10,000	5,000	-
Ministry of Economic Policy	5,000	-	-	-	-
CSAEF	<u>12,000</u>	<u>3,000</u>	-	-	-
<b>Total principal repayments</b>	<b>17,000</b>	<b>10,000</b>	<b>10,000</b>	<b>5,000</b>	<b>-</b>
<b>NET FREE CASH FLOW AFTER DEBT REPAYMENTS</b>	<b>Kcs <u>5,352</u></b>	<b>Kcs <u>4,457</u></b>	<b>Kcs <u>(3,225)</u></b>	<b>Kcs <u>10,949</u></b>	<b>Kcs <u>8,522</u></b>

The principal assumptions underlying cash flow have been discussed earlier. The net investment in leased property represents amounts expended on purchasing new equipment for lease to Chrastava, net of principal repayments received from Chrastava on existing leases. However, the major area of interest for the CSAEF relates to their proposed loan. The projections assume that all Kcs 15 million is received in 1992, with repayment in 1994 and 1995 of Kcs 3 million and Kcs 12 million respectively. Management has assumed that the CSAEF loans are repaid prior to any amounts from the Ministry of Economic Policy.

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## **IX. LEGAL MATTERS**

### **Contracts**

We have obtained local legal advice from Bubnik & Myslil of Prague on various relevant legal documents. These include the Founding Agreement and Statutes of the joint stock company, Sliver, the Sub-license Agreement between Investa and Sliver and the Lease Agreement and Co-operation Agreement between Sliver and Chrastava. There were no matters of legal principal raised in connection with the above contracts and agreements, however, the following comments were raised:

- Founding Agreement and Statutes - these documents are based on general texts and we are not aware of any unusual or exceptional provisions. The majority of the provisions of the Statutes are taken from the Joint Stock Companies Act. The board of directors is the statutory body of the company to which management is sub-ordinated. We understand that the new Commercial Code, applicable from January 1, 1992, will reinforce the authority of the board of directors.
- Sub-license Agreement - the various provisions are discussed principally in Section III of this report. However, although the contract has been concluded for an unspecified period of time, there are certain termination provisions as follows:
  - by mutual agreement;
  - by notice given by Investa where Sliver is in arrears with payments for more than thirty days or if it fails to observe its other obligations. The term of notice is three months in this latter case;

- by notice given by Investa in the case where II cancels its license agreement;
- by twelve months notice given by either party.

Lease Agreement - we have seen a draft of this agreement. The draft contract appears to have slightly different terms than indicated by management. Sliver management informed us that the intent of the contract reflected their views and that amendments will be made to that effect in the final document. In addition there are certain errors in the contract, including provision for an insurance charge of 21% of original cost, rather than the intended 0.21%. Overall, the contract appears burdensome to the lessee. As an example there are no provisions for termination by the lessee. However, this may reflect the weak bargaining position of Chrastava.

Sliver has indicated that the risk of producing Sliver Machines at Chrastava is reduced by their ability to remove the capital equipment and relocate it with another manufacturer. Not only does this appear physically impractical but there is no provision for termination of the equipment lease contract due to unsatisfactory performance. The only provisions for lease termination by the lessor are:

- payment arrears in excess of ninety days; and
- improper use of equipment resulting in premature wear.

Co-operation Agreement - As in the case of the lease, this agreement appears to favor Sliver. Sliver may terminate this agreement or contract for parallel production at an alternative facility by giving Chrastava

six and three months notice respectively. In the case of termination of the license contract between Investa and II dated May 25, 1990, no notice is required. The agreement does not include provision for termination by Chrastava.

### Restitution

We are not aware of any restitution issues with regard to Chrastava. We were informed that due to nationalization of industries and property in the period from 1945 to 1948, little property was seized subsequent to 1948. However, Sliver and CSAEF management should ensure that this is true prior to deciding on any course of action in relation to Chrastava or Tanvald.

## VALUATION

### Overview

#### Definition of Value

We define fair market value as the price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or sell and both having reasonable knowledge of relevant facts concerning the property.

