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PADCO

PLANNING AND DEVELOPMENT COLLABORATIVE INTERNATIONAL, INC.

FINAL REPORT

HUNGARY

HOUSING CONSTRUCTION SUBSECTOR ASSESSMENT

April 1992

PROVIDES GOVERNMENTS AND PRIVATE CLIENTS IN DEVELOPING COUNTRIES WITH SERVICES IN PLANNING, MANAGEMENT, FINANCE, ECONOMICS AND TRAINING FOR URBAN, RURAL AND REGIONAL DEVELOPMENT

HUNGARY

HOUSING CONSTRUCTION SUBSECTOR ASSESSMENT

Prepared for

Ministry of Industry and Trade

U.S. Agency for International Development
Office of Housing and Urban Programs

Prepared by

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GLOSSARY

EC	European Community
ÉVOSZ	Association of Building Entrepreneurs
FESZ	Fertôd Épitoipari Szovetkezet
HÅÉV	Hajdú Megyei Ållami Épitoipari Vállalat
HFT	Hungarian Forint
KFT	Joint stock company
LMS-TERV	Concrete Panel System
MIT	Ministry of Industry and Trade
OKISZ	Association of Small Private Contractors
OTP	National Savings Bank
PCC	Private Construction Company
RT	Corporation
SOE	State-Owned Enterprise
SOFA	Soproni Faipari Vállalat
SPA	State Property Agency
Vaskut	Housing cooperative
ZÅÉV	Zala Megyei Ållami Épitoipari Vállalat

1 INTRODUCTION AND SUMMARY OF FINDINGS AND RECOMMENDATIONS

1.1 Introduction

1.1.1 Project Description

The Hungarian Housing Construction Subsector Assessment was undertaken at the request of the Ministry of Industry and Trade (MIT) and financed by the United States Agency for International Development, Office of Housing and Urban Programs (USAID). A consultant team from PADCO[1], composed of four American and two Hungarian experts (see **Appendix A.1**), began the work in October 1991 and completed the final report in April 1992.

The objective of the Assessment was to identify sources of inefficiencies in the housing construction subsector and to assess their extent and relative importance. An appropriate set of policy recommendations and a program for further technical assistance was to be prepared. The Assessment was to provide a clear statement of priorities and form the basis of an action plan for reforming the subsector through restructuring and privatizing State-Owned Enterprises (SOEs) and promoting the private sector.

1.1.2 Sponsor and Participants

The Assessment was sponsored by the MIT Department of Building under the direction of Mr. György Karikås. A counterpart team from the Ministry (see **Appendix A.2**) was designated to work with the consultants. The PADCO team consisted of privatization specialists, construction industry specialists, building material specialists, financial analysts and housing industry specialists.

The consultants interviewed over one hundred individuals in over forty companies or agencies (see **Appendix A**) in their efforts to gather data, to fully understand the internal and external factors effecting the housing construction industry and to test and refine the findings and recommendations. The participants included public, private and cooperative construction companies; public, private and cooperative building materials and products manufacturers; industry associations; government agencies and financial institutions; private real estate development entities, investors and bankers; and privatization consultants. It is believed that this broad spectrum of participation has provided an in-depth knowledge of the industry and significantly enhanced the value of this Assessment.

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[1]Planning and Development Collaborative International, 1012 N Street, N.W., Washington, D.C. 20001.

1.1.3 Approach and Methodology

The approach to the Assessment evolved during the early part of the work. The task was to look at the supply side of the housing sector rather than the demand side although severe constraints and distortions on the demand side have had dramatic direct and indirect effects on the supply side.[2] The consultants' approach was to first identify all the participants ("actors") in the housing sector: the consumers, developers/investors, contractors, subcontractors, materials/products manufacturers, bankers/financiers and regulators/policy makers. Key issues and problems were delineated for each of the "actors" and an initial effort was made to identify and evaluate the impact of the interdependencies between the "actors". In this way the Assessment was focused on both the internal and external factors that effect the construction subsector.

A strongly interactive methodology consisting of five phases was developed to undertake the Assessment. During Phase I initial background data was assembled and MIT selected the SOEs and one cooperative firm to be interviewed by the consultants. Phase II consisted of the identification of private sector firms to be interviewed, the first round of interviews of all the participants and the development of the Approach described above. Phase III focused on the gathering of additional data from the companies interviewed and the conversion of the data, particularly the financial data, into useful comparative formats. Phase IV involved interviews with additional participants, particularly in the private sector, analysis of the data, verification of findings and the testing of reactions to possible recommendations. Phase V involved the drafting of this report, its review by MIT and USAID and its final publication.

1.2 Summary of Findings and Recommendations

1.2.1 Findings

1.2.1.1 The Housing Sector

The "Actors"

The consultants identified a number of problems and issues effecting each of the respective "actors" in the housing sector during Phase II. The Assessment sought to trace the problems and issues in the construction subsector that have their roots among the other "actors" in the housing sector. The following summarizes the key issues that were considered to have the most significant impact on the construction subsector.

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[2]The supply side refers to the producers of housing and housing materials (e.g., materials manufacturers, subcontractors, contractors and developers), whereas the demand side refers to the consumers of housing (e.g., individual buyers, cooperatives and investors).

Consumers	• Insufficient income (lack of affordability) • Use of sweat equity and black market labor
Developers/Investors	• State, local governments and OTP no longer placing orders • Shortage of private entrepreneurs/investors
Bankers/Financiers	• High risk perception of construction industry • Lack of underwriting knowledge/capability • Lack of mortgage instruments • High prevailing interest rates
Regulators/Policy Makers	• Under regulated industry • Lack of national housing policy

The Interdependence of the "Actors"

The above list of issues is not meant to be exhaustive. They are only the key external factors the consultants believe are having a significant impact on the housing construction subsector. The interdependence of the "actors" and the impacts of these various issues are discussed in Section 3.

1.2.1.2 General Findings for the Industry

Overview

Transformation of the Hungarian Economy. The transformation of the Hungarian economy from a centrally planned to a market oriented system was actually initiated as early as 1968. Then, immediately prior to the establishment of a democratic government, the existing government passed several laws that established the necessary legal environment for the establishment of truly privately owned Hungarian and joint venture companies. Privatization of the SOEs was also begun under the old regime, but the limited form of privatization permitted was a joint venture between the SOE and a foreign investor or company. The law now permits private Hungarian investors to participate in the privatization process. Despite this positive environment, the consultants found little evidence that privatization was being effectively implemented in the construction sector.

Dynamics of Supply and Demand in the Housing Sector. Since World War II and especially during the last decade, the growth of Hungary's housing stock has generally been higher than that of other Eastern European countries and, since the late 1970s, higher than Western European countries as shown in **Exhibit 3.4.** However the production of the SOEs

was addressed at only a portion of the demand for housing. The remainder, ranging from 60 to 80 percent, was met by private, predominantly self-built, housing construction. The dramatic decline in government direct investment in housing has resulted in a drastic cutback in production by the SOEs, while private production has declined slightly due to falling demand.

State of the Hungarian Housing Construction Industry. The housing industry as a whole is in a state of transition and the construction industry is in crisis with many of the SOEs involved in construction threatened with insolvency. All of these SOEs are in various stages of restructuring and privatization. However, many of the plans for restructuring and privatization appear to be merely a realignment of vertically integrated companies into a series of smaller interdependent entities that are in turn dependent on a residual "mother" company. These newly restructured organizations have the legal structure of private companies but are not market oriented and do not appear to be flexible and independent enough to survive in the current climate. The building materials and products SOEs have generally lagged behind the construction SOEs in developing and implementing restructuring and privatization plans. Their current financial condition varies but is deteriorating like most of the construction SOEs.

At the same time there is an emerging, enterprising private sector housing construction and building materials industry that is playing an increasing role in housing production. These private sector firms may not have the internal management problems and historical lack of market orientation of the SOEs, but their growth and survival is threatened by the same external factors.

Given the relatively small size of the domestic market for construction services generally, Hungary's central location in Europe and its upcoming associate membership in the European Community, the Hungarian construction industry will likely be subject to intense competition requiring improvements in management, efficiency and standards of performance if the industry, of which housing is only a part, is to successfully transform itself.

General Findings

This Assessment has arrived at general findings consistent with the overall goal of developing action plans and policies to effect the transformation of the Hungarian construction industry in general and the housing construction subsector in particular. The current and potential future roles of MIT, industry trade associations and other public and private entities are addressed.

International Context. It is apparent that as Hungary heads toward membership in the European Community, there will be no choice but to develop plans for the integration of the industry into a unified Western Europe, including eventual parity in standards of quality, efficiency, performance, safety and environmental impact.

Housing Sector Context. The housing industry is composed of a number of interrelated subsectors or "actors." Remedies for any one subsector, no matter how comprehensive, will not be successful without curing the problems in the other subsectors.

Role of Associations. The trade associations, while generally supportive of their memberships' interests, do not have a national agenda or a political lobbying base to promote the industry and are currently ineffective in championing the causes of the sector. New or revitalized associations may be necessary.

Productivity and Skills of Labor. The consultants found that the productivity of residential construction labor was generally low compared to western labor but that the technical skills and quality of the work was adequate when using traditional construction techniques. However, comparisons between the SOEs and private sector contractors indicated that productivity, evidenced by quicker completion times, was directly proportional to pay scales and attitude. Ownership also contributed an incentive to increased productivity.

Impact of the "Black Market Labor" in "Self-Built" Housing. Data in **Exhibit 3.6** show that approximately 68 percent of all housing construction wages are not recorded, indicating the amount of "black market" labor involved. The prime motivation to utilize "black market" labor is to reduce construction costs where the "self-builder" is unable or unwilling to undertake the work himself. Since privately built/self-built housing, using predominantly the owner's and "black market" labor, represented 67 percent of the housing completions in 1990, a substantial portion of current housing construction activity is undertaken by the informal sector. MIT is interested in finding a way to reduce or eliminate this informal sector activity, thereby providing more potential opportunities for small contractors (formal sector) as well as improving controls on the quality of construction. This area will require further study.

1.2.1.3 Specific Findings

Findings for the Construction SOEs, Materials SOEs and the Private Construction Companies, organized in the following generic categories, are listed here and described in detail in Section 3:

- Strategic Policy
- Organizational/Managerial
- Technical/Operational
- Market/Marketing
- Economic/Financial
- Legislative/Legal

Assessment of the Construction SOEs

Strategic Policy.

- Generic Privatization Approach Unsuccessful in the Construction Sector
- Lack of an Overall Industry Restructuring and Privatization Policy
- Over Valuation of Assets
- Lack of Cost Control
- MIT Often Seen as Unsupportive of the SOEs
- Investment Returns Comparatively Unattractive

Organizational/Managerial.

- SOEs Realigned Rather than Restructured
- Need to Create Viable Organizational Units
- Emphasis on Short Term Survival rather than Long Term Viability
- Absence of Market and Profit Orientation
- Delay in Sales of Non-productive Assets
- Relaxation of Financial and Statistical Reporting Requirements
- Lack of Realistic Business Plans
- Lack of Independent Audits

Technical/Operational.

- Low Productivity and Redundant Excess Capacity
- Late Interest in New Technologies
- Inferior Quality of Residential Construction Materials/Products
- Quality of Traditional Construction is Adequate

Market/Marketing.

- Lack of Developers/Investors
- Late Shift to Other Construction Markets
- No Marketing Studies Undertaken
- Untapped Renovation/Rehabilitation Market

Economic/Financial.

- High Collateral Requirements of Restructuring Loans
- Hyper-escalation of Material Costs
- Absence of Suppliers' Credits
- Absence of Insurance for Contingent Liabilities (construction warranties)

Legislative/Legal.

- Absence of Guidelines for Joint Ventures and Licensing Agreements

Assessment of the Materials SOEs

Strategic Policy.

- "Culture" of the Industry is Changing
- Foreign Investors Focus on Production of New Materials
- Lack of an Industry-by-Industry Restructuring Policy
- Delays in Restructuring and Privatization
- Risk of Market Monopolies in some Industries
- Lack of Cost Control
- Materials Subsidiaries of Construction SOEs Not Privatized or Market Oriented

Organizational/Managerial.

- Absence of a Market and Profit Orientation
- Limited Impact of Trade Associations
- Lack of Business Planning

Technical/Operational.

- Surplus and Inflexible Capacity
- Inferior Quality Compared to European Standards
- Outdated Production Facilities

Market/Marketing.

- Entry of Small Custom Manufacturers
- Absence of Market Studies
- Competition from Foreign Manufacturers
- Potential International Market
- Undeveloped Distribution Systems

Economic/Financial.

- Fixed Overheads and Large Payrolls
- Large and Growing Inventories
- Escalation of Material Prices
- High Energy Costs
- Lack of Credits/Finance

Legislative/Legal.

- Lack of Guidelines for Joint Ventures and Production Agreements
- Uncertain Relationship Between MIT and the Companies

Assessment of the Private Construction Companies

Strategic Policy.

- Embattled Profile of Emerging Private Construction Companies (PCCs)
- Lack of Government Support for PCCs
- Lack of Specialty Contractors (Subcontractors)

Organizational/Managerial.

- Small Vertically Integrated Organizational Structure
- PCCs Assuming Developer Roles
- Trade Associations Not Well Regarded
- Labor and Management Skills Adequate

Technical/Operational.

- Use of Technology as a Basis for Business Venture
- PCCs are Relatively More Efficient and Flexible Compared to SOEs
- The Housing Rehabilitation Market Poses Problems

Market/Marketing.

- Lack of Marketing Strategies
- Diversified Markets/Lack of Specialization
- The Adverse Impact of the Self-Built Market

Economic/Financial.

- PCCs Facing Severe Financial Constraints
- Land is Available but Land Costs may Escalate
- High Collateral Requirements for "Construction Loans"
- Lack of Credit History

Legislative/Legal.

- Lack of Dispute Resolution

1.2.2 Recommendations

1.2.2.1 Future of the Housing Construction Industry

Importance of the Other "Actors"

The key "actors" in the housing sector have been identified and the key impacts on the housing construction subsector of those "actors" outside the construction subsector are described in Section 3.1. While it would be inappropriate as well as impossible for this Assessment to address all of these issues, it is nevertheless important to identify where actions outside the subsector would be necessary if actions proposed within the subsector are to be effective. Therefore, the consultants' recommendations include internal (to the subsector) as well as external actions that should be taken.

The Future Housing Sector

The preferred characteristics of a transformed housing sector in Hungary, from the perspective of the construction subsector, were proposed to and agreed with MIT at the end of Phase II:

- A construction industry that is fully self-supporting and market-driven
- A contracting industry competitive with European contractors in terms of quality, price and performance
- A building materials and products industry consistent with European standards
- A mature private real estate development/investment industry
- A banking industry that provides short term and long term credit/financing for each of the "actors" involved in the production and consumption of housing
- A government that limits its regulatory involvement to establishing and enforcing codes and standards for health and safety
- A government that fosters fair and open competition in the market place
- An insurance industry that provides coverage for design, materials, products and construction liabilities

The consultants have endeavored to address the recommendations (see Section 4) toward supporting this image of a transformed housing industry and toward a new "culture" in the construction subsector within a framework of immediate actions, medium and long term policy actions and areas and issues for further study.