The scope of our valuation included, but was not limited to, consideration of:

- A. The nature of the business, including its history since organization;
- B. The economic outlook in general and of the specific industry at the date of valuation;
- C. Non-operating asset values;
- D. Earning capacity;
- E. Dividends and dividend-paying capacity;
- F. The existence or lack of intangible value;
- G. The market price of comparable securities relative to their earnings, dividends and asset values.

## Economic and Industry Outlook

In order to evaluate the prospects of a business enterprise, it is important to have a general understanding of the economic environment in which the business functions. Consequently, we have reviewed various publications concerning the general economic conditions of Eastern Europe, Czechoslovakia and of the textile equipment producing industry in particular. The analysis presented is not intended to be comprehensive in scope, but to provide sufficient background information in order to make general observations about how the economic outlook could affect the Company.

## General Economic Conditions

### Political and Economic Development

Czechoslovakia emerged as a sovereign state following the collapse of the Austro-Hungarian empire at the end of World War I. The country was known as a progressive liberal democracy prior to the German invasion in 1939.

The end of World War II saw the restoration of the democratic Czechoslovakia state, after its liberation from the Nazi's by the Soviet Red Army. Popular gratitude to the Soviet Union and the increasing support for socialist ideas brought the Communist Party to power in 1946. While the Communists initially sought a democratic state balanced between East and West, the progression of the Cold War finally caused the party to crush dissent. As a result, the "Stalinization" of the country's economic and political system took place. Programs for the nationalization of industry, introduction of centralized planning, collectivization of agriculture and elimination of political opposition were introduced.

### Economic Performance

Following a period of liberalization during 1968, known as the "Prague Spring", central planning resumed with partial success. Economic growth averaged 5% annually, but this growth meant an increasing dependence on the Soviet Union and a decline in trade and competitiveness with the West. However, this growth concealed a slow but persistent decline in the competitiveness of Czechoslovakian manufactured exports. This was evident not only in Czechoslovakia's declining shares of Western markets, but also in Soviet import figures. The economy's structural weaknesses were ultimately manifested by falling growth rates during the end of the 1970's.

This was followed by a sharp recession in 1981-1982 precipitated partly by the Soviet Union's decision to cut oil supplies and a simultaneous decline in East-West relations. After an austerity and debt reduction program, the economy recovered briefly during the early to mid 1980's with NMP (Net Material Product, also referred to as National Income) rising 2.3 to 3.5% annually.

The results of NMP<sup>1</sup> growth (a socialist measure of economic output) showed a 2.3% growth in 1988 and a 1.9% growth in 1989. These figures are well below the 3.5% planned growth. Despite the lower performance, it is likely that even these lower figures are overstated. More realistic estimates of NMP growth indicate that most of the growth of the 1980's may have been an illusion. This results from the accounting practices which conceal inflation and

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1. NMP is the value added output of goods and services relating to physical production, transport and distribution. Health, education, public administration, defense, banking, hotels (although restaurants are included), and various personal services are all excluded. Hence, NMP is smaller than Western measures of GNP and GDP.

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the existence of incentives within the system to inflate figures to capture bonus payments. Czechoslovakia will convert to a Western system of national accounting in the near future.

### Economic Reform

The November 1989 revolution in Czechoslovakia achieved several important reforms to bring the country closer to a market economy. A number of laws and regulations have been amended, including those regulations covering economic relations with foreign countries. As a result of these reforms and movements to a market economy, outside investors have been attracted to the investment opportunities within Czechoslovakia. To date, there have been approximately 2,900 joint ventures registered in Czechoslovakia. The concentration of the joint ventures are with Germany (861), Austria (821), Switzerland (197) Italy (134) and the United States (132).

Czech economists acknowledged that problems in the economy were a result of the socialist economic system. Criticism centered on three major areas. First, there was a reliance on heavy and extractive mining industries. While the West was shifting towards lighter and more technologically advanced products, Czechoslovakia was left with a product range that directly competed with the low-wage, newly industrialized and developing countries. Second, due to the Eastern Bloc's emphasis on self-sufficiency and isolation from the West, the economy produced products for which it often lacked any competitive advantages. Third, the absence of a free market has led to inefficient allocation and utilization of scarce resources throughout the economy.