1.2.2.2 Specific Recommendations

	Construction SOEs	Materials SOEs	Private Companies
Immediate Actions			
Strategic Policy.			
• Review Privatization Programs and Prepare New Industry-Wide Program	●	●	
• Joint MIT/SPA Strategy for Intervention in Restructuring Process	●	●	
• Establish Guidelines for the Restructuring and Privatization of the Materials/Products SOEs Including Manufacturing Units of the Construction SOEs		●	
• Establish an Office of Building Technology in MIT's Department of Building	●	●	●
• Sponsor a Symposium on Investment Opportunities in the Hungarian Construction Industry	●		●
• Monitor Monopolies in Construction Material/Product Markets		●	
• Establish Program to Study the Implications of European Community Membership		●	
• Reimpose Financial Reporting Requirements and Audits	●		
Organizational/Managerial.			
• Sponsor Training in Business Planning	●	●	●
• Reorganization/Reorientation of MIT to Respond to a Privatized Construction Industry			●
• Sponsor Training in the New Accounting and Financial Reporting Systems	●	●	●
• Audit the Changeover from the Old Accounting System to the New	●	●	
• Quarterly Reporting from all SOEs and their Subsidiaries	●	●	

● Applies directly
O Applies indirectly

	Construction SOEs	Materials SOEs	Private Companies
Technical/Operational.			
• Sponsor a Technical Exchange Program	●	●	●
• Steps to Moderate Construction Cost Escalation	●		●
• Steps to Achieve Construction Cost Savings	●		●
• Introduction of EC EuroNorms	●	●	●
Market/Marketing.			
• Stimulate Housing Rehabilitation			●
• Encourage Early Entry into Non-Residential Markets	●		
• Sponsor Training in Market Analysis and Marketing	●	●	●
• Promote the Introduction of State-of-the-art Technologies by the Materials/ Products Manufacturers	●	●	●
Economic/Financial.			
• Identify the Institution(s) Responsible for Housing Finance	O	O	O
• Resolve Valuation of Contingent Liabilities for Construction Guarantees	O	O	O
Legislative/Legal.			
• Promote the Enactment of a New Housing Act	O	O	O
• Promote the Enactment of an Enforceable Foreclosure Law	O	O	O
• Promote Enforcement of Building Regulations	O	O	O
Future Policy Actions			
Strategic Policy.			

● Applies directly
O Applies indirectly

	Construction SOEs	Materials SOEs	Private Companies
• Identify Investment Incentives to Promote Housing Production and Renovation			●
• Develop "Asian Style" Targeting of Competitive Building Material/ Products Industries for Support/Promotion		●	●
• Identify Investment and Other Incentives to Encourage Foreign Construction Companies to Joint Venture with Hungarian Firms	●		●
• Redefinition of the Role of MIT to Promote Rather than Regulate	O	O	O
• Promotion of the role(s) of Trade Association(s) as a Primary Spokesman and Lobbyist for the Industry	O	O	O
Organizational/Managerial.			
• Provide Technical Assistance in Preparing Business Plans	●	●	●
• Include a Banker on the Boards of Directors of the SOEs	●	●	
Technical/Operational.			
• Develop Incentives to Promote the Introduction of New Technologies	O	O	O
• Develop Policy for the Upgrading of Standards	O	O	O
• Support Training Programs for Skill Training in the Use/Installation of New Materials and Technologies	●		●
Market/Marketing.			
• Support the Growth of a Real Estate Development Industry	O	O	O
• Promote a Focus on Housing Rehabilitation	O	O	O
Economic/Financial.			
• Lobby Government on the Non-availability of Financing/Credit	O	O	O
• Lobby Government for a VAT Tax Holiday for the Housing Industry	O	O	O

● Applies directly
O Applies indirectly

	Construction SOEs	Materials SOEs	Private Companies
Legislative/Legal.			
• Promote Standardized Tendering Procedures	●		●
• Promote the Enactment of New Regulations to Require Arbitration to Solve Disputes	●		●
• Sponsor the Creation of an Insurance Industry that Provides Bonds and Liability Insurance	●		●
Issues for Further Study			
Strategic Policy.			
• Feasibility of Creating an Investment Fund from the Proceeds of Asset Sales of Liquidated Companies	●		
Organizational/Managerial.			
• None recommended			
Technical/Operational.			
• Step-by-step Upgrading of Traditional Construction Technology Using New Methods, Materials, Systems and Products	●	●	●
• Identification of Other Building Materials/Products that Impact Quality and Cost		●	
• A Review of Planning, Zoning and Building Regulations and the Effectiveness of Local Governments' Implementation	O	O	O
Market/Marketing.			
• An International Market Research Program	O	O	O
• Feasibility of Rehabilitating Buildings Constructed of Pre-cast Concrete Panels	●		●

● Applies directly
O Applies indirectly

	Construction SOEs	Materials SOEs	Private Companies
Economic/Financial.			
• Credit Requirements of the Industry	O	O	O
• Impact of the Use of "Black Market" Labor	●		●
• The Impact of Transport and Distribution on the Materials Industry		●	
Legislative/Legal.			
• Development of the Supply Side Aspects of a Social Housing Policy	O	O	O

● Applies directly
O Applies indirectly

2 APPROACH AND METHODOLOGY

2.1 Approach

2.1.1 Initial Objectives

The initial objectives of the Assessment were developed by MIT and USAID and are contained in the Terms of Reference for the work:

> The purpose of this activity is to carry out an assessment of the extent and relative importance of sources of inefficiency in the housing construction subsector that contribute to supply shortfalls in the housing sector.

An appropriate program of policy recommendations and further technical assistance was to be produced for discussion between the MIT and USAID. The Assessment was to provide a clear statement of priorities and form the basis of an action plan for reforming the housing construction subsector through restructuring and privatization of the State-Owned Enterprises (SOEs) and promotion of the private sector.

2.1.2 Revised Objectives

The consultants' initial findings suggested the Hungarian housing construction industry was in a "free fall" with housing production falling from 89,000 units in 1980 to 52,000 in 1989, 43,000 in 1990, and down to 33,000 units in 1991. Present projections for 1992 indicate production in the 25,000–30,000 unit range (see **Exhibit 3.3**).[3] It was clear that deflationary economic policy and major changes in and constraints on the availability of demand side financing were having an increasingly contractive impact on the construction industry as a whole and the housing construction industry in particular. In the building materials industries, supply surpluses have replaced earlier shortfalls and production capacity has been contracting either by design or by default. Hence, after discussions with MIT and mutual agreement that the industry faces a crisis situation, the consultants revised the original objective to better reflect the fundamental and urgent problems that must be addressed:

> The Assessment is to focus on the identification of the key problems and issues effecting the housing construction subsector that need attention if the industry is to survive, improve efficiency and effectively manage the transition to a fully market oriented, private sector dominated industry.

MIT asked the consultants to prepare recommendations consisting of immediate actions, medium and longer term policies and areas or issues for further study.

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[3] Source: MIT, Department of Building; and housing construction forecasts by AB.

2.1.3 Identifying the "Actors"

All subsectors ("actors") of the housing sector were considered by the consultants in formulating their approach to the work. The primary "actors" in the sector were thought to be the following:

- Consumers
- Developers/Investors
- Contractors
- Subcontractors
- Material and Product Manufacturers
- Bankers and Financiers
- Regulators and Policy Makers

The key problems and issues affecting each of the "actors" and the interdependencies between the "actors" were continually assessed during the course of the work allowing the consultants to bring into focus all those indirect as well as direct issues effecting the supply side of the housing sector: the contractors, subcontractors and material/product manufacturers.

This broad approach to the problem involved an extensive number of interviews with companies, agencies and institutions outside the construction industry and a comprehensive investigation of how housing actually gets built by various private sector entities (i.e., cooperatives, contractors, developers, banking institutions). It also provided the opportunity to test hypotheses about the industry and to obtain feedback directly from the industry on the validity of findings and recommendations.

2.1.4 Phased Work Program

The original work program developed for the Assessment included five phases:

- Phase I - Assembly and review of background information
- Phase II - Field work, Data gathering
- Phase III - Field work, Data compilation
- Phase IV - Field work, Data analysis
- Phase V - Data analysis, Report preparation

This work program was not modified significantly and is described in more detail in the following Section 2.2, Methodology.

2.2 Methodology

2.2.1 Phase I: Selection of Companies to be Interviewed

The PADCO consultant team began work in Hungary in early October 1991 (Phase II). Prior to commencing the field work, background information from USAID, the World Bank and MIT was assembled and reviewed. The Team Leader, in Hungary prior to the start of the work, was able to meet with MIT and agree upon the sample of companies to be interviewed and the methodology for carrying out the work. Information requests were prepared and sent to the companies, appointments were made for on-site visits and interviews with senior management arranged. A detailed schedule for Phase II was prepared and a methodology for conducting the interviews and gathering data agreed prior to the commencement of the work.

MIT pre-selected the sample of SOEs involved in construction that the consultants were to interview as well as the SOEs involved in the four building material industries that MIT suggested be assessed. One cooperative firm was also identified that was involved in both construction and materials production. The sample of construction SOEs included companies considered to be above average, average and below average in terms of financial condition. The brick, tile, joinery and insulation materials industries were selected by MIT because of their importance in housing construction and the recent rapid shift from an under supply to an over supply situation in each industry. The cooperative was selected as an example of one of the more successful companies of its type. The non-private companies selected by MIT were the following:

- Borsod Megyei Ållami Épitoipari Vállalat
- Dunabau 43 Altalanos Épito Vállalat
- Zala Megyei Ållami Épitoipari Vállalat
- Békés Megyei Épitoipari Vállalat
- Fertôdi Épitoipari Szovetkezet (Coop)
- Budai Téglaipari Vállalat (Brick)
- Romhányi Épitési Kerámiagyár (Tile)
- Soproni Faipari Vállalat (Joinery)
- Salgótarjáni Uveggyapot RT (Insulation)
- A fifth construction SOE, Hajdú Megyei Ållami Épitoipari Vállalat, a company thought to be in above average financial condition, was added by the consultants.

A sample of private sector companies involved in construction and material production was left for the consultants to identify. An initial sample of private construction firms was identified and both construction and materials products manufacturing companies were added to this sample during the course of the work (see **Appendixes A.8** and **A.9**), bringing the total sample to twelve. Similarly a broad range of other "actors" were interviewed as part of the

methodology of focusing in on all the issues effecting the housing construction subsector (see **Appendixes A.3, A.4, A.5,** and **A.10**).

2.2.2 Phase II: Initial Data Collection

The Phase II work was begun in early October 1991. The U.S. team members joined their Hungarian colleagues in Hungary to undertake an intensive two week initial data gathering process. During this period the consultants undertook the following tasks:

- Meetings with MIT counterpart staff
- Interviews with senior management of the selected SOEs, private contractors and officials from government agencies and financial institutions
- Visits to company headquarters, construction sites and completed buildings
- Inspections of factories and storage facilities
- Tours of retail outlets and a housing/building materials exhibition park
- Research in libraries and other resource centers

Most of the work was conducted in Budapest but the visits to the companies and the interviews with senior management required trips to most regions of the country. Trips were made to Miskolc, Békéscsaba, Zalaegerszeg, Sopron, Fertôd, Salgótarján, Romhány and Kecskemét. A complete schedule of meetings and a list of all persons met by the team are included in **Appendixes A** and **B**.

A vast amount of data was either collected during the visits or promised by the companies. In a few cases companies intentionally withheld information about their operations or privatization plans to retain confidentiality. Private companies declined to disclose any financial information.

The interview process and the gathering of data was aimed at learning about the specific companies as well as the workings of the Hungarian housing industry as a whole in order to permit inclusive assessments of the industry's strengths and weaknesses. The consultants met each evening to discuss the day's events and findings, and to develop strategies and lines of questioning for the subsequent day.

During the latter part of the two week period the consultants assembled some initial findings which were presented and discussed with MIT prior to the team's return to the US.

2.2.3 Phase III: Statistical Data Collection

At the conclusion of Phase II, the consultants developed a list of additional statistical, technical and other data that they saw as being necessary to undertake the analysis in Phase IV. This supplemental data collection was allocated to each consultant with the major responsibilities resting with the Hungarian members of the team.

Generally, US team members were to collect international indices on construction costs, standards, and productivity while the Hungarian team members were to follow up with the companies visited and collect statistical data from MIT and other sources on the entire housing construction subsector.

The Hungarian members of the team also scheduled a number of meetings with industry "actors" during Phase III to gain further insight into a few key areas such as privatization strategies and the emergence of private sector construction companies.

2.2.4 Phase IV: Follow-up Data Collection and Analysis

Phase IV began in the latter part of November, allowing approximately five weeks for the required data to be assembled and for data analysis to begin.

The second visit of the US team members to Hungary consisted of approximately four weeks. The first several days were devoted almost entirely to additional interviews and data collection efforts to fill information gaps or to develop a more in-depth data base. These meetings then tapered off as more and more time was devoted to data analysis, formation of hypotheses, testing/presenting of findings and commencement of report preparation.

2.2.5 Data Analysis and Formulation of Preliminary Findings

Since the consultants were working with only a sample of companies in each category, it was considered necessary to develop preliminary findings during the early stages of Phase IV to provide focus to the final data gathering and analysis stages. Additional companies were included (i.e., HÅÉV, Kunság Fenster and HRÖS-ÉP) to "round out" the data base and to provide further input into this process.

2.2.6 Testing and Presentation of Findings

2.2.6.1 Interviews

The preliminary findings were tested by presenting them to organizations being interviewed during the latter stages of Phase IV. The findings were refined and preliminary recommendations were developed as part of this process; in turn these preliminary recommendations were tested in the same way.

Whether or not interviewees agreed with the consultants' assessments or proposals for action, they invariably presented further insights, embellishments and viewpoints that enabled the team to refine and expand its findings and recommendations.

2.2.6.2 Round Table Conference with Construction SOEs

A major input to the refinement of findings and recommendations was provided during a conference of SOE managers invited to Budapest by MIT on December 13, 1991. Twenty-two companies were represented by the attendees. The consultants tabled a number of issues together with their preliminary findings to stimulate discussion and debate. This process of sequential refinement and testing of findings and recommendations has afforded a significant measure of confidence in their validity.

2.2.6.3 Discussions with MIT

Three meetings were held with MIT: one at the start of Phase IV, one at the beginning of the second week and a final wrap-up meeting at the end. These meetings were also used as opportunities to discuss findings and possible recommendations with senior MIT officials.

2.2.6.4 Final Report Preparation

Preparation of the final report began in the field during Phase IV while the analysis was ongoing so that findings and recommendations extracted from the analysis could be recorded and, where the opportunity presented itself as described in Section 2.2.6.1, these draft findings and recommendations could be tested. It was not appropriate to include all the data that was assembled and analyzed during the course of the work in the body of the report or in the appendixes. However, the consultants have provided all the analyses and supporting documentation that form the bases for the findings and recommendations. (See **Appendixes C, D,** and **E.**)

The initial draft of the final report was submitted to MIT and USAID in early February 1992 for their review and comment. This final report reflects the comments received from both agencies. The report is produced in both English and Hungarian.

3 FINDINGS

3.1 The Housing Sector

3.1.1 The "Actors"

The primary "actors" in the housing sector include consumers, developers, investors, contractors, subcontractors, materials and product manufacturers, bankers and financiers, and regulators and policy makers. During Phase II of the Assessment, the consultants identified a number of problems and issues affecting each of these respective "actors." In many cases the problems and issues affecting the "actors" not involved in construction related activities appeared to impact the construction subsector. Some seemed to have a direct impact while others appeared to have indirect but important implications. During Phases III and IV, interviews and data analyses served to identify the specific nature of the impact these problems and issues had on the subsector. While it is beyond the scope of this Assessment to seek and recommend solutions to the problems of the housing sector as a whole, nevertheless it was considered essential to address the direct impacts these sectoral issues have on the construction subsector. Hence the Assessment sought to trace problems and issues in the construction subsector back to their roots among the other "actors" in the housing sector. The following summarizes the most important issues that were identified with regard to each "actor" outside the construction subsector.

Consumers	• Insufficient income (lack of affordability) • Use of sweat equity and black market labor
Developers/Investors	• State, local governments and OTP[4] no longer placing orders • Shortage of private entrepreneurs/investors
Bankers/Financiers	• High risk perception of construction industry • Lack of underwriting knowledge/capability • Lack of mortgage instruments • High prevailing interest rates
Regulators/Policy Makers	• Under regulated industry • Lack of national housing policy

[4]The National Savings Bank, now restructured as the National Savings and Commercial Bank Ltd. with a separate real estate subsidiary.

3.1.2 The Interdependence of the "Actors"

The above list of issues is not meant to be exhaustive. They are only the key external factors the consultants believe are having a significant impact on the housing construction subsector. The impacts of these various issues are discussed briefly in the following sections as a preamble to the findings for the construction industry itself.