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The government has made economic reform a top priority, with the stated objective of creating a free market economy. The primary force behind the process is the Finance Minister, Vaclav Klaus. The programs goals are to:

- eliminate excess demand by permitting consumer prices to float freely;
- eliminate government subsidies for industries and consumers;
- pursue a restrictive monetary and fiscal policy to contain inflation;
- distribute shares of state owned enterprises to the population through various privatization programs.

#### Current Economic Situation

The Czechoslovakian economy has been effected by a number of internal and external influences. The main internal factors are: price and trade liberalization, convertibility of the currency, a tight monetary policy advocated by the Finance Minister and cuts in the subsidies to enterprises. The principal external influences are: dissolution of the Comecon trading system, disruption of energy supplies from the Soviet Union, decline in trade with the former East Germany following German reunification, and the increase in world prices arising from the Gulf crisis.

In 1990, the Net Material Product fell by 3.5% while industrial output dropped 3.7%, mainly because of the disruption in Soviet Union energy supplies and its impact on the chemical industry. Forecasts for 1991 are even gloomier with a decrease in NMP of between 5 and 10%. Recovery is not expected before 1993. The decline in industrial production along with the expected

bankruptcy of many companies will provoke an upsurge in the unemployment rate which currently stands at 3.8%. Official forecasts for the end of 1991 put unemployment at 5-8% though current pressures on the government to give companies in difficulty more time could postpone part of this increase to next year.<sup>2</sup>

Up until this year, a system of price controls had kept Czechoslovakia relatively immune from high inflation rates. The price liberalization measures introduced on January 1, 1991 and the accompanying reduction in subsidies to enterprises brought an abrupt end to this situation: in the first half of 1991 prices went up almost 50%.

The Gross Domestic Product (GDP) for 1990 is US\$44.5 billion (bn) and fell to US\$39.1 bn in 1991. Forecasts for 1992 anticipate an increase of 33.5% to US\$52.2 bn.

Inflation for 1990 was approximately 10%, increasing to 60% in 1991. Unemployment during 1990 was approximately 1%, while estimates for 1991 and 1992 are 7 and 11% respectively.

The standard of living however is quite high compared with other Eastern European countries. Czechoslovakia has a low level of hard currency debt. Foreign trade is increasingly shifting from the Soviet Union to the West.

Czechoslovakia boasts a highly educated and skilled domestic labor force. Although the hourly wage is under US\$2, the overall standard of living compares well to that of its neighbors.

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2. Information in this section is primarily based on data from the following sources: Czechoslovakia - "Europe 1992" Industry Report, by Coopers & Lybrand Europe; Czechoslovakia - Country Profile, by Business International, 1990-1991.

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Although the government is taking steps to minimize negative effects on the economy and the labor force as the movement towards a free market economy accelerates, unemployment is expected to rise.

### Industry Outlook

The textile industry has entered its third difficult year and profits are expected to show the softness in the market. Industry forecasts believe the end of the downturn is approaching and that the International Textile Machinery Exhibition this autumn will mark a turning point.

Order intakes have fallen primarily as a result of the Gulf War and the following recession. It is predicted that it will be the second half of 1992 before orders return to previous levels.

The extensive automation of production processes, particularly in spinning machinery, will improve the competitive chances of manufacturers in industrialized nations.

### Analysis of Valuation Approaches

The approaches that are used to value closely held companies are:

- Income Approach
- Cost Approach
- Market Approach

#### Income Approach

The income approach simulates the reasoning of an investor viewing some relevant measure of income, such as cash flow, resulting from the anticipated operations of a business enterprises through its lifetime. This approach provides an estimate of value considering the return on and of the invested capital in the subject company.

Specifically, the income approach estimates value by determining the present value of the subject company's future net or "free" cash flow available for distribution to shareholders.

#### Market Approach

A market approach leads to an estimate of value based on what other purchasers and sellers in the market have paid for business enterprises comparable to those being appraised. This approach is based on the principle of substitution. This principle states that the limit of prices, rents, and rates tends to be set by prevailing prices, rents, and rates for equally desirable substitutes.

Specifically, the market approach estimates value by comparing the subject company to publicly traded market comparable companies. This approach is often applied by use of market ratios (e.g., price-to-earnings) of similar publicly traded companies.