3.1.2.1 Consumers

In a market economy, housing is a commodity that consumers buy and sell. The consumer represents the demand side of the housing sector. In Hungary during the last forty years the government has represented the demand side; housing has been considered a social right and where the wage structure did not have to reflect the full cost of housing the State provided significant subsidies to the sector. In recent years, the wage structure has not kept pace with inflation, losing value in real terms whereas the cost of housing construction has escalated, widening the gap between real incomes and real housing costs. The result is a significant decline in affordability, referred to as "solvent demand" (effective demand). The decline in affordability has also been strongly affected by the movement to market interest rates for construction and mortgage financing which is discussed in the section on Bankers. The impact on the construction sector is evident in the sharp decline in housing starts. Solvent demand will need to be restored before any upturn in starts will occur. Not surprisingly many members of the construction sector, both SOEs and private companies, believe all their problems will be solved if there is solvent demand.

A major portion of consumers have traditionally relied on "sweat equity" (their own labor) and "black market labor" (informal labor) to construct their housing in order to reduce cost and because of the lack of, or high cost of, financing. While the "self-built" approach has accounted for a substantial portion of the private housing construction over the last few years, as shown in **Exhibits 3.1** and **3.2**, the likely rise in the opportunity cost of "sweat equity," given increases in real incomes, suggests it is a market for construction services that could be better met by the smaller private contractors that are emerging in the marketplace.

3.1.2.2 Developers/Investors

The construction industry is normally dependent upon the real estate development industry and investors to provide the orders for construction products and services. Until recently a large portion of the orders for housing construction came from the State or local governments, the National Savings Bank (OTP) for its own account or from SOEs and cooperatives providing housing for their workers. These "investors" have reduced their orders significantly over the last five years and have now ceased placing new orders entirely. With the exception of the luxury or super luxury markets, private developers that exist today are also ceasing to develop new projects as significant amounts of unsold product exist on the market. OTP, for example, has 1,500 unsold units and 6,000 units nearing completion and has stopped all new projects. The impact on the housing construction industry is obvious.

Exhibit 3.1 ALL HOUSING CONSTRUCTION Number of Completed Dwellings			
	Self and OTP Financed		State Financed
Year	Self-built family houses	Condominiums	Rentals and Condominiums
1988	33,079	12,278	5,209
1989	35,896	10,705	4,886
1990	29,263	11,047	3,461
1991	21,040	no data	1,301

Source: KSH (Central Statistical Office)

Exhibit 3.2 OTP FINANCED HOUSING CONSTRUCTION*						
	Completions		Starts		Incomplete	
Year	No. of Units	% of Prev. Year	No. of Units	% of Prev. Year	No. of Units	% of Prev. Year
1990	39,207	87.8	33,744	86.0	63,498	90.9
1991	28,302	75.7	17,636	52.9	49,812	80.6

*Housing with any form of OTP financial participation (95%).

The lack of a mature real estate development industry to assemble land, raise equity and debt financing and to market and sell housing leaves the construction industry without many potential clients. The high risks and relatively low returns compared to other potential investments are not attracting investors or entrepreneurs to this sector.

3.1.2.3 Bankers/Financiers

Bankers also have a high risk perception of this industry. Current lending practices involve high collateral requirements; guarantees, usually in the form of bank deposits or co-guarantors; short terms; and high prevailing interest rates. In large part, however, this situation is a reflection of, and is consistent with, national economic policy.

Other than OTP, which is now leaving the construction and mortgage lending business, there are only a few government-owned commercial banks that have provided the equivalent of construction loans. There is a general lack of underwriting capability that also prevents any early change in the current credit situation. High market interest rates, the current lag in the growth of real wages versus the real cost of housing, and the lack of innovative mortgage instruments that lower payments in the early years are in large part responsible for the growing stock of unsold units and the inability of a large portion of potential buyers to afford housing. The impact on the supply side is quite evident in the case of SOEs, OTP and private contractors: unable to sell what has already been completed, contractors are leaving the housing industry entirely or planning minimal housing starts in 1992, assuming construction financing is available (see **Exhibit 3.3** and **Appendix D.1**). The super-luxury market in Budapest may be the only exception.

Exhibit 3.3
ALTERNATIVE PROJECTIONS OF HOUSING COMPLETIONS 1991-95

Year	Fact	Limited Government Intervention	No Government Intervention	Massive Government Intervention
1989	51,487	--	--	--
1990	43,771	--	--	--
1991	33,000	--	--	--
1992	--	28,000	22,000	33,000
1993	--	32,000	20,000	40,000
1994	--	35,000	19,000	42,000
1995	--	36,000	18,000	43,000

Source: Housing construction forecasts by AB.

3.1.2.4 Regulators/Policy Makers

The housing construction industry is not over regulated. On the contrary, the stricter enforcement of building codes, more stringent guidelines for competitive bidding (including bid and performance bonding) and the introduction of risk and liability insurance have been identified as important elements in improving the overall performance and efficiency of the industry and eliminating those whose performance is below acceptable norms and standards. Lack of strict building code enforcement is prevalent not only in self-built housing but also in many of the larger projects undertaken by the SOEs on behalf of municipal governments.

Environmental regulations have primarily focused on major industrial pollution, leaving the building construction industry relatively under regulated.

Competitive bidding, now prevalent throughout the industry, has allowed under-capitalized, inexperienced bidders to participate, resulting in cases of unrealistically low bids and defaults on contracts. Regulations for tendering, including bid and performance bonds, are needed to both insure fully responsive bids and to guarantee the performance of the contractor. Irresponsible bids and frequent cases where contractors are unable or unwilling to complete a job elevates the risk perception and lowers the creditworthiness of the industry.

A new national housing policy has been under study for more than a year now and it is uncertain when a Housing Act will be approved by Parliament. Whether or not the Act provides for the early stimulation of the demand side, it is expected to deal with two fundamental issues facing the sector: housing finance and social housing policy. The construction subsector would clearly benefit from the delineation of the public and private sector roles, hopefully providing a firm basis for strategic business planning by the SOEs, their successors and private companies.

3.2 General Findings for the Construction Industry

3.2.1 Overview

3.2.1.1 Transformation of the Hungarian Economy

In order to assess the Hungarian construction industry's general position and future direction it is appropriate to consider the general economic environment and the ongoing transformation of the overall Hungarian economy from a centrally planned to a market oriented system. The transformation was actually initiated as early as 1968 when new economic policy permitted private enterprise and then, in 1976, with policies that actually encouraged private entrepreneurship. Western investment in Hungry has officially been encouraged since 1982. At this time a degree of control and management of the SOEs was shifted to the county councils. Finally, immediately prior to the establishment of a democratic government, the then existing government passed several laws that established the necessary legal environment for the establishment of truly private Hungarian owned and joint venture companies.

Privatization of the SOEs was also begun under the old regime. However, the only form of privatization that was permitted was a joint venture between an SOE and a foreign investor or company. The State still controlled the Hungarian interests in the joint ventures. Hungarian investors and individuals were not permitted to purchase any interest in the SOEs. This is now permitted under the new government. During the last one and one-half years, this form of true privatization has been at the forefront of government policy. Unfortunately, the consultants found little evidence that this policy was being effectively implemented in the construction sector, particularly the housing construction subsector.

Since 1970 the growth of Hungary's housing stock has generally been higher than that of other Eastern European countries and since the late 1970s higher than Western European countries as shown in **Exhibit 3.4**. However the production of the SOEs was directed at only a portion of the demand for housing. The remainder of the demand, ranging from 60 to 80 percent, was met by private, predominantly self-built, housing construction. Government did not initially support this activity and has not attempted to regulate or control it, which has led to the "black market" labor phenomenon that is discussed in Sections 3.1.2.1 and 3.2.2.7. The dramatic decline in government direct investment in housing has resulted in a drastic cutback in production by the SOEs and has further stimulated the need for the private production of housing, presenting an opportunity for newly organizing private construction companies. Under the previous regime the workers in SOEs had time to devote to the construction of their own private housing. In the future, with a growing proportion of the work force employed in private sector companies and with a growth in real wages in relation to housing costs (e.g., increasing the opportunity cost of "sweat equity" and "black market" labor) a decline in the proportion of "self-built" housing and the use of "black market" labor can be expected.

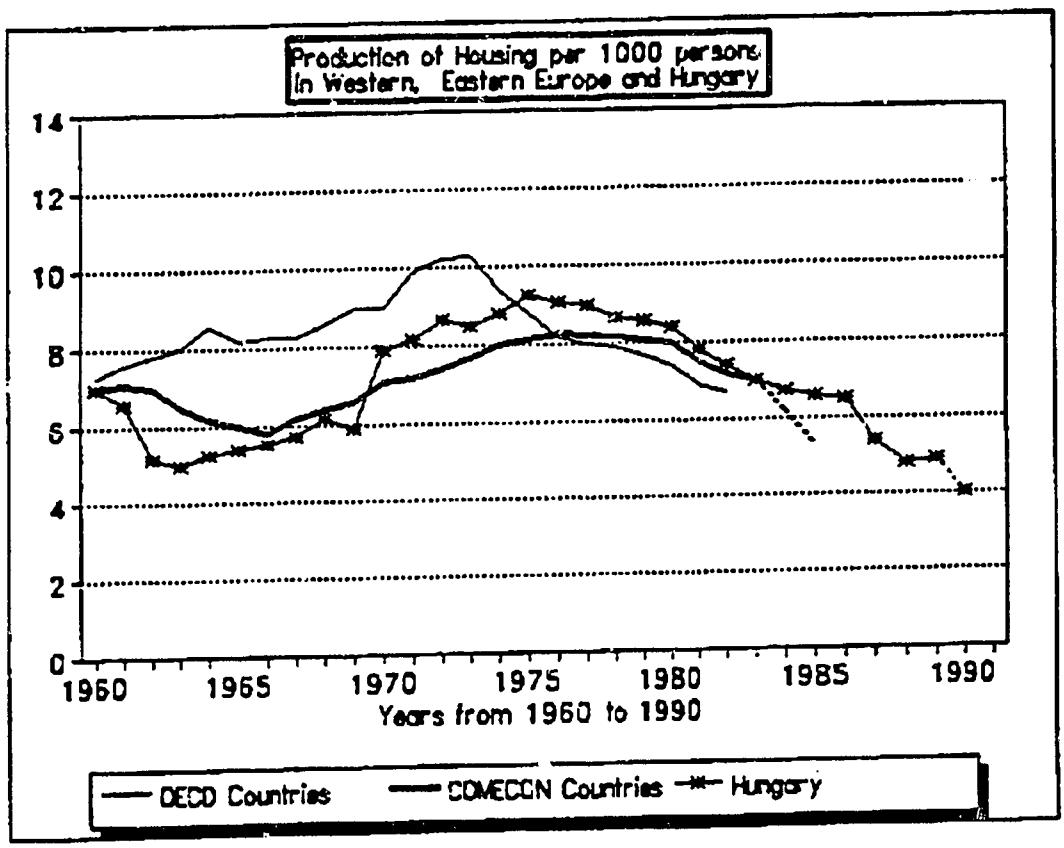

Exhibit 3.4

Source: Ivan Tosics, "Privatization in Housing Policy: The Case of the Western Countries and that of Hungary" (1987).

3.2.1.2 State of the Hungarian Housing Construction Industry

The housing industry as a whole is in a state of transition and the housing construction industry is in crisis with many of the SOEs involved in construction incurring heavy financial losses and threatened with insolvency. These same SOEs are also in various stages of restructuring and privatization. Many of the plans for restructuring and privatization appear to be merely a conversion of vertically integrated companies into a series of smaller interdependent legal entities that are in turn dependent on a residual "mother" company. The newly restructured organizations may have the legal structure of private companies but most are not flexible and independent enough to survive in the current climate.

Virtually all the SOEs involved in construction are vertically integrated organizations producing building materials, primarily for use in their own projects. This production has declined significantly except where products are produced for the general market, especially new products produced in joint venture with foreign entities. The building materials and products SOEs have generally lagged behind the construction SOEs in developing and implementing restructuring and privatization plans. Their current financial condition varies but is deteriorating like the construction SOEs.

At the same time there is an emerging, enterprising private sector housing construction and building materials industry that is playing an increasing role in housing production. These private sector firms may not have the internal management problems and historical lack of market orientation of the SOEs, but their growth and survival is threatened by the same external factors. The complete withdrawal of government from the housing construction sector is leaving the industry unregulated and unguided at a time when a major and essential transformation of the entire housing sector is necessary. If true privatization of viable subsidiaries of the SOEs is to be achieved and private companies are to be encouraged, MIT will need to take a leading role in assisting and promoting this transformation.

Given the relatively small size of the domestic market for construction services generally, Hungary's central location in Europe and its upcoming associate membership in the European Community, the Hungarian construction industry will likely be subject to intense foreign competition requiring improvements in management, efficiency and standards of performance if the industry, of which housing is only a part, is to successfully transform itself.

The Assessment's focus on only four building materials industries, all currently in a substantial oversupply situation, has not dealt with a few key issues such as the availability of building materials generally, specifically the most technologically advanced, and the likelihood of adequate supply when the housing industry recovers. These and other issues should be the subject of further study.

3.2.2 General Findings

This Assessment has arrived at general findings consistent with the overall goal of developing action plans and policies to effect the transformation of the Hungarian construction industry in general and the housing construction subsector in particular. The current and potential future roles of MIT, industry trade associations and other public and private entities are addressed.

3.2.2.1 International Context

It is apparent that as Hungary heads toward entrance into the European Community its housing industry will be faced with a dilemma. On the one hand there will be increased opportunities for housing construction/material exports; on the other there will be increased foreign competition in domestic markets. There will be no choice but to develop plans for the integration of the industry into a unified Western Europe, including eventual parity in standards of quality, efficiency, performance, safety and environmental impact. Significant foreign ownership and control of domestic companies is occurring and may need to be monitored, if not controlled. In 1990 foreign companies invested more than Hungarian Forints (HFT) 4.0 billion in the construction industry, 27 times more than in the previous year.

3.2.2.2 Housing Sector Context

As described earlier, the housing industry (as in all other countries) is composed of a number of interrelated subsectors or "actors" (material producers, contractors, developers, consumers, etc.). Remedies for any one subsector, no matter how comprehensive, will not be successful without curing the problems in the other subsectors. The detailed findings developed from this Assessment, while not addressing all the problems of the housing sector, do focus on the actions MIT should take or should encourage others to take to address those issues that directly or indirectly affect the housing construction subsector.

3.2.2.3 MIT Role in Formulating Industry Policy

The industry is in urgent need of a spokesman on the government side. The MIT has traditionally been responsible for setting industry policy. However current restructuring of the MIT "client" companies, overseen by the SPA, has meant that MIT's role is in transition and the future responsibilities uncertain. It is the consultants' view that either the MIT take action to redefine its role or abdicate the role to someone else.

3.2.2.4 Role of Associations

Trade associations began forming in the late 1980s, splitting-off from what was the Chamber of Commerce. The consultants interviewed three of the associations that currently represent the industry: ÉVOSZ, formed in 1989, represents the formal sector of the industry and has 450 members of which 80 are SOEs; Magyar Épitoanylafipar, the Building Materials

Industry Association, formed in September 1991, has a current membership of 35 and expects to ultimately have between 200 and 300 members; OKISZ, the Association of Small Contractors, has 1500 members of which 950 are involved in construction (cooperatives built 22 percent of the housing in Hungary in 1990).

With the possible exception of ÉVOSZ, these associations, while generally supportive of their memberships' interests, do not have a national agenda or a political lobbying base to promote the industry and are currently ineffective in championing the causes of the sector. The only example of direct support provided to members was by OKISZ through a loan to Fertôd, the cooperative company interviewed, to provide the equity capital for a joint venture with the international skylight manufacturer, Velux. All three associations believed that training and education was the responsibility of the State and, with the exception of OKISZ, did not plan to offer such assistance to their members. The consultants believe these existing associations will need to redefine their roles and responsibilities to reflect the needs of emerging private sector companies or new associations will need to be formed.

3.2.2.5 Productivity and Skills of Labor

The consultants found that the productivity of residential construction labor was generally low compared to western labor but that the technical skills and quality of the work was adequate when using traditional construction techniques. Lengthy on-site construction time was primarily a result of labor intensive masonry construction techniques and a lack of construction management skills. However, comparisons between the SOEs and private sector contractors indicated that productivity, evidenced by quicker completion times, was directly proportional to pay scales. This applied to both construction and materials manufacturing. Ownership also contributed an incentive to increased productivity, for example, at Kunság Fenster in Kecskemét, Politerm in Békéscsaba and Fertôd in Fertôd.

Since the pay scales for residential construction labor are lower than for commercial construction labor[5] and the materials and technologies employed in commercial construction are currently more sophisticated than for housing, the higher skilled workers naturally gravitate toward the commercial construction subsector. Other distortions occur in the labor skills market, for example, near the Austrian border where it is alleged that 20 percent of the skilled construction labor works in Austria.[6] Further, the relatively better economic conditions in the western part of the country and Budapest versus the east has led Fertôd, for example, to consider importing skilled labor from the east. The major problem with this plan is a shortage of housing for the relocation of the laborers.

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[5]Source: Ingatlan Bank, Vaskut and Épkomplex.

[6]Source: Building Cooperative of Fertôd.

3.2.2.6 Construction Cost Savings

Housing construction firms, particularly the SOEs, could realize significant cost savings if they departed from some presently used practices, even if these companies are currently profitable and successful. Potential savings of 20 percent or more are considered possible.

Areas of potential technical and/or managerial improvements are listed below and are described in more detail in this and following sections:

- Reduction of construction duration through construction management methods and new building technologies
- Reduction of labor and material costs through use of new products, assembly techniques and value engineering
- Improvement of labor skills and efficiencies through training and incentive programs
- Refinement of job cost accounting procedures
- Innovative architectural concepts and designs
- Innovative land use and infrastructure planning

One of the most important factors in construction cost savings is a reduction in construction time. The time taken to complete construction of dwelling units in Hungary is considered excessive by international standards. The consultants found that typical schedules for construction of a modest sized (±40 unit) residential building was one year. Some were as high as 16 months, the lowest observed was around 9 months and actual completion times were often longer because of delays.

Western management techniques for reducing construction times include, for example, "fast-tracking," critical path scheduling, and incentive bonuses to subcontractors. Technical solutions, some already in use in Hungary, include innovative concrete construction methods (tunnel form and lift-slab), advanced tools and equipment (hot curing of concrete), and new products and materials. With current interest rates on construction loans at 38 percent, if completion time for a building is reduced from 18 months to 12, interest expense can be reduced by a third and construction costs by 10 percent.

In addition, in the current high inflation environment, similar savings will be realized if labor and materials are purchased over a shorter duration. Overhead is also reduced proportionately. Total housing construction cost savings in the range of 10 to 15 percent should be achievable due solely to reductions in construction times.

3.2.2.7 Impact of the "Black Market Labor" in "Self-Built" Housing

Not surprisingly, limited official data are available on the extent to which informal or "black market" labor is used by individuals in the construction of their own housing. The data shown in **Exhibits 3.5** and **3.6** indicate that approximately 83 percent of housing construction expenditure involved some "black market" labor and that some 68 percent of all housing labor

wages are not officially recorded, or "black market." However, it is not clear whether all "black market" labor activity is confined to the self-built market. The prime motivation to utilize "black market" labor is to minimize construction costs in those trades where the "self-builder" is unable or unwilling to undertake the work himself (see **Exhibit 3.5**). The "self-builder" needs certain skills that he does not possess to complete construction or, in many cases in the higher income groups where he has the financial resources to pay for labor as well as materials, he may act only as his own general contractor. The use of informal labor represents significant savings as no social security tax or income tax is paid. Social security tax, normally paid by the employer, amounts to about 45 percent of gross income and income taxes range from 45–50 percent of gross income (see **Exhibit 3.7**). "Self-builders" can actually afford to pay "black market" laborers higher net wages than they would normally receive and still achieve a significant savings.

Exhibit 3.5
"BLACK MARKET" LABOR INVOLVEMENT IN SELF-BUILT MARKET

	Responses		Total Construction Costs	
	Number	%	Million HFT	%
The majority of the work was done by self-help.	42	9.3	46425	7.3
Only unskilled work was carried out by self-help, the remainder by "black market" craftsmen.	369	81.8	524019	82.9
The whole job was contracted.	40	8.9	61325	9.7
TOTAL	451	100.0	631769	100.0

Source: 1990 Survey by AB of "Black Market Labor Involvement in Housing Construction."

As self-built housing represented 67 percent of the housing completions in 1990 using predominantly informal labor, MIT is interested in finding a way to incorporate this "black market" labor activity into the formal sector, providing more potential opportunities for small contractors as well as improving controls on the quality of construction. This area will also require further study.

3.3 Specific Findings

Findings for the Construction SOEs, Materials SOEs and the Private Construction Companies (PCCs) have been organized in the following generic categories:

Exhibit 3.6 TOTAL WAGES VERSUS UNRECORDED PAYMENTS By Type of Work			
Type of Work	**Total Wages (million HFT)**	**Unrecorded Payments (million HFT)**	**% of Wages Unrecorded**
Design	4.3	2.2	51.2
Earthworks	3.5	2.5	71.4
Foundation	6.6	4.4	65.2
Walls, Slabs	19.1	11.9	62.3
Inside Plaster Work	13.0	8.9	68.5
Outside Plaster Work	10.0	6.9	69.0
Roof-Carpenter Work	12.4	8.1	65.3
Electrical Work	6.3	4.0	63.5
Plumbing & Sewage	7.2	5.0	69.4
Heating	11.5	6.2	53.9
Floor Layers; Wall Finishes	7.3	5.3	75.0
Other	17.8	15.5	87.1
Engineer in Charge	1.9	1.4	73.7
TOTAL	120.9	82.3	68.0

Source: 1990 A.B. Survey of "Black Market" Labor Involvement in Housing Construction.

- Strategic Policy
- Organizational/Managerial
- Technical/Operational
- Market/Marketing
- Economic/Financial
- Legislative/Legal

This structured assessment has provided the format for the development of the Recommendations in Section 4.

Exhibit 3.7 HUNGARIAN WAGE/TAX STRUCTURE (Monthly Salary)			
Cost to Employer	**Percent**	**Forint**	**Dollars @ 76 HFT=US$1**
Gross Pay	100.0	34783	$457.67
Plus:			
Unemployment	1.5	522	6.87
Social Security	43.0	14957	196.80
Cost to Employer	144.5	50261	$661.33
Net to Employee:			
Gross Pay	100.0	34783	$457.67
Less:			
Pension	-10.0	(3478)	(45.77)
Unemployment	-0.5	(174)	(2.29)
Income Tax*	-32.0	(11131)	(146.45)
Net Take Home Pay	57.5	20000	$263.16
Net to Cost	39.8%	39.8%	39.8%

Source: CI Privatization Consulting Ltd.
*Income taxes are actually graduated.

3.3.1 Assessment of the Construction SOEs

3.3.1.1 Strategic Policy

Generic Privatization Approach Unsuccessful in the Private Sector

The State Property Agency's (SPA's) approach to privatization in most sectors has been to sell off the SOEs to private investors, often a foreign entity, and then let the new owner organize it as he wishes. If this cannot be done, as appears to be the case with construction companies, the policy has been to restructure the SOE into smaller units, and then try to find investors to buy or invest in them, while attempting to sell off the non-essential assets (resorts, hostels, idle plants and other non-productive assets). SPA, however, has had very

limited success in selling all or part of these smaller units to local or foreign investors. Investors in the construction industry, if any, may be foreign, but more likely will be current employees, current vendors, or other local investors as is the case with Békés. This same privatization approach is being applied to materials manufacturers, for example, at Romhány and Sofa. A different approach is necessary if this process is to be expedited.

Lack of an Overall Industry Restructuring and Privatization Policy

There is no industry-wide policy on restructuring and privatization although the MIT prepared one that was submitted to and rejected by the SPA. Each company interviewed as well as the other companies in the subsector have retained privatization consultants and are in one stage or another of the process. The status of each construction SOE is shown in **Exhibit 3.8**. The plans have been prepared without reference to the overall size of the current and future housing market, the potential market for new construction and rehabilitation services and the obvious need for consolidation. Mergers and acquisitions in the subsector appear not to have been considered.

While restructuring has and continues to occur in the industry, privatization has generally not proceeded. This is a result of declining asset values as well as the high risk/low return perception of the industry held by entrepreneurs or potential private investors. The construction industry is simply not an attractive investment which is reflected in the significant difference between the book value of a company and the prices potential investors are prepared to offer. Finally, delays in the implementation of the restructuring and privatization plans have had a significant negative impact on the financial condition of companies such as HÁLÉV, making privatization more remote.

Over Valuation of Assets

The SPA is relying on there being a major difference between the current market value of a company's fixed assets and their book value (cost, less accumulated depreciation) to bail out the negative net worth and pay off the debts of companies being privatized. With the current high cost of financing and the generally adverse economic environment, these values may not be achievable.

Lack of Cost Control

Little or no action has been taken to control and reduce costs at SOEs during the past two and one-half years of economic transition and market downturn. This has created very large losses throughout the industry (see **Appendix C.1**) with corresponding increases in liabilities that are threatening to create financial problems for suppliers, bankers and other creditors.

Exhibit 3/3
RESTRUCTURING/PRIVATIZATION STATUS OF THE HOUSING CONSTRUCTION SOEs

SOE	Net Income in 1990 (Million Forint)	Status
DUTÉP	-412	Liquidated
Bázis Ép. V	-400	Liquidated
Délép V	-350	Restructuring
Borsod m. ÁÉV*	-300	Pending Liquidation
Győr m ÁÉV	-200	Restructuring
Komárom m. ÁÉV	-180	Restructuring
43. sz. ÁÉV*	-136	Restructured
23. sz. ÁÉV	-95	Restructuring
Heves m. ÁÉV	-70	Restructured
Keletm.o. ÁÉV	-30	Restructured
Nográd m. ÁÉV	-16	Restructured
Szabolcs m. ÁÉV	-10	Restructured
Vas m. ÁÉV	1	Restructuring
Szolnok m. ÁÉV	3	Restructured
BULAV	4	Restructuring
Pest m. ÁÉV	5	Restructuring
Épip. V. Dujváros	6	Pending Liquidation
22. sz. ÁÉV	10	Restructuring
Hajdú m. ÁÉV*	13	Restructured
Tolna m. ÁÉV	15	Restructured
21. sz. ÁÉV	15	Restructured
Zala m. ÁÉV*	17	Restructured
Albia Regia V	18	Restructured
Békés m. ÁÉV*	47	Restructured

Source: MIT.
*Indicates company included in assessment.

MIT Often Viewed as Unsupportive of the SOEs

The relationship between MIT and construction SOEs was not found to be universally close or even of a working nature. MIT was often described as unsupportive and non-responsive. The management of several SOEs, without prompting, stated that officials from MIT had not visited their companies for years and had not shown any interest in their problems.

Investment Returns Comparatively Unattractive

Given the broad range of potential alternative investments in Hungary and elsewhere in Eastern and Central Europe and their deteriorating financial condition and limited market potential, the construction sector SOEs do not present as attractive an opportunity in terms of the likely returns, the risks and the length of time to recover the initial investment as do investments in other sectors. Moreover major Western European commercial construction firms currently can enter the Hungarian market and bid on major projects without investing in a local partner.

The exception to this is building materials manufacturing subsidiaries of the SOEs where the introduction of new materials/products with relatively lower production costs and significant export potential have attracted foreign capital investment into joint ventures.

3.3.1.2 Organizational/Managerial

SOEs Realigned Rather than Restructured

The sample of companies that were assessed by the consultants included three (Borsod, Békés and Dunabau 43) where the restructuring and privatization plans for the companies have achieved a "horizontal realignment" of vertically integrated companies (e.g., creating legally separate companies whose majority ownership remains with the parent and where contracts for services and materials between the companies effectively leaves intact the total interdependence of the previous "vertically" integrated company). Management has been left intact and the operations of the companies have been split up as separate interdependent, wholly owned joint stock (KFT) subsidiaries of the original parent. The parent company has only changed its legal structure, having been converted to a share holding company (RT), and retains the majority of the assets of the original company which it leases to the subsidiaries. The privatization consultant to these companies is the same organization that advises eleven other construction SOEs and therefore this approach appears to be common. While it has some support in the MIT as well as the SPA, the consultants believe the approach taken at the above three SOEs is not an effective way to restructure these companies if the ultimate objective is privatization, e.g., to create viable independent business enterprises that could represent attractive investments for local or foreign investors.

Need to Create Viable Organizational Units

The housing construction industry in most parts of the world is mostly composed of a myriad of small to medium sized contractors that produce the vast proportion of new housing. For example, in the US, of the 60,000 builders, 30 percent of new housing units are constructed by the 400 largest contractors, while the remaining 70 percent of the housing is produced by small and medium-sized construction companies. The primary reason for this is that in a market economy housing is "ordered" by a vast number of small investors, developers and individuals in relatively small quantities and suited to each particular market. Large vertically integrated companies are dependent on large "orders" to achieve a volume that can potentially cover their large fixed overhead. Typically, they find it difficult to respond to this type of market.

The MIT and the SPA agree that the SOEs should be restructured into several smaller companies and this "restructuring" of the SOEs has created some 850 companies from some 40 original enterprises (some of these are materials manufacturing operations and some are specialty and civil works contractors). However in most cases what has been created is a series of interdependent companies providing services to each other and not directly to the market. What is needed is the creation of general and specialty contractors that are organized to respond to specific markets, can effectively compete for work, form their own alliances or relationships as the market dictates or respond to the market independently.

Emphasis on Short Term Survival Rather than Long Term Viability

Concern about the social implications of restructuring and privatization of the industry has had a significant impact on the decision making process. Management and the SPA have shown deep concern about the layoffs that appear to be necessary for the long term survival of the company or its successors, often delaying decisions on layoffs or approvals for restructuring that would impose layoffs until well beyond the point where the company's financial condition is retrievable (see **Appendix C.2**). For example, HÅÉV, a company that has been relatively strong, has experienced delays in obtaining approvals and financing for its restructuring plan. In the interim, management's decision not to respond to the collapse of their markets by laying off a significant portion of their 3,000 staff and instead borrowing to maintain a large cash balance to cover increasing operating deficits, has severely undermined the long term viability of the company. If current market conditions continue, those decisions will threaten the company's survival.

Absence of Market and Profit Orientation

The SOEs were established to execute a national housing program not to respond to a market or to make a profit. They were provided the funds to produce what was "ordered" by the State based on historical costs of producing standard designs and a standard mix of unit types. There was never an attempt to respond to a market nor an incentive to produce a profit

by controlling costs and schedules. Every unit that was built was effectively "pre-sold" either to the State as communal rental stock or to pre-selected individual buyers.

Management of the SOEs has generally been too slow in responding to the need for a market orientation and profit motivation. Although several of the companies have entered the development field by constructing housing on their own land or on sites purchased from others, their motive was to provide jobs and revenue to cover overhead. These projects would have been more successful if their markets were better understood and the costs and schedules had been managed with the objective of producing a profit. One case where these issues have been addressed is at ZÅÉV. A new project management system has been introduced for both residential and non-residential projects that gives one individual full project management responsibility from marketing to final sales and sets the project up as a profit center.

Delay in Sales of Non-productive Assets

The SOEs have a number of "non-productive" assets that include spas, hotels, resorts, sports complexes and housing that were constructed and operated for the benefit of their workers and management. These assets have in most cases been targeted for sale to reduce overhead and raise capital. However, the Protective Property Law passed in 1989 and a second law passed in 1990 (Az állami vállalatokva bizott vagyonának védelmével szóló 1990 évi VIII törvény) essentially prohibited the direct privatization or sale of these State assets until a plan for restructuring and privatization was approved by the SPA. The delays in preparing and approving privatization plans have led to significant delays in the process of disposing of non-essential assets and thereby substantially increased the financial burden on the struggling SOEs (see **Appendix C.2**). Further compounding the problem, valuations of these assets by privatization consultants and others have proven overly optimistic in the current economic environment, making sales relatively unattractive.

Relaxation of Financial and Statistical Reporting Requirements

Since January 1991 financial and statistical reporting requirements of SOEs have been significantly relaxed, resulting in a potential loss of financial control, a loss of key information and a false sense of independence by what are still state-owned-enterprises. Newly created KFTs and other subsidiaries of SOEs are not reporting. Only the parent company is reporting making it impossible (see **Appendix C.1**) for the "owners" (the State) to compare current results with past results and to understand the current financial condition of the overall company.