#### Cost Approach

The cost approach is based on the theory that a prudent investor would pay no more for an asset than its depreciated reproduction (or replacement) cost. The cost to replace the asset would include the cost of constructing a similar asset of like utility at prices applicable at the time of the appraisal in the area when the asset is located. To arrive at an estimate of the fair market value using the cost approach, the replacement cost new must be reduced for depreciation of the property. In this context, depreciation has three potential components: physical deterioration, functional obsolescence, and economic obsolescence.

Physical deterioration is the impairment to the conditions of the asset brought about by wear and tear, disintegration and use in service. Functional obsolescence is the impairment in the

efficiency on the asset brought about by such factors as overcapacity, inadequacy, or changes in technology that affect the property. Economic obsolescence is the impairment of the desirability of the asset arising from external economic forces, such as government exercise of eminent domain powers, other adverse legislative enactments, or changes in supply/demand relationships due to changes in the external environment.

We have evaluated each approach to determine the appropriate methodology to utilize in assessing the value of Sliver and Sliver-Chrastava. In the following discussions, we summarize the methodologies we have considered and explain the justification for either accepting or rejecting its use in our valuation.

#### Financial and Proforma Financial Statements - Sliver

In order to apply the valuation approaches described above, the financial statements of Sliver were adjusted to conform with United States generally accepted accounting principles.

The financial projections provided by management were analyzed to determine the reasonableness of the underlying assumptions and accuracy of the numbers presented in the projections.

We have relied on the prospective financial statements for the fiscal years ending December 31, 1991-1995. We note that the prospective statements assume that significant amounts of capital are available for acquisition expenditures and capital asset acquisitions and that revenue increases at a very rapid pace.

#### Analysis of Company Financial Information - Sliver

Sliver's income statement for the periods ending December 31, for 1991 through 1995 are shown in Section VIII of this report. The

income statements show increasing sales at a 55.3% CAGR. Yearly percentage increases in sales and net income are shown in the table below.

<u>Year</u>	<u>Sales (in millions)</u>	<u>Percentage Increase</u>	<u>Net Income (in millions)</u>	<u>Percentage Increase</u>
1991	Kcs 0	-%	Kcs (0.4)	-%
1992	102.5	-	3.4	-
1993	205.1	100	8.3	144
1994	307.6	50	15.0	81
1995	384.5	25	21.6	44

Adjustments to Financial Statements - Sliver

Prior to the application of the valuation approaches described above, the Company's financial projections were analyzed for any necessary pro forma adjustments. Our analysis indicated minor changes to account for adjustments to required working capital, cash flow disbursements for product development and repayment of interest and debt obligations.

Financial and Proforma Financial Statements - Tanvald

The financial projections provided by management were analyzed to determine the reasonableness of the underlying assumptions and accuracy of the numbers presented in the projections.

We have relied on the financial statements for the fiscal years ending December 31, 1991-1993 provided by Chrastava and were not reviewed by us. As discussed in Section V of this report our procedures were limited. However, they provide a basis for a valuation which is probably a worst case scenario.

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Adjustments to Financial Statements - Tanvald

Prior to the application of the valuation approaches described above, Tanvald's financial projections were analyzed for any necessary adjustments. Chrastava management indicated that the rent expenses should reflect lease payments to Sliver for the equipment leased to the Chrastava Tanvald plant. Tanvald had only included lease payments of Kcs 700,000 in the years 1991, 1992 and 1993. Actual lease payments, including interest and principal, are 190,000, 5,504,000, and 9,194,000 for 1991, 1992, and 1993 respectively. Our adjustment reflects the financing cost and the principal repayments.

Analysis of Company Financial Information - Chrastava (Tanvald)

Tanvald's projected income statements, for the twelve month periods ending December 31, for 1991 through 1993, and actual income statement for the nine months ended September 30, 1991, show increasing sales at a 65.1% CAGR. Despite increases in sales, Tanvald's operations do not show a profit in the 1991-1993 period. Yearly percentage increases in sales and adjusted net income are shown in the table below.