Effective January 1992, financial reporting and accounting will change from the Hungarian system to the Western European system. While this is a positive and necessary change, the transition will further obscure the financial records and leave MIT and SPA without sufficient, up-to-date information to take appropriate actions at this critical time.

Lack of Realistic Business Plans

The Business Plan is a new managerial concept to Hungarian managers. Up to now, the State has provided the market, the customers and the financing. Management was primarily a production management function. The business plans outlined by virtually all the SOEs appear to lack an understanding of the market within which they will be operating and the economic factors that must be faced. Appropriate actions that would have responded to these issues were either not proposed or postponed for non-business reasons.

Lack of Independent Audits

There has been no independent audit and certification of financial statements by independent CPA's. The financial statements reviewed by the consultants (see **Appendix C.2**) showed a number of inconsistencies that would probably have been resolved through independent audits.

3.3.1.3 Technical/Operational

Low Productivity and Redundant Excess Capacity

The productivity and capacity of the SOEs were found to be generally lower than their Western counterparts when output per worker was assessed (see **Appendix D.5, D.5.1, D.5.2**). However, current capacity is substantially beyond the demand of the current housing market and, more important, the in-place capacity to produce large projects using concrete panels and relatively poor quality in-house produced building materials is proving inappropriate to respond to the more diversified housing market that is emerging. An indication of this is the fact only two concrete panel plants are still operating in Hungary: one in Gyôr and one in Debrecen (HÅÉV). Hence a large portion of the potential capacity that is available in the SOEs is now redundant and will be increasingly so in the future.

Late Interest in New Technologies

With the exception of ZÅÉV, none of the SOEs has shown significant interest in new building technologies, building systems or construction management systems until recently. The current interest in technology is primarily limited to building material/product manufacture through joint ventures with foreign investors in the SOE or, more often, in a wholly owned KFT subsidiary. This was in sharp contrast to the private sector companies the consultants interviewed. The lack of technical innovation, however, is consistent with the overall failure of management to adopt to the rapidly changing circumstances.

Inferior Quality of Residential Construction Materials/Products

Traditionally the cheapest and lowest standard of materials was used for residential construction by the SOEs to satisfy their "orders". Quantity rather than quality was the norm. Many of these materials were manufactured by the vertically integrated SOEs who had little incentive to improve quality or introduce new technologies. Not surprisingly there is little or no external market for these materials.

Quality of Traditional Construction Is Adequate

Residential construction labor, particularly with the SOEs, is relatively unskilled and lower paid than is the case with commercial and private sector residential construction labor. However the necessary skills are available to produce reasonable quality traditional construction. The poor quality of the industrialized systems appears to be more the result of poor technology in the concrete panel plants and poor design specifications than poor quality labor.

3.3.1.4 Market/Marketing

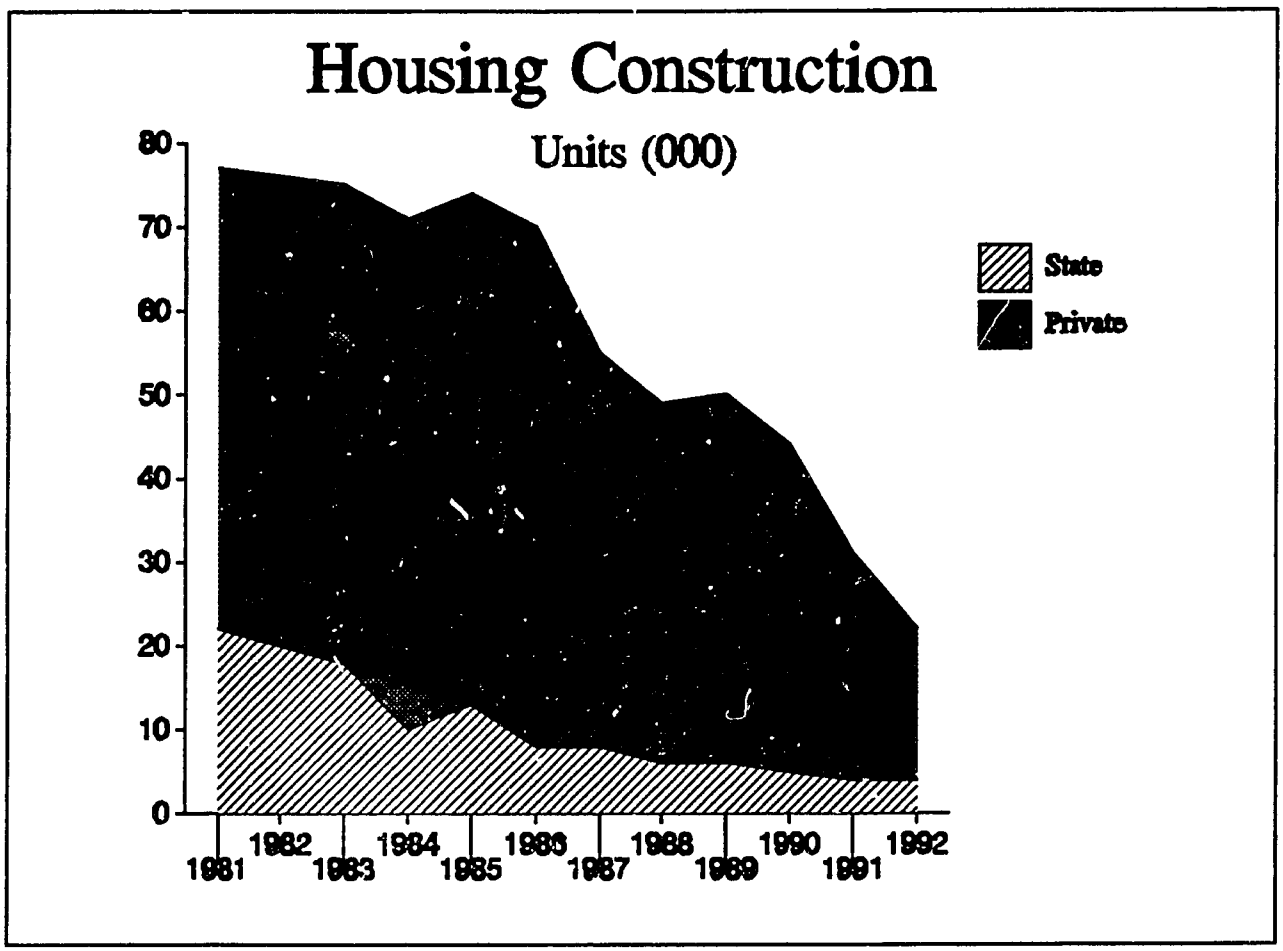
Lack of Developers/Investors

Housing production by the SOEs has fallen in both absolute and percentage terms for the last ten years as shown in **Exhibit 3.9** and the departure of the government from the housing development field has meant the collapse of their major market. Private housing production has also fallen in absolute numbers but has increased as a proportion of the total. However, this growth in the proportion of private sector housing production does not reflect the emergence of private developers so much as individuals building their own housing. A small number of private contractors and developers produced housing while subsidized OTP financing was available, but currently only small quantities of luxury and super-luxury units are being started. While there are a number of reasons for this marked decline, the lack of housing developers or investors is a major contributing factor.

Late Shift to Other Construction Markets

The SOEs' inability or unwillingness to shift their activities to other non-residential markets contributed to the rapid decline in the financial strength of several of the companies. However those that began focusing their attention on other markets early have either maintained their financial strength or moderated their financial decline. Dunabau, Borsod and HÅÉV are examples of the former whereas Békés and ZÅÉV are examples of the latter. Residential construction represented 72 percent of ZÅÉV's gross revenues in 1988-1989, 68 percent in 1990, 48 percent in 1991 and is expected to represent only 35 percent in 1992. In the meantime they have focused on the institutional market and entered into two joint ventures with foreign companies to produce building products.

Exhibit 3.9



No Marketing Studies Undertaken

HÅÉV, ZÅÉV and Fertőd have begun developing their own housing projects with their own financing. None of them undertook any market or feasibility studies to determine what the market wanted or who could afford or finance housing today. The standard mix and sizes of units were produced and the mid-sized units (60–90 square meters) are not affordable for those buyers who normally would want a unit of this size. Not surprisingly HÅÉV and ZÅÉV have a significant number of unsold units although OTP mortgage financing is available to buyers.

Untapped Renovation/Rehabilitation Market

The consultants found no evidence of any organized effort on the part of the SOEs to enter the potentially vast renovation market. It has been estimated that at least 20 percent of Hungary's urban housing stock is in need of renovation and upgrading despite the fact that in 1990, 30 percent of the total investment in housing was in the form of maintenance and

repair.[7] Currently the privatization of the communal housing stock is creating a large number of new owners that, given financing, would wish to arrange for the renovation of their buildings that, in many cases, have been neglected for over 40 years. If financing is available it is likely that expenditures for renovation of the existing stock could form a large proportion of the total expenditure on housing construction in the next five years. MIT also cited the potential of this market to assist in the recovery of the housing construction industry.

3.3.1.5 Economic/Financial

High Collateral Requirements of Restructuring Loans

As part of the approval process for the restructuring and privatization plans for the SOEs, restructuring loans are made to provide equity and working capital for the newly formed units. In the cases of Dunabau and Borsod, the loan terms required collateral in terms of fixed assets that are often several times the value of the loan. Lenders are also in the first position ahead of other lenders, most importantly the suppliers, in case of default. As the parent or "center" companies and several if not all the subsidiaries are likely to be ultimately liquidated, the consequential impact on the suppliers could also be liquidation.

Hyper-escalation of Material Costs

Price escalation on material costs has exceeded inflation for the economy as a whole ranging up to 450 percent on small items (locks) and as high 150 percent on major items (cement).[8] Average price escalation for building materials is estimated at 23.5 percent in 1990 and 42.6 percent in 1991 whereas construction costs have only risen an average of 9 percent (17 percent in 1990) indicating that contractors, in order to remain competitive, have absorbed a majority of the price escalation on materials, resulting in reduced margins/ profits or actual losses.[9] The construction industry cannot continue this practice and survive.

Absence of Supplier Credits

Most SOEs manufacture a portion of the materials they use in their housing projects but are dependent on suppliers for their raw materials and other products. Supplier credits are not available today to the SOEs or anyone else since virtually no credit is available to the suppliers. The suppliers often are carrying substantial past due accounts receivable from SOEs and others. For example, Sopron offers no credit to its customers. All sales are made on a cash-on-delivery (COD) basis. Other suppliers, including Kunság Fenster (windows) required

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[7]Source: MIT and AB.

[8]Source: Prices for building materials provided by Zoltán Berta of Berta and Demeter and István Beliczky of Épkomplex.

[9]Source: MIT.

a 50 percent down payment and the remainder on delivery. Scarce working capital must be used to pay cash for materials.

Absence of Insurance for Contingent Liabilities

Hungarian law provides for long term (10 year) warranty of construction in terms of major building components, e.g., structure and mechanical systems. No agreement seems to have been reached between the OTP, SPA and the SOEs regarding how these liabilities should be estimated for each company and no insurance is currently available to cover the contingent liability represented by this requirement.

3.3.1.6 Legislative/Legal

Absence of Guidelines for Joint Ventures and Licensing Agreements

Most of the SOEs involved in construction and materials production as well as some private sector companies have entered into or are actively seeking joint ventures with foreign entities, primarily to produce building products but also to introduce new manufacturing technologies and construction systems. The consultants were unable to fully investigate this area within the scope of this Assessment but did encounter several examples where joint venture or licensing agreements may be one sided and potentially detrimental to the evolution of a healthy competitive industry. This issue is discussed further in Section 3.3.2.

3.3.2 Assessment of the Materials SOEs

3.3.2.1 Strategic Policy

"Culture" of the Industry is Changing

Industry Wide. New building materials/products manufacturing companies are being established, often with foreign capital or equipment. The more enterprising construction/ manufacturing SOEs are using the restructuring process to form new ventures to produce new or improved types of building products. Fertőd, the cooperative has established new ventures to produce interlocking concrete block and sanitaryware. ZÅÉV has established joint ventures with Austrian companies to produce a new form of rigid wall insulation and roofing felt.

Perhaps the most important factor that is affecting a change in the culture of the Hungarian building materials industry is that the traditional shortage of primary building materials, including the four that are the subjects of this Assessment, disappeared in the late 1980s and has been replaced by a substantial oversupply situation in the early 1990s. This oversupply condition has been caused by the investment in significant increases in capacity in the mid-1980s and the precipitous decline in the demand for new housing construction in the late 1980s and early 1990s.

Brick. The brick industry, for example, is now comprised of a large number (86) of individual workshops owned by nine companies. Within a year, more than half of the workshops are expected to close due to lack of sales (see **Appendix E.3.1**).[10]

Tile. The tile industry is comprised of five manufacturers.[11] In the past, these manufacturers focused on volume. Quality, style, and product range were hardly, if ever, considered to be important issues. As a result, due to deregulation of imports, Hungarian tile manufacturers have begun to lose significant market share, especially to Italian producers. The deteriorating financial condition of companies like Romhányi Építési Kerámiagyár makes them unlikely targets for foreign or local investors (see **Appendix C.4.1**). The exception is Alföldi Porcelángyár where a 58 percent interest was recently purchased by a German company, Villeroy and Boch A.G.

Joinery. The industry is dominated by a small number of large State-owned manufacturers, SOFA and DUFA being the largest. Sofa, for example, has the capacity to produce .5 million square meters of door and window products which is over 50 percent of the current market. Its declining sales, rapidly growing inventories and fixed overheads has placed an increasing financial burden on the company.

In the last two years a number of small, custom manufacturers have opened, some, like Kunság Fenster in Kecskemét, owned and managed by ex-employees of one of the SOEs. These companies have entered the market not because the market is growing but because it is changing, demanding more custom products, and the large SOEs cannot respond.

Insulation. While there are a number of building insulation products in Hungary, MIT asked the consultants to focus on the glass wool industry as it was a newly introduced product that had successfully attracted foreign investment. Both glass wool manufacturers are joint ventures with foreign partners; Salgótarján has a Japanese investor and Talpogai has an Italian partner.

Foreign Investors Focus on Production of New Materials

The consultants found that the great majority of foreign investment in the industry (HFT 4.0 billion in 1990) has been focused on the production of materials. The objective of the foreign investor, as well as the local partner, is to take advantage of new product and/or production technology and lower production costs to capture a significant portion of the depressed local market. Until the local market and other Eastern European markets recover,

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[10]Sources: György Garai, Brick & Tile Industry Trust; Árpád Csaba, Romhányi; Lajos Kocsis, Sopron; János Köteles, Kunság Fenster.

[11]Zlakerámia, Pietra Építési Kerámiagyár, Alföldi Porcelángyár, Budapesti Porcelángyár and Romhányi Építési Kerámiagyár.

export of some 60–80 percent of their production to Western Europe is planned.[12] In several instances foreign investors have gained majority interest and control of companies formerly controlled by the Hungarian partners. Salgótarján (glass wool insulation) and Hungarian-Weinerberger (brick) are two examples.

Lack of an Industry-by-Industry Restructuring Policy

The restructuring and privatization of the building materials/products SOEs has proceeded much more slowly than is the case with the construction SOEs and no industry-by-industry strategy has been developed to guide investment decisions. Priorities among industries and companies have not been established and no targets have been set for the type and amount of investment needed in each industry. Investment policy is in effect being established by the international investors. This would appear to be beneficial except for the fact that these decisions are being made primarily on the basis of export potential as opposed to the current or future needs of the Hungarian housing construction market. MIT has not taken sufficient action to encourage the development of an overall policy.

Delays in Restructuring and Privatization

The absence of industry-by-industry policy, in the view of the consultants, has also delayed restructuring and privatization, particularly in the brick, joinery and tile industries. Individual companies have been left to search for foreign and local investors or partners on their own without support from MIT or SPA. The search for investors or "saviours" to provide new capital for operations and modernization has delayed the critical restructuring decisions and contributed to further deterioration of the financial condition of these companies. The expectation has been that new capital will solve all their problems. An exception to this is the case of Salgótarján, where although left alone to search for a new product line to utilize their excess glass making capacity, they were successful in attracting a Japanese investor.

Risk of Market Monopolies in Some Industries

Industry Wide. The lack of an overall policy and guidelines for restructuring, privatization and investment has also permitted one or two manufactures to monopolize the markets for particular products potentially limiting competition, creating price and supply distortions, and discouraging any further investment in that industry.[13]

Brick. An Austrian manufacturer, currently operating the Hungarian-Weinerberger facility, appears to be positioning itself to acquire strategic production facilities throughout Hungary in order to eventually dominate the Hungarian brick industry.

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[12]Source: Balázs Bokor, Terranova.

[13]Source: Sándorné Dani, Budai Brick.

Insulation. There are only two glass wool manufactures in Hungary, both with foreign partners and both with significant surplus capacity in the current market. The glass wool producer interviewed by the consultants, Salgótarján, converted an unused sheet glass manufacturing facility to produce insulation with the investment assistance of its Japanese partner.

Joinery. Velux has bought out its Hungarian partner, Fertôd, and now has 100 percent control of a company that has 90 percent of the skylight market in Hungary.[14]

Lack of Cost Control

The SOEs in the tile and joinery industries demonstrated an inability or lack of commitment to control overhead and production costs, producing less and less output with the same cost structure. The rising costs per unit of output are shown in **Appendix E**. This problem also applies to the restructured materials production units of the construction SOEs.

Materials Subsidiaries of Construction SOEs Not Privatized or Market Oriented

The newly created materials manufacturing units (KFTs) of the restructured construction SOEs are not actually privatized companies since they are usually tied in a legal, management and marketing sense to the parent company and remain wholly or majority State-owned. Their primary purpose is to service and support the parent company, and therefore they lack a competitive market orientation and capability. This is in marked contrast to the joint venture building materials companies that construction SOEs have established with foreign partners.

3.3.2.2 Organizational/Managerial

Absence of a Market and Profit Orientation

The materials SOEs were established for the same reason the construction SOEs were established: to execute a national housing program. Of course there were other construction markets for their products but housing was the primary market. As production units, their prime objective was to produce large quantities of a limited range of product types with fixed overheads and a steady market. If this could be achieved, a modest profit would be made. However, with the decline in the demand for new housing construction and the evolution of a diversified and custom market with competition from better designed, higher quality domestic and imported products, these companies have lost market share and been unable to respond effectively.

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[14]Source: András Khaut, Fertôd.

Limited Impact of Trade Associations

Industry associations have not developed mission statements, nor do they appear to have adequate financing to perform many of the traditional roles of representation, technical assistance, standards development and enforcement, marketing and technical exchange. The Brick & Tile Industry Trust is the most active association representing building materials manufacturers, performing many of the traditional roles of a trade association in a western country.[15] Both the brick and tile industries are also represented in a technical capacity by Szikkti. The joinery and insulation industries do not seem to be represented by associations operated specifically for those industries.

Lack of Business Planning

The lack of sound business planning is evident in the restructuring and privatization plans, especially for the brick, tile and joinery companies. Most of the business plans do not reflect the financial management, marketing and technical innovations that will be required for a company to survive and become profitable in an evolving marketplace. The business plans should address all the following issues as a matter of priority:

- Reduction of management and overhead costs
- Implementation of production efficiencies, both labor and resources (raw materials, energy, etc.)
- Identification of new markets (domestic and import)
- Implementation of quality standards
- Identification of new product opportunities
- Development of new sources and methods of financing

3.3.2.3 Technical/Operational

Surplus and Inflexible Capacity

Industry Wide. The newer privately owned companies have been organized to be more flexible, accommodating smaller production runs of a custom nature.[16] Existing SOEs, with equipment designed for large production runs of standard products, are finding it difficult to remain competitive.[17]

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[15]Source: György Garai, Brick & Tile Industry Trust.

[16]Source: János Köteles, Kunság Fenster.

[17]Source: Lajos Kocsis, Sopron.

Joinery. The large manufacturers like SOFA have equipment designed for large runs of a standard product line.[18] Not only do they now have surplus capacity but their plant and equipment can not respond to the new market for a broader variety of custom products without significant downtime. In contrast a newly formed privately owned custom manufacturer, Kunság Fenster, is able to reconfigure their machinery quickly to accommodate production line changes. The owners of this company are prior employees of DUFA, the sister company of SOFA.

Brick. Many of the older brick operations are quite small and labor intensive.[19] Capacity is directly dependent on the number of employees. If the social policy is to not lay off workers, then capacity remains inflexible and inventories continue to rise as sales shrink.

Tile. The Romhány tile manufacturer has recently invested in Italian-made production equipment that is relatively efficient, especially in terms of energy use. However, this represents a relatively small proportion of their production capacity and the deputy manager has indicated that this may be "too little and too late." The company's overall capacity is approximately 4.5 million square meters. Due to reduced demand and outdated technologies some of the production lines are operating at 65 percent of capacity or less. Employment has decreased by more than 30 percent over the last two years.

Inferior Quality Compared to European Standards

Industry Wide. With few exceptions, Hungarian building materials and/or methods of manufacturing do not conform to Western European or EuroNorm standards (see **Exhibit 3.10**).[20] All manufacturers expressed a desire to meet international or Western European standards, although efforts to accomplish this appear to be disorganized and uncoordinated.

Privately owned companies with foreign partners are closer to achieving international standards of quality and production. This is due either to more recent capital investments in newly designed production facilities or their intention of meeting the demands of the export market. The capital investment required to upgrade production equipment and processes is not readily available in Hungary. Foreign capital is being sought by most of the companies in the brick, tile and joinery industries.

Generally, materials produced for commercial and institutional construction are of higher quality than that produced for residential construction.[21]

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[18]Source: Lajos Kocsis, Sopron.

[19]Source: Ferenc Illés, Budai Brick.

[20]Source: Árpád Kunvári, Szikkti; and Koros Kovacs, ÉMI.

[21]Source: István Beliczky, Épkomplex.

Exhibit 3.10
THE QUALITY OF CURRENT HUNGARIAN BUILDING MATERIALS VS. WEST EUROPEAN STANDARDS

Characteristics	Problems
BRICK	
Dimensions	• Do not always match building modules • Dimensional tolerances 50% greater
Density	• Variation greater than permitted
Compression Strength	• Class 3 is lower
Cracking	• Hungarian standards allow larger and deeper
Density/Compression Strength Ratio	• Classes 2 and 3 lower
Thermal	• No significant problem
CERAMIC TILE	
Quality Classes	• Different quality classes not allowed in Western Europe
Dimensions	• Allowable tolerances greater
Surface Quality	• Fewer indicators required
Flex Strength	• Hungarian standards lower
Temperature Variation	• Hungarian standards lower
Glazing	• No crack resistance standard • No moisture content standard • No chemical resistance standard
(GLASS WOOL) INSULATION	
Materials	• Meets Western European standards
Products	• Differences in density standards • Differences in thermal conductivity standards

Source: Dr. Árpád Kunvári, Szikkti.

Brick. Some of the structural brick products produced by the leading manufacturers, Budai Téglaipari and Hungarian-Weinerberger, approach international standards. Face or clinker brick does not meet international standards for color, density, leaching, breakage and dimensional uniformity.[22]

Ceramic Tile. Only Class 1 Hungarian tile, such as the new products produced by Pietra, meets EuroNorm standards. Class 2 and Class 3 do not. One of the biggest problems is dimensional uniformity.[23] Domestically produced tile is inferior in quality to Italian tile in particular, which is capturing an increasing share of the market. Currently, Hungarian regulations are conflicting as both old and new testing standards are valid.[24]

Insulation. Hungarian produced glass wool products comply in most respects with Western European standards. The "Therwoolin" products of Salgótarján meet DIN standards.[25]

Outdated Production Facilities

Brick. Even the most up-to-date facilities require large capital investments, especially in the areas of energy conservation, quality control and finished goods handling.[26]

Tile. Hungarian tile producers are burdened with production lines designed for large runs of a single style.[27] Not only is the quality not comparable with the Italian manufacturers but the range of styles and colors is much more limited. Many tile production lines are outdated and inefficient, especially in the area of energy use.

Insulation. The two Hungarian glass wool manufacturing facilities are new and up-to-date. The management of the Salgótarján company declined to provide the consultants any financial information, including their costs of production.

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[22]Source: Árpád Kunvári, Szikkti.

[23]Source: Árpád Kunvári, Szikkti; and Árpád Csaba, Romhányi.

[24]Source: Árpád Kunvári, Szikkti.

[25]Source: Árpád Kunvári, Szikkti.

[26]Source: Sándorné Dani, Budai Brick.

[27]Source: Árpád Csaba, Romhányi.

3.3.2.4 Market/Marketing

Entry of Small Custom Manufacturers

The domestic joinery market is changing; today most orders are for relatively small quantities of a varied and custom nature.[28] Volume production equipment and fixed overhead make it difficult for large manufacturers to compete in the custom window market.

Absence of Market Studies

In a market oriented economy the introduction of new materials and products is usually preceded by extensive market studies to determine the likely acceptance of the product in the market place. While it was likely that foreign partners investing in new enterprises in Hungary undertake their own market studies, the SOEs and Fertôd Cooperative did not show any evidence of having adequately researched the market for the new material/product production ventures they were setting up on their own or with local or foreign partners.

Competition from Foreign Manufacturers

Industry Wide. Imports only appear to have effected products like ceramic tile, sanitary fixtures and hardware, where superior design/selection and sophisticated marketing are important to sales.

Ceramic Tile. Import liberalization has has had a negative impact on the sales of Hungarian tile manufacturers.[29] Western European tile companies are more sophisticated than Hungarians in terms of marketing and retailing and offer a much wider range of styles and colors, particularly important in a competitive market.

Joinery. Foreign (Austrian & German) hardware manufacturers are beginning to market their products to Hungarian manufacturers.

Potential International Market

Industry Wide. While some existing companies have sought to establish new export markets for their products, virtually all newly formed materials manufacturers have targeted a substantial portion of their production for export. In the case of the foreign joint ventures, with the exception of Salgótarján, they have sought an export market for up to 80 percent of their production.[30]

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[28]Source: Lajos Kocsis, Soproni; János Köteles, Kunság Fenster.

[29]Source: Árpád Csaba, Rombányi.

[30]Source: Balázs Bokor, Terranova.

Brick. At current production cost levels it would be feasible to export Hungarian made brick products to neighboring countries.[31] However, the quality and dimensional stability standards of these products will need to be upgraded in many cases.[32]

Insulation. The two Hungarian glass wool manufacturers have greater capacity than current demand levels warrant.[33] These manufacturers have steadily increased export sales to supplement lagging domestic sales, and further potential increases are possible as these products substantially meet Western European standards.[34]

Undeveloped Distribution Systems

Industry Wide. Manufacturers are exploring new methods for distributing their products, including direct sales, regional distributors, private retail outlets, trading companies and international "barter" arrangements.

Brick. Hungary can be served by as few as three or four manufacturers, assuming the adequacy of material transportation and distribution.[35]

3.3.2.5 Economic/Financial

Fixed Overheads and Large Payrolls

Companies with large fixed overhead costs and payrolls and declining sales are finding it difficult to remain competitive given the consequent increases in unit costs. Even in cases where companies have taken steps to reduce overheads, these actions often have come too late and are too modest to stem a rapid rise in losses (see **Appendix C.4**). Often social reasons may have delayed staff reductions as was the case with the construction SOEs. (See Section 3.3.1.2, Emphasis on Short Term Survival Rather than Long Term Viability.)

Large and Growing Inventories

The tile and joinery companies interviewed did not respond early enough to the decline in sales and continued to produce at levels beyond what the market was willing to absorb. This increased inventories significantly as shown in **Appendix C.** Although production has been

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[31]Source: Ferenc Illés, Budai Brick.

[32]Source: MIT.

[33]Source: László Varga, Salgótarján.

[34]Source: János Köteles, Kunság Fenster.

[35]Source: Sándorné Dani, Budai Brick.

cut from its peak, inventories continue to grow while sales continue to decline faster than production cuts, certainly much faster than the cuts in overhead costs.

Escalation of Material Prices

Industry Wide. The escalation of material prices over the last two years has averaged more than the level of inflation for the economy as a whole. The escalation of construction costs in 1990 was only 17 percent[36] indicating that the operating and profit margins of contractors are being squeezed by the material suppliers as contractors attempt to remain competitive.[37] Many materials manufacturers and suppliers appeared unwilling to offer discounts despite lagging sales and rising inventories.

Brick. Hungarian brick manufacturers own their own mines, assuring a stable supply of raw materials. They have been impacted, however, by the steep rise in energy prices (see High Energy Costs below).[38]

Joinery. All of the wood and most of the paint and stain used in the joinery industry is imported. Due to the devaluation of the Hungarian forint, the prices of these components have escalated. While all of the sheet glass used is produced domestically, the price of glass has also escalated due to higher energy costs.

High Energy Costs

Industry Wide. Energy costs that were subsidized until 1990 and have now been deregulated. In all of the industries examined, the movement to full market prices for energy has had the largest impact on production costs.[39] In many cases capital investments to reduce energy use have been more than offset by increases in the unit cost of energy.

Brick. Energy currently accounts for 30–32 percent of production costs according to the Brick & Tile Industry Trust.[40] Energy costs increased 80 percent in one year. With modernization it is possible to reduce energy costs to 20 percent of production costs (2,500 megajoules per 1,000 bricks versus 5,400) at today's prices.[41]

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[36]Source: MIT.

[37]Source: István Beliczky, Épkomplex.

[38]Source: György Garai, Brick & Tile Industry Trust.

[39]Source: György Garai, Brick & Tile Industry Trust; Dani Sándorné, Budai; Árpád Csaba, Romhányi.

[40]Source: György Garai, Brick & Tile Industry Trust.

[41]Source: Dani Sándorné, Budai Brick Company.

Lack of Credit/Finance

Industry Wide. Most Hungarian manufacturers do not have the financial resources to undertake the research and to institute programs for the upgrading of products, production techniques and quality control procedures. All manufacturers have obtained or are looking for foreign capital to finance operations, purchase new equipment or upgrade existing equipment and develop new products.

Brick. The larger, more economically sound companies that have undertaken programs to modernize production technologies within the last five to ten years are in a better position to survive in the current market. The leading Hungarian brick manufacturer, Budai, has prepared a proposal for financing the development of several new brick and roof tile products as part of its privatization plan. It has not been successful in attracting the necessary financing as yet.

Joinery. Foreign equipment manufacturers have provided equipment, either through leases or financing agreements, to several of the newest Hungarian custom window manufacturers. Kunság Fenster, for example, was unable to secure domestic or foreign financing for the purchase of equipment and negotiated a barter arrangement whereby quantities of windows are delivered for sale in the equipment manufacturer's country.

3.3.2.6 Legislative/Legal

Lack of Guidelines for Joint Ventures and Production Agreements

The building material SOEs as well as the subsidiaries of the construction SOEs and the private construction companies interviewed have "been left to their own devices" to negotiate and form joint ventures, production arrangements and licensing agreements with foreign enterprises. It would appear that some of these ventures could have been structured to be more equitable for the Hungarian partner, for example in the case of the venture between Fertôd and Velux.

Uncertain Relationship Between MIT and the Companies

Many manufacturers are unsure of the role MIT should play in the industry and others are skeptical about the ability and willingness of MIT to assist the industry during this period of economic transformation. Even within MIT there appears to be a lack of agreement on the role MIT should play in the promulgation and enforcement of standards related to the quality and performance of building products.

3.3.3 Assessment of the Private Construction Companies

3.3.3.1 Strategic Policy

Embattled Profile of Emerging Private Construction Companies (PCCs)

Small privately-owned construction companies (PCCs) appeared to be invariably in a combative mode, given the adverse economic environment. They were typically short of cash, without credit, and understaffed. Yet they were often growing, profitable and appeared headed for success. In fact, PCCs doubled their output to 27 percent of total construction investment between 1989 and 1990.[42] Top managers were younger and generally from technical backgrounds; most owed part of their companies' success to adoption of innovative technologies or creative business management strategies. Many PCC managers came from SOEs, and talked of having recruited their best employees from their old companies.