<u>Year</u>	<u>Sales (in millions)</u>	<u>Percentage Increase</u>	<u>Net Income (in millions)</u>
1991	Kcs 56.9	-%	Kcs (1.5)
1992	92.1	61.8	(16.4)
1993	155.1	59.4	(8.4)

Application of the Income Approach

For valuation purposes, we assume that Sliver and Tanvald will continue their operations as a going concern. Accordingly, an appropriate indicator of value is based on the future cash flows and profits of each operation. Therefore, we consider the income approach to be the appropriate methodology for valuing Sliver and Tanvald.

Discounted Cash Flow - Sliver

The income approach estimates value by determining the present value of the subject company's future net cash flows. These cash flows were estimated by the use of a discounted cash flow ("DCF") model. The DCF model utilized a four-step methodology. First, future estimates were made of the revenues and earnings of the business. These future estimates are based on the 1991-1995 forecast prepared by Sliver management.

Second, estimated net free cash flows was determined based on management's projections. Net free cash flow indicates the amount of funds available for distribution to shareholders of the business and is calculated in the following manner:-

Net income	(after interest, taxes, equity reserve contributions)
plus:-	Depreciation and amortization
-	Equity reserve payments (a non-cash expense)
-	Indicated changes in working capital
-	Equity contributions
-	Loan proceeds
less:-	Capital expenditures
-	Start-up costs
-	Software development costs
-	Principal repayments of loans

Third, the future net-free cash flows were discounted to present value at a discount rate determined by the risk-adjusted cost of equity (RACE). The RACE analysis is presented in Exhibit A. This RACE rate was developed by selecting current market rates for investments that are reflective of the risks associated with an investment in both Czechoslovakia and the textile industry.

Fourth, to estimate income generated beyond 1995 and into the future, a residual value is calculated. The residual value was calculated by application of the Gordon Growth Model. This

method is used as a proxy to estimate income indefinitely as an annuity-in-perpetuity. By capitalizing 1995 net free cash flow, (using the RACE, less long-term growth rate for a capitalization rate), the residual value was estimated. This amount was discounted and then added to the discounted amounts for the interim years.

#### Analysis of the Income Approach - Sliver

We have performed a sensitivity analysis with the DCF model. Assuming that the projections reflect a reasonably accurate forecast of income and expense items, the most important variables in the DCF model are the discount rate applied to the net free cash flows and the growth rate in the residual value calculations.

Based upon a range of reasonable assumptions, discount rates may range from 45% to 55% (see Exhibit 2). The income approach yields a range of values from approximately Kcs 16.7 million to Kcs 18.5 million for the Sliver operation. (Exhibit 3)

#### Analysis of the Income Approach - Tanvald

The sum of the present values of the cash flows and the residual value were both negative. It should be noted that the Tanvald projections are for three years, while the Sliver projections are for five years. Based on the Tanvald projections, it is not possible to determine if Tanvald management believes positive cash flows might be generated for Tanvald in the later years, 1994 and 1995. While positive cash flows in these years would have a favorable effect, the discounting of the cash flows in later years would significantly diminish the impact of the positive cash flows on the results. Based on the projections, the current cost structure and the adjustments for the lease payments to Sliver, it does not appear that the Tanvald operation will be a profitable enterprise in its current form. As discussed in Sections V and VI there are a number of benefits to be gained from Tanvald being privatized independently of Chrastava.

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Discounted Cash Flow - Tanvald (Alone)

The financial projections for Tanvald (Alone) were based on the financial projections of Tanvald for the years 1991-1993. These projections were provided by Chrastava management and adjusted to reflect the post-tax savings provided by the Kcs 160,000 per Sliver Machine of additional income currently allocated to Chrastava to cover corporate overhead which would be available to Tanvald if it was to be privatized separately. The cash flows were adjusted for the lease payments as discussed earlier. Net free cash flow is calculated in the following manner:

Net income	(after lease payment adjustments)
plus:-	Overhead savings of 160,000 per machine
less:-	Income taxes
plus:-	Depreciation

Analysis of the Income Approach - Tanvald Alone

We have performed a sensitivity analysis with the DCF model. Assuming that the projections reflect a reasonably accurate forecast of income and expense items, the most important variables in the DCF model are the discount rate applied to the net free cash flows and the growth rate in the residual value calculations.

Based upon a range of reasonable assumptions, discount rates may range from 45% to 55% (see Exhibit 2). The income approach yields a range of values from approximately Kcs 5.7 million to Kcs 7.9 million (Exhibit 3).