PCCs represent the future of Hungary's transformed housing construction industry and its opportunity to become a competitive part of the European Community. They are battling to succeed in a slumping housing market, with little or no financing or government support. PCCs will be the basis for the industry's growth as it reemerges from its present economic slump.

Lack of Government Support of PCCs

The consultants interviewed six PCCs and five private sector materials manufacturers in Hungary (see **Appendix A**). They appeared to have no contact with MIT nor had received or perceived any form of support from MIT or other government agencies. As several of these PCCs represent excellent examples of the emerging private sector construction industry, MIT and other government agencies would benefit from a dialogue with these companies in its formulation of policies to support the transformation of the industry. PCCs' business plans could provide the government with insights into trends, industry problems, constraints to developments, and other factors crucial to policy development. PCCs could equally benefit from information and support they could gain from the government, particularly with regard to early notice of policy changes and new programs.

Lack of Specialty Contractors (Subcontractors)

The concept of subcontractors or specialty contractors focusing on just one aspect of construction (e.g., foundation contractors, window installers, electrical contractors) is new to Hungary. The emergence of subcontractors has been the result of either the restructuring of an SOE whereby a specialty division is created as a new KFT, or a new business venture started with specialty contracting at its core. In the SOEs, these specialty trades were integrally

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[42]Source: MIT.

connected to other parts of the vertically integrated construction enterprise. However, even after restructuring, these new KFTs continue to be supported by the parent company as customer, advisor, lender and supplier of land, buildings, equipment and even financing at favorable rates. With the dramatic decline in the housing market this support has been or will soon be drastically curtailed or even discontinued. In this event these KFTs will need to readjust quickly and profoundly, but the consultants found little evidence that they are able or willing to do so.

3.3.3.2 Organizational/Managerial

Small, Vertically Integrated Organizational Structure

PCCs appeared to be "small businesses" as defined in the US, typically with fewer than 100 employees. All but Inga, which specialized in foundation work, were vertically integrated and undertook all phases of the construction process. This appeared to be by necessity rather than design due to the limited numbers of subcontractors. PCCs were interested in increasing their reliance on subcontractors where they are available and considered reliable.

PCCs Assuming Some Developer Roles

The Assessment identified and interviewed a number of entities that were performing all or part of the developer's role in the absence of a mature real estate development industry. Those performing developer functions, singly or in joint venture, included:

- Builders and general contractors (Inga, Épkomplex, Hírös, Altus)
- Banks (Ingatlan Bank)
- Municipal governments (District XVIII, District XII, District V)
- Private entrepreneurs
- SOEs (HÅÉV, ZÅÉV)
- Cooperatives (Fertôd, Vaskut)
- Design professionals (Profinvest)

With a few exceptions, the development of housing projects was undertaken without adequate market analysis or financial feasibility studies. The formal training of developers does not yet exist, and the roles of developers within the industry, although needed, have not yet been defined.

If government policy follows Western European models, developers will be less entrepreneurial and will respond to government requests for bids on development projects. In such cases government is, in effect, setting regional or local planning policy, and developers are implementing it at their risk. Usually these European developers are larger companies with considerable resources. Alternatively government policy might assume the more entrepreneurial, US-style, in which large and small developers take the initiative for new housing projects,

thereby having a greater impact on planning issues. In this case development can occur in a greater variety of sizes and locations and smaller developers can more easily participate, particularly in small to medium sized projects.

Existing Trade Associations Not Well Regarded

Trade associations, including the recently established new entities interviewed by the consultants, were not highly regarded by the management of PCCs. There were suspicions as to the motives of these SOE dominated organizations and a spirit of collaboration and mutual support between PCCs has not emerged as yet. New associations may need to be created to serve the needs of the PCCs.

Labor and Management Skills Adequate

Labor skills are adequate but incentives are required to retain workers or for workers to improve productivity. It appeared that although better workers were able to earn higher hourly wages, other incentives were not prevalent for increased labor productivity or improved performance.

Construction worker skills appear to be, and are considered in the industry to be, adequate by international standards. However, many of the highest skilled workers have been attracted away from housing construction by commercial contractors, who can afford to pay higher wages.

Management skills were sound, despite the fact that all the PCCs interviewed could benefit from training in marketing, cost control, scheduling, and business planning. Senior management, often the owners, were clearly driven by the will to succeed, and appeared to offset most shortcomings with hard work. The enthusiasm and positive attitude was in marked contrast to the frequent resignation or indifference of SOE management.

3.3.3.3 Technical/Operational

Use of Technology as a Basis for a Business Venture

PCC interviews indicated that a primary basis for their establishment as new companies was new technology: improved or innovative management systems and construction methods that promised opportunities for success not enjoyed by SOEs. New techniques for constructing concrete structures formed the basis for two companies, western methods of construction management were the basis for another, and computer-based construction scheduling systems were utilized by two more.

PCCs are Relatively More Efficient and Flexible Compared to SOEs

PCCs appear to be much more efficient than SOEs, and many have based their businesses on new and more flexible technologies (eg. lift-slabs, innovative forming/curing, etc.) which can respond suitably to small orders and variable designs.

The housing construction sector is in transition from predominantly large SOEs and relatively few independent small contractors to growing numbers of small and medium size contractors including the descendants of the restructured SOEs. This transition has been paralleled by a trend away from standard designs and monotonous, prefabricated buildings of the SOEs toward custom designs and varied products based on traditional construction methods. This last phenomenon, the return to traditional forms of construction, has continued the inefficient over-design of building elements, with excessive material quantities, construction costs and construction schedules. The industry should be encouraged to make use of factory-built components and building system technologies that have flexibility in design, are lightweight, and can be used economically in small projects/quantities.

The Housing Rehabilitation Market Poses Problems

Rehabilitation of the existing housing stock is potentially a major market for construction services and an opportunity for the growth and revitalization of the housing construction industry. However, a number of serious problems must be addressed if this potential market is to be attractive to the PCCs. These problems include:

- The existing condominium law makes financing building rehabilitation difficult.
- Municipal governments that now own the rental stock have insufficient financial resources even to maintain the stock.
- Rehabilitation requires more highly skilled workers who have been attracted to commercial and other construction projects where wages are higher.
- Estimating and bidding on rehabilitation projects is much more complex than for new construction.

3.3.3.4 Market/Marketing

Lack of Marketing Strategies

PCC marketing programs appeared to be directionless and indicated a lack of marketing knowhow or experience. Although many projects were subject to competitive bidding, most often projects accrued to PCCs by apparent luck, happenstance, through acquaintances and through other informal relationships.

Diversified Markets/Lack of Specialization

In the battle to survive, all of the PCCs were diversifying their markets to become much less dependent on housing, at least in the near term. While management in several areas would prefer to specialize, this was impossible in the current economic climate. PCCs undertook many projects as a result: residential, remodeling, commercial, institutional and private homes.

Adverse Impact of "Black Market" Labor and the Self-Built Market

As mentioned earlier, individuals who build their own houses using extensive amounts of "black labor" labor have an impact on the construction market, on tax revenues, and on the construction industry's transition to a market economy. The impact on the emerging PCCs is that a large potential market, particularly for smaller PCCs, will not be available in the near future unless this practice is reduced or eliminated by tightening and enforcing building regulations. The incorporation of the traditional informal sector into the newly forming formal housing construction sector is a high priority and requires further study.

3.3.3.5 Economic/Financial

PCCs are Facing Severe Financial Constraints

Despite limited capitalization, lack of credit, and a shrinking construction market, most of the PCCs were finding ways to survive in the present climate of economic recession. This environment will obviously curtail their growth but does not seem to threaten their survival at the moment. However, a prolonged recession in the construction industry will likely result in the failure of many of the companies interviewed.

Land is Available to PCCs but Land Costs may Escalate

Future land costs, with infrastructure, may soon escalate significantly as most of the current projects by PCCs are being constructed on land with relatively low historic costs and existing infrastructure.

Housing development costs often included land costs that appeared to be below current market prices and infrastructure costs (roads, sewage, water, power, etc.) that were very low or even nonexistent (i.e., it was assumed the municipal government would provide them). Often land was donated or provided at nominal cost to contractors or developers by municipalities who were eager to see housing built in their jurisdictions; sometimes infrastructure was similarly subsidized. Where development costs were provided, land and infrastructure totaled 15 to 25 percent of construction costs, with infrastructure at 5–10 percent.

There did not appear to be a shortage of land, only serviced land for larger projects. Many in-fill sites exist but as the supply of land diminishes and demand increases its real value in

the marketplace will most likely escalate. Also, the true cost of infrastructure will need to be included in the cost of development. These two trends may result in land costs much higher than seen at present, with possibly adverse effects on affordability.

High Collateral Requirements for "Construction Loans"

A construction loan in Western terms is usually defined as a loan secured by real property and the value of construction in place. Additional security or collateral is usually required but the principal security is in the form of a lien on the property. Neither the OTP nor commercial banks are currently prepared to provide loans for construction on this basis in Hungary due to the perceived high risk and the absence of a readily enforceable foreclosure law. Hence only short term commercial credits are available, secured by collateral pledged to the Bank and amounting to 1.5–2.5 times the loan value.

Lack of Credit History

Because of the economy's transformation, most companies, entrepreneurs and individuals have no credit history, making assessment of the borrower's creditworthiness difficult, thereby impeding the granting of credit. There is no credit reporting network.

3.3.3.6 Legislative/Legal

Lack of Dispute Resolution

A quick, inexpensive system of dispute resolution such as arbitration, does not exist in the construction industry. Concerns were frequently expressed about the time and complexity required for settlements of claims and disputes in the court system. The delay in settlement is often more harmful than its cost.

4 RECOMMENDATIONS

4.1 Future of the Housing Construction Industry

4.1.1 Importance of the Other "Actors"

The key "actors" in the housing sector have been identified and the key impacts on the construction industry of those "actors" who are outside the subsector were described in Section 3.1. It is essential that all of the issues facing the housing sector be addressed concurrently if major improvements are to be achieved in the construction subsector. While it would be inappropriate as well as impossible for this Assessment to address all of these issues, it is nevertheless important to identify where actions outside the subsector would be necessary if actions proposed within the subsector are to be affective. The consultants' recommendations include internal (to the subsector) as well as external actions and have been arrayed in the following categories to provide an industry-wide perspective:

- Strategic Policy
- Organizational/Managerial
- Technical/Operational
- Market/Marketing
- Economic/Financial
- Legislative/Legal

4.1.2 The Future Housing Sector

The preferred characteristics of a transformed housing sector in Hungary, from the perspective of the construction subsector, were discussed and agreed with MIT at the end of Phase II:

- A construction industry that is fully self-supporting and market-driven
- A contracting industry competitive with European contractors in terms of quality, price and performance
- A building materials and products industry consistent with European standards
- A mature private real estate development/investment industry
- A banking industry that provides short term and long term credit/financing for each of the "actors" involved in the production and consumption of housing
- A government that limits its regulatory involvement to establishing and enforcing codes and standards for health and safety

- A government that fosters fair and open competition in the market place
- An insurance industry that provides coverage for design, materials, products and construction liabilities

The consultants have endeavored to address the recommendations toward supporting this image of a transformed housing industry and toward a new "culture" in the construction subsector within a framework of immediate actions, medium and long term policy actions and areas and issues for further study.

4.2 Immediate Actions

4.2.1 Strategic Policy

4.2.1.1 Review Privatization Programs and Prepare New Industry-Wide Program

MIT in consultation with the SPA should prepare a comprehensive industry-wide strategy for restructuring and privatization that has as its objectives the new "culture" of the industry that the MIT has as its goal (see Section 4.1.2). The consultants believe that the current and most common approach being taken for restructuring the SOEs involved in construction does not provide the most robust opportunities for survival of the new entities created and, further, the decisions are taken in isolation (e.g., company by company) instead of within an industry-wide context. The strategy should be developed taking into account projections of the likely demand for housing construction services (both new and rehabilitated housing). It should consider mergers and acquisitions within the industry, for example, since markets based on county political boundaries (current SOE markets) do not make sense in the transformation to a free market economy.

4.2.1.2 Joint MIT/SPA Strategy for Intervention in Restructuring Process

The evidence suggests that a rapidly accelerating decline in the financial position of virtually all the SOEs involved in construction and some involved in materials production has resulted from lengthy delays in taking the difficult decisions necessary to restructure and revitalize the companies. Based on a newly adopted industry-wide strategy for restructuring and privatization, it is recommended that joint action be taken by MIT and SPA to prod these companies to take the appropriate decisions regarding immediate asset sales, reductions of management and staff, cost cutting and debt reduction. This recommendation applies particularly to Borsod, Békés, Dunabau, HÅÉV, SOFA and Romhány. An early review of all the SOEs is recommended as it is believed that several others will benefit from early prodding by MIT and SPA. Failure to take this action is likely to result in the majority of these companies becoming insolvent and in cases where they are already insolvent, continuing to incur debts well in excess of the market value of their assets.

4.2.1.3 Establish Guidelines for the Restructuring and Privatization of the Materials/ Products SOEs Including Manufacturing Units of the Construction SOEs

Formal guidelines should be established for the evaluation of privatization/transformation plans. Approval of plans should be contingent on the following criteria:

- Sound fiscal planning
- Detailed marketing and distribution strategies with a view to new markets, especially those with export potential
- Upgrading of product and production technologies with the goal of meeting Western European or EuroNorm standards within five years
- Concepts for attracting debt or equity capital
- Creative ideas for the use of under-utilized or unutilized production facilities
- Plans for the development of new products

In addition, the privatization plans of individual manufacturers should be reviewed within the context of the entire industry. The necessity for each production facility, and consequently its likelihood of surviving in a free market economy, should be considered relative to current and projected future demand for the materials.

4.2.1.4 Establish an Office of Building Technology in MIT's Department of Building

MIT should establish a new unit in the Department of Building whose role will be to focus on the issues and promote the introduction of new technologies in both the construction and building materials/products industries. The staff of the office should be made up of individuals with direct working experience in the industry. This office should be considered the predecessor of a private industry sponsored building technology research institute similar to the German institute Bauzentrum, for example.

4.2.1.5 Sponsor a Symposium on Investment Opportunities in the Hungarian Construction Industry

MIT, through its newly established Office of Building Technology, should sponsor an international symposium to introduce executives from foreign building materials and products manufacturers to the proposed policies for the transformation of the Hungarian construction industry, the desire to introduce state-of-the-art technology throughout the industry and the investment opportunities that are thereby created. Currently interest in the Hungarian construction industry has been dominated by the Austrians. Broader international exposure would be beneficial.

4.2.1.6 Monitor Monopolies in Construction Material/Product Markets

MIT should monitor the investment and privatization process to identify where potential monopolies may exist or may be created that could result in price and supply distortions in the market place. The cement, skylight and glass wool insulation industries are examples where this problem may exist.

4.2.1.7 Establish Program to Study the Implications of European Community Membership

MIT should immediately establish a program, in collaboration with the trade associations and consistent with the current status of negotiations for Hungary's associate membership in the European Community (EC), to study the implications of EC membership on the construction industry, especially in terms of competition and standards. The objective should be to identify the parameters that must be met for the Hungarian construction sector to evolve into a fully viable and internationally competitive industry within the EC. The issue of quality and performance standards of building materials/products is discussed separately.

4.2.1.8 Establish a Formal Liaison Between PCCs and MIT

MIT should invite representatives of PCCs and private building materials/products manufacturers to establish a working committee with MIT representatives (see Section 4.2.2.4) to exchange views and to make recommendations regarding public/private efforts to transform the "culture" of the housing construction industry. The PCCs will benefit from an ongoing exchange of ideas and concerns with government on the future role of government in the sector. The liaison should not be a substitute for trade association activities, although its initial aims will be to initiate and maintain contact with the private sector. When trade associations mature to the point where they truly represent PCCs or when new trade associations are formed, MIT can deal directly with them.

4.2.2 Organizational/Managerial

4.2.2.1 Reimpose Financial Reporting Requirements and Audits

MIT should require reinstatement of the quarterly financial reporting for the parent (RT) as well as the subsidiaries (KFTs) of the SOEs while the other immediate actions recommended in this report are implemented. The reduction of financial reporting requirements, while consistent with MIT's efforts to reduce government oversight of the SOEs, is being implemented at a time when the financial condition of most of these companies needs constant monitoring so that prudent policy decisions can be made in a timely manner. All of these companies, whether they have been restructured to one degree or another, are still 100 percent or majority State-Owned Enterprises. This requirement should remain in effect until majority interests in these companies have been sold.

4.2.2.2 Provide Technical Assistance in Preparing Business Plans

A program that would provide immediate technical assistance in preparing business plans should be made available to PCCs and the new subsidiaries of the restructured SOEs through Hungarian based consulting firms with knowledge of the industry and the Hungarian economic environment. This assistance could be co-sponsored by MIT and one of the trade associations and financed through international or bi-lateral grants.

4.2.2.3 Include a Banker on the Boards of Directors of the SOEs

MIT with the support of the SPA should require the SOEs involved in construction as well as those involved in materials production to immediately appoint a banker to their Boards to provide them with an independent financial view and to assist the Boards in making the difficult decisions that, in several cases, they have put off (see Section 4.2.1.2).

4.2.2.4 Reorganization/Reorientation of MIT to Respond to a Privatized Construction Industry

Without abandoning their traditional responsibilities to the SOEs, it is recommended that MIT reorganize its Department of Building to include a unit that interfaces with the PCCs and the trade associations, promotes conferences, seminars and training courses and organizes international trade fairs to demonstrate their strong interest in supporting the evolution of a private sector dominated housing construction industry. As indicated in Section 3.3.1.1 of the Findings, a number of the SOEs interviewed felt MIT was not particularly supportive nor understanding of their problems. Private sector firms were distrustful of both the MIT and the existing trade associations (see Section 3.3.3.1). If MIT is to play a supportive role in the transformation of the industry it will need to transform itself into a responsive, proactive and leading spokesman for the new "culture" it espouses.

4.2.2.5 Sponsor Training in the New Accounting and Financial Reporting Systems

MIT should take the initiative, perhaps supported by SPA, to ensure that management and the accounting departments of the SOEs, as well as MIT's and SPA's own monitoring units, are fully conversant with and trained in the use of the new accounting systems. MIT might sponsor workshops or seminars for the financial officers of the SOEs or prevail upon the SOEs' privatization consultants to provide the necessary training.

4.2.2.6 Audit the Changeover from the Old Accounting System to the New

In addition to reimposing the financial reporting requirements, the consultants recommend that the changeover to the new Western-style accounting system not be done without external audits of each company. The risk is that total understanding of the financial condition of these companies is likely to be lost at this critical juncture.

4.2.3 Technical/Operational

4.2.3.1 Sponsor a Technical Exchange Program

Selected key technical management and operations personnel from both the restructured SOEs and the PCCs should be offered an opportunity to gain valuable experience and insight into the development, introduction and utilization of new technologies in the construction industry in Western countries. This program should be sponsored by the Building Technology Office and financed through grant aid if possible, or by donations from foreign companies interested in participating in the program.

4.2.3.2 Steps to Moderate Construction Cost Escalation

Since construction cost escalation is currently being driven by hyper-escalation of materials costs, the consultants recommend that MIT establish a unit or sponsor the establishment of a private sector agency to regularly collect and disseminate information on material and product prices and to detect price anomalies. This unit could be part of the unit that currently monitors exports and imports of construction materials/products.

4.2.3.3 Steps to Achieve Construction Cost Savings

While it is acknowledged that no immediate steps can be taken to reduce construction costs, it is recommended that MIT take the initiative to address the issue by announcing the studies outlined in Section 4.4 and to sponsor or seek the help of the trade associations in sponsoring conferences and workshops to acquaint members of the industry with the techniques and technologies that are relevant to cost control and cost reduction that were discussed in Section 3.3.1.3.

4.2.3.4 Introduction of EC EuroNorms

The consultants recommend that MIT announce the government's intention to generally adopt EuroNorm Standards for all building materials/products produced or imported into Hungary as part of Hungary's integration into the EC. The methodology, schedule and financing to achieve this would be determined as part of the studies recommended in Section 4.4. It is essential that this early commitment be made to the survival and transformation of the Hungarian building materials industry. The industry is attracting the only significant interest from foreign investors. Approvals of privatizations and joint ventures should take into account the likely competitiveness of the venture in the international market place and its ability to affect a transformation of the existing industry in Hungary.

4.2.4 Market/Marketing

4.2.4.1 Stimulate Investment in Housing Rehabilitation

MIT should take the lead in organizing a working group composed of members of the construction industry, the trade associations, local governments, the Ministry of Finance, the Ministry of Social Welfare and the Ministry of the Environment to make recommendations on practical and financially feasible methods to undertake rehabilitation of the existing housing stock. The World Bank has already indicated an interest in focusing its first housing finance project on the renovation of the existing stock. It appears, however, that the housing sector lacks the institutional framework to implement such a program. The MIT has indicated it is well aware of the need, but must take such an initiative as part of its new promotional role.

4.2.4.2 Encourage Entry into Non-residential Markets

As part of an industry-wide program for restructuring and privatizing the SOEs and encouraging the development of new private construction companies, MIT and the SPA should encourage the diversification of these companies into other construction markets including civil works. This diversification would occur through mergers, local and foreign joint ventures and aggressive marketing. The consultants' findings indicated that both SOEs and PCCs benefitted from a rapid diversification of their activities, particularly the entry into non-residential building construction. While the institutional and commercial markets may not have been entirely new to these companies, the early recognition that their growth, if not their survival, depended on their success in competing for this work, has given some companies like ZÅÉV and Békés the ability to wait for the recovery of the housing market.

4.2.4.3 Sponsor Training in Market Analysis and Marketing

It is also recommended that the trade associations and MIT co-sponsor training for emerging private sector and SOE subsidiary companies in market analysis and marketing of both construction services and materials/products. A key component of sound business planning is an analysis of markets and one of the keys to implementing a business plan is marketing. The general absence of sound business planning in the SOEs and the specific lack of market analysis prior to entering new markets or developing new products will not yield the hoped for results. Marketing skills are an essential component of the new "culture" the MIT is trying to affect.

4.2.4.4 Promote the Introduction of State-of-the-art Technologies by the Materials/ Products Manufacturers

MIT's proposed Building Technology Unit should also take the lead in promoting the use of only market oriented state-of-the-art technologies in the materials/products industries, discouraging the introduction of out-dated manufacturing systems and products that will not serve to transform the industry into an internationally competitive position. The example of

the Hungarian communications industry is appropriate: a conscious decision has been made to leap from pre-war to twenty-first century fiber optic technology.

4.2.5 Economic/Financial

4.2.5.1 Liaise with the Institution(s) Responsible for Housing Finance

The consultants agree with MIT that government economic policy indicates that they can not and should not intervene to stimulate housing demand. MIT, however, as the government spokesman for the housing construction industry, should liaise with the Ministry of Finance to institutionalize a housing finance system at the earliest possible time. This housing finance system should be able to at least respond to the demand that exists and fill the gap left by the departure of the OTP from the construction and mortgage lending market.

4.2.5.2 Resolve Valuation of Contingent Liabilities for Construction Guarantees

The consultants recommend that MIT intervene to resolve the dispute between SPA and OTP and the SOEs regarding the valuation of their contingent liabilities, resulting from their construction guarantees, SPA and OTP are concerned that large contingent liabilities will be transferred to them, with the liquidation of several of the SOEs. They have, thus, valued the liabilities higher than the SOEs have.

4.2.6 Legislative/Legal

4.2.6.1 Promote the Enactment of a New Housing Act

MIT has a major stake in the content and early enactment of the proposed new Housing Act. The National Bank, the Ministry of Finance, the Ministry of Social Welfare, the Ministry of the Environment and the Ministry of the Interior, among others, have been providing input into the new legislation. However no one seems to be contributing input from the supply side. Consistent with its new role as the spokesman for a transforming housing construction industry, MIT should immediately seek a voice in these ongoing discussions with the following objectives:

- To establish the "rules" for public and private sector participation in housing production and rehabilitation
- To identify how housing production and rehabilitation will be financed
- To ensure recognition that housing suppliers will respond to expressed market demand rather than government "orders"
- To ensure that any policies on rental and social housing are consistent with the objective of a market oriented construction subsector
- To clearly identify the constraints that the supply side is experiencing that will impact its ability to respond to any new housing initiatives (i.e., virtual absence of credit in the industry)

4.2.6.2 Promote the Enactment of an Enforceable Foreclosure Law

MIT should also specifically seek action on a form of foreclosure law that will encourage lenders to provide market rate construction loans to contractors or developers and mortgage loans to consumers, assuming this is not part of the new Housing Act. True construction and mortgage lending requires the ability of the lender to place an enforceable mortgage lien on real property and in the case of default, recover the property and evict the borrower. Although technically a law providing for the recovery of residential property exists, only a few OTP officials believe it to be enforceable. None of the bankers, developers, contractors or officials from other government agencies felt the current law was sufficient to enable construction lending or mortgage lending for new construction or renovation. Construction lending for new construction, as described in Section 3.2, is actually in the form of fully collateralized commercial credits or personal loans.

4.2.6.3 Promote Enforcement of Building Regulations

MIT, consistent with its proposed new role, should begin a public campaign directed at municipal governments to promote enforcement of building regulations while a proposed study (see Section 4.4.3.3) is underway. The effectiveness of building regulations and their effective enforcement by local governments was beyond the scope of this Assessment. However, as indicated in Section 3.1.2.4, enforcement of regulations at the local level appears to be lax not only in the "self-built" market but also with regard to major projects. With the entry of many new small builders into the market and the severe pressure on costs from the escalation of materials costs, quality and standards are undoubtedly under pressure.

4.3 Future Policy Actions

4.3.1 Strategic Policy

4.3.1.1 Identify Investment Incentives to Promote Housing Production and Renovation

It is acknowledged that providing a stimulus to housing demand is not consistent with current government economic policy. It is recommended, however, to adopt a policy of investment incentives that might make the housing sector relatively more attractive to private sector investors and thereby lead to a more rapid transformation of the industry and growth in investment in new and renovated housing. This approach would be consistent with MIT's new role but would need to be agreed in principal with the Ministry of Finance before the proposed study (see Section 4.4.6) is commenced.

4.3.1.2 Develop "Asian Style" Targeting of Competitive Building Material/Products Industries for Support/Promotion

A second recommended strategic policy, used by several Asian countries, that will also require Ministry of Finance approval, is the targeting for investment incentives of key materials/products industries. The targeted industries could include those where Hungarian enterprise or skills have or could have an internationally competitive position in Europe. This recommended policy could also apply to new materials/products that are only now in the process of being developed. They could, however, become a major industry with significant export potential, given Hungary's strategic position in central Europe.

The Ministry could provide assistance to the development and expansion of these industries through the provision of the following incentives:

- Tax abatements
- Land and/or buildings for production facilities
- Infrastructure
- Expediting of approvals
- Loan guarantees
- Foreign Exchange risk protection
- Technical and legislative assistance

4.3.1.3 Identify Investment and Other Incentives to Encourage Foreign Construction Companies to Joint Venture with Hungarian Firms

The successful privatization of the SOEs as well as the attraction of foreign investment into the Hungarian construction industry (construction companies) would be enhanced if incentives were provided to encourage rather than discourage the formation of permanent and project joint ventures to undertake commercial and residential building construction as well as civil works. MIT should begin developing a set of policies, in consultation with SPA and the Ministry of Finance, that would include regulatory as well as tax and export incentives.

4.3.1.4 Redefine the Role of MIT to Promote Rather than Regulate

While it is recommended that MIT take a number of immediate actions given the critical stage of the industry's transition, these actions should be consistent with the recommended future MIT role of a promoter rather than a regulator. It is considered essential that MIT, while its detailed policies are evolving, "get the message out" that it intends to take on this new role that promotes a market-oriented, private sector dominated housing construction industry. The relationship between MIT and the current trade associations or as-yet-to-be-formed associations should be given careful thought so that the public and private sector can form a supportive relationship rather than an adversarial or competitive one.

4.3.1.5 Promote the Roles of Trade Associations as Primary Spokesmen and Lobbyists for the Industry

MIT should encourage members of the industry to strengthen their respective trade associations or, in cases where existing trade associations are felt by the industry to be ineffective, to form new associations that more directly represent their views. Each industry should develop and support their own spokesman and lobbyist group to lobby not only government agencies like MIT, but also Parliament directly. The roles of these trade associations should also include:

- Standards development, product/company certification and enforcement
- Forum for exchanging ideas and a mechanism for collective problem solving
- Marketing and public relations

4.3.2 Organizational/Managerial

4.3.2.1 Sponsor Training in Business Planning

MIT should seek the assistance of the Western academic community and international and bilateral grant organizations to sponsor short courses in business planning and to develop courses for Hungarian trainers to offer in the future. One approach would involve the use of case studies to present imaginative and successful new business development programs that have been successful in other parts of the world as well as examples from Hungary. The case study approach should demonstrate how SOEs and private companies can address the following:

- Fiscal planning
- Implementation of sound business management principals
- Organization
- Sources and methods of financing
- Transformation of production facilities
- Markets for unnecessary assets
- New markets for existing products
- Marketing and distribution programs
- New product development

International exchange programs of senior managers and business strategists are also recommended to assist Hungarian managers develop the skills to prepare sound business plans.

4.3.3 Technical/Operational

4.3.3.1 Develop Incentives to Promote the Introduction of New Technologies

MIT should create a unit that identifies tax and other incentives to encourage the introduction of new and emerging technologies in the construction sector including construction equipment, manufacturing equipment, materials/products and building components and systems. The unit should also be tasked with monitoring the effectiveness of these incentives from the perspective of developing and maintaining an internationally competitive industry.

4.3.3.2 Develop Policy for the Upgrading of Standards

The recommended adoption of EuroNorms will require an overall policy for the upgrading of technical, performance and quality standards over a period of several years. This policy and its implementation should emerge from the study proposed in Section 4.4. The responsibility for developing and implementing this policy should be given to the proposed Office of Building Technology or preferably to a private sector or non-profit building materials standards institute if one is established.

4.3.3.3 Support Programs for Skill Training in the Use/Installation of New Materials and Technologies

MIT should use its proposed technology unit to identify where Hungarian skilled labor lacks the training to utilize new technologies. In consultation with the trade associations, it should support training programs to introduce the necessary skills. Foreign skilled labor is being used extensively in new commercial construction as Hungarian labor is not as proficient.

4.3.4 Market/Marketing

4.3.4.1 Support the Growth of a Real Estate Development Industry

It is recommended that MIT take the initiative to promote the growth of a real estate industry, an essential "actor" in the housing sector. It can begin this initiative by promoting the government's consideration of investment and tax incentives for entrepreneurs and investors to enter the housing development field (see Section 3.1.2.2), by arranging seminars and workshops to provide short term training and by assisting universities in establishing real estate programs. MIT is well aware that private developers will be essential to the transformation of the housing construction subsector and to the production of new as well as rehabilitated housing in the future. Without developers, the housing construction industry will have no clients with the exception of individual owners. Although some contractors are beginning to develop their own projects, construction companies have traditionally made rather poor developers due to their inexperience in assessing the non-construction related risks.

4.3.4.2 Support the Development of Housing Rehabilitation Programs

MIT should utilize the recommendations of the working group (see Section 4.2.4.1) and the results of the proposed studies (see Section 4.4) to support and promote the preparation of programs for housing renovation by both public and private sector entities. The investment necessary to rehabilitate the existing housing stock has not been estimated but with 27 percent of the housing stock in Budapest alone requiring major renovation, the potential market for construction services is enormous. MIT's role would include information on products, techniques to reduce costs, techniques to reduce disruption, estimating and labor skill requirements. Sponsorship of training programs similar to the current Dutch program should continue with specific emphasis on renovation contracting. In addition MIT should sponsor or co-sponsor seminars and workshops and the preparation of publications on the critical legal and financial issues of housing renovation. The proposed seminars would also address the technical and managerial complexities of renovation work versus new construction that discourage developers and contractors alike. All these issues must be addressed if a housing renovation program is to be successful.

4.3.5 Economic/Financial

4.3.5.1 Lobby Government on the Non-Availability of Financing/Credit

While it is inappropriate for this Assessment to recommend changes