Application of the Market Approach

There are certain restrictions and limitations which are noted in considering the application of the market approach. First, the financial information for Sliver is prospective rather than

historical in nature. Application of multiples, based on the historic performance of other companies, to the projected performance of a company with no operating history or established cost structure is highly speculative. Second, Czechoslovakia does not have a functioning stock exchange and therefore direct comparisons are not feasible. Estimating the appropriate multiple for a start-up operation in a non-existent market introduces a great deal of uncertainty. Third, Sliver is a start-up operation. Multiples of other companies in the textile business reflect established, mature operations. Accordingly, multiples for established textile equipment manufacturers may not be relevant. Consequently, we consider it inappropriate to use the market approach for valuation purposes.

#### Application of the Cost Approach

As stated earlier, the premise of valuation in this report is based on the assumption that the companies involved are considered going concerns. This means that the value of the company lies in the cash flows or profits it can generate by the utilization of its assets, rather than the market value or replacement value of the assets themselves. Consequently, the cost approach is not a satisfactory method of valuing Sliver or Tanvald.

However, although the Tanvald plant, as part of Chrastava, has a negative value it has stand alone value as an existing manufacturing facility. This value represents the net assets of the plant including the property and the skills of the workforce. The cost approach can be used to give an indication of this value.

As discussed in Section V, the information regarding Tanvald is limited. Due to this limited information, we cannot provide a reasonable estimate of asset value, however, matters to be considered are discussed below.

As discussed in Section V the principal components of net assets are property, plant and equipment and inventory and can be summarized as follows:

	(In thousands) <u>September 30, 1991</u>
Land and buildings	Kcs 18,600
Plant and equipment	<u>35,300</u>
	53,900
Accumulated depreciation	<u>(37,100)</u>
Net book value	Kcs <u>16,800</u>
Inventory:	
Raw material	Kcs 12,900
Work in progress	8,400
Finished goods	<u>300</u>
	Kcs <u>21,600</u>

#### Land and Buildings

This represents the factory site and the buildings comprising the Tanvald facility. The building is a brick structure of approximately 200,000 square feet. The building appears to be in reasonable shape and structurally sound by appearance and limited walk-through observations. While the building is old, it appears to be adequate for its existing purposes. On a book value basis, the building has a value of Kcs 6.9 million.

The determination of the fair market value of the land and building will be best assessed by a real estate appraiser in Czechoslovakia who should be familiar with the local markets and available comparable sites.

#### Plant and Equipment

This category contains a range of old and new equipment. Due to the general nature of the equipment, many of the items are very old, but still productive. In order to determine an accurate value of the equipment, it would be necessary to examine the individual machines and maintenance records in great detail. A piece of equipment, when upgraded periodically and serviced

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regularly can be as productive as new equipment. In addition, based on a general depreciation policy of 7-10% per year the net book value may reflect a reasonable estimate of value.

#### Raw Material and Inventory

This includes a lot of steel stock of various sizes and diameters. Tanvald was required to purchase this stock under the old socialist market system, even though it had no need of it for production purposes.

To determine the fair market value of this inventory, the inventory has to be categorized into the types of stock available, quality and whether it can be used in the production process. If there is no need for it in the production process, or if the quality is substandard, the inventory should be disposed of for scrap value.

#### Work-in-Progress

The work-in-progress may be of some value, but that will depend on the nature of finished product and the ultimate buyer. Since 80% of Tanvald's sales were to the Soviet Union, it may be a reasonable assumption that the work-in-progress was also to end up as finished goods to be sold to the Soviet Union, and is therefore worth very little unless other buyers for those same end products can be found.

#### Finished Goods

Depending on the nature of these finished goods, they may have some value. If they were to be sold to the Soviet Union, their value may be limited unless other interested buyers can be found.

The value of plant and equipment and inventory will probably be at a discount to book value and thus is the basis which should be used for valuation purposes.

PROJECTED CAPITAL EXPENDITURES - 1991 and 1992

(In Thousands)

1991

Brake press	Kcs	800
Welding unit		50
Turret lathe		800
Forklift truck - 2		950
Grinder		650
Micrometer		50
Grinder		343
Surfacing lathe		1,000
Balancing machine		<u>400</u>
		5,043
Unidentified expenditure dependent on CSAEF loan		<u>4,457</u>
Total 1991 expenditure	Kcs	<u>9,500</u>

1992

Milling machine	Kcs	780
Measuring devices		477
Turret lathe		1,500
Measuring devices		600
Turret lathe		2,500
Balancing machine		2,100
Surfacing lathe		<u>9,000</u>
1992 identified expenditure	Kcs	16,957
Testing room - funded by CSAEF		<u>10,543</u>
Total 1992 expenditure	Kcs	<u>27,500</u>

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Risk Adjusted Cost of Equity - (RACE)

In selecting a discount rate, we have used utilized an equity rate which is based on comparable risk investments. A return on equity rate is calculated such that it provides a rate of return on equity sufficient to attract required capital, adjusted for the risks involved with the particular investment.

As discussed in the report, the operations of Sliver and Tanvald incorporate numerous areas of concern and risk. While Tanvald is an established manufacturing facility, there are significant risks involved with the 'start-up' and production of the Sliver Machine. Earlier discussions indicated Tanvald's potential problems in meeting production quotas, inefficient management and worker productivity, space limitations, lead time constraints on key production equipment orders, slow build-up of capacity, various problems relating to the age and condition of the plant, learning curve requirements, and a lack of systems development programs.

From an investor's perspective, the situation could be categorized as a second stage company, having some measure of potential market penetration, profitable or marginally profitable operations and a healthy appetite for cash to fund inventory purchase, receivable, and capital investment.

Based upon a detailed study of venture capitalist requirements for various classes of investments, this situation would require a rate of return of 35 to 50%.<sup>1</sup> Since the projections used in the analysis are on an inflation-free base, we have eliminated the long-term rate of inflation of approximately 5%.

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1. Based on data contained in the OED Report on Venture Capital Financial Analysis, Pg 1-12 to 1-18.

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While there are significant factors to overcome, there are some positive aspects as well, based on the experience of management and talents of the workforce.

Additional risk is also embodied in the international nature of the business operations. Political upheaval, currency exchange rate fluctuation, high inflation and interest rates and increasing unemployment add uncertainty to the investment picture. Competition from other textile manufacturers may also exist if production falls significantly behind demand.

To compensate for this risk, we add another 15 percentage points to the required return on equity.

To sum:

	<u>Range</u>	
	<u>Low</u>	<u>High</u>
Venture Capital Risk Adjusted Rates of Return	35	50
Less Long Term Inflation Rate	-5	-5
International Risk	<u>15</u>	<u>15</u>
Total range	45	60

Based on the risks and opportunities of the Sliver Machine, a discount rate in the range of 45% to 55% is considered to adequately reflect the appropriate discount rates for our analysis. The average rate of 50% is presented in our models, and the range of 45% to 55% is used to develop the range of values for a particular company.

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Summary of Valuations

Based on our analysis, the assumptions and the methodology described in this report, this table presents the ranges of values indicated for the following business entities.

<u>Business Entity</u>	(In millions)	
	<u>Low</u>	<u>High</u>
1. Sliver Machine a.s.	Kcs 16.7	Kcs 18.5
2. Tanvald (as part of Chrastava)	(9.7)	(7.6)
3. Tanvald (Alone)	5.7	7.9
4. Sliver Machine and Tanvald Alone:		
Sliver Machine a.s.	16.7	18.5
Tanvald (Alone)	<u>5.7</u>	<u>7.9</u>
Total Value	Kcs <u>22.4</u>	Kcs <u>26.4</u>

From a valuation standpoint, it is indicated that the Tanvald (Alone) business entity is a more favorable alternative to Tanvald continuing its operations under the Chrastava organizational unit, based on the information and discussions presented to us by the managements of Sliver and Chrastava.

Taking as given contracts between Sliver and Tanvald in full force and effect in perpetuity, there is no analytical basis for assuming that any inherent synergies exist between Sliver and Tanvald (Alone); Tanvald (Alone) could practically achieve any cost reductions which might be possible without combining with Sliver. Assuming that the potential drains on Sliver management discussed in the report are not excessive, the value of the combined operations of Sliver and Tanvald (Alone) may be fairly

represented by simple addition of the values of each entity, as shown in item number four above. It should be noted that the main contract risk noted in Section VII above is not accounted for in our valuation analysis, and that this results analytically in the additive combined value.

Limiting Conditions

This valuation is based on prospective financial information which has been provided by management. The prospective information has not been subjected to any auditing or verification procedures and we express no opinion of any kind on it. Management has advised us that they consider the data used to be both reasonable and accurate, and that no information known to them conflicts with the data or its resulting use of such data in this valuation. However, it should be noted that Sliver management considers the Tanvald projections to be overly pessimistic. Further, because events and circumstances frequently do not occur as expected, there will usually be differences between prospective financial information and actual results, and these differences may be material. Accordingly, to the extent that any of the aforementioned information requires adjustment, the resulting fair market value may be different.

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## SLIVER MACHINES a.s.

	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>
DISCOUNTED CASH FLOW:					
Net Free Cash Flow	8,522	10,949	(3,225)	4,457	5,352
Less: Equity Capital - Cash in Hand	(15,000)				
Net Free Cash Flow for Valuation	(6,478)	10,949	(3,225)	4,457	5,352
Present Value Factor	<u>0.9036</u>	<u>0.5443</u>	<u>0.3629</u>	<u>0.2419</u>	<u>0.1613</u>
Present Value of Net Free Cash Flow	(5,854)	5,960	(1,170)	1,078	763
Sum of Present Values (Year 1-5)	877				
Residual Value	12,488				
Present Value Factor	0.1317				
Discounted Residual Value	1,645				
Plus: Equity Capital Cash in Hand	15,000				
CONCLUSION:					
ENTERPRISE VALUE = (000's Kcs.)	17,522				

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ASSUMPTIONS FOR CASH FLOW MODEL

Discount rate 50.0%  
Terminal 5.0%

Sensitivity 45.0% 18,505  
50.0% 17,522  
55.0% 16,752

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## CHRSTAVA TANVALD

	<u>1991</u>	<u>1992</u>	<u>1993</u>
<b>DISCOUNTED CASH FLOW:</b>			
Net Income	(1,590)	(16,404)	(8,494)
Adjustments - Depreciation	4,190	4,500	4,300
Net Free Cash Flow for Valuation	2,600	(11,904)	(4,194)
Present Value Factor	<u>0.9036</u>	<u>0.5443</u>	<u>0.3629</u>
Present Value of Net Free Cash Flow	2,349	(6,480)	(1,522)
Sum of Present Values (Year 1-3)	(5,652)		
Residual Value	(9,786)		
Present Value Factor	0.2963		
Discounted Residual Value	(2,899)		
<b>CONCLUSION:</b>			
ENTERPRISE VALUE = (000's Kcs.)	(8,552)	-----	

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ASSUMPTIONS FOR CASH FLOW MODEL

Discount	50.0%	
Terminal	5.0%	
Sensitivity	45.0%	(9,716)
	50.0%	(8,552)
	55.0%	(7,606)

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## TANVALD ALONE

	<u>1991</u>	<u>1992</u>	<u>1993</u>
<b>DISCOUNTED CASH FLOW:</b>			
Net Income	(1,590)	(16,404)	(8,494)
Adjustments:			
Elimination of Chrastava Overheads		6,400	12,800
Taxes on Adjusted Net Income			(1,682)
Depreciation	4,190	4,500	4,300
Net Free Cash Flow for Valuation	2,600	(5,504)	6,924
Present Value Factor	<u>0.9036</u>	<u>0.5443</u>	<u>0.3629</u>
Present Value of Net Free Cash Flow	2,349	(2,996)	2,513
Sum of Present Values (Year 1-3)	1,866		
Residual Value	16,156		
Present Value Factor	0.2963		
Discounted Residual Value	4,787		
<b>CONCLUSION:</b>			
ENTERPRISE VALUE = (000's Kcs.)	6,653 -----		

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ASSUMPTIONS FOR CASH FLOW MODEL

Discount	50.0%	
Terminal	5.0%	
Sensitivity	45.0%	7,914
	50.0%	6,653
	55.0%	5,697

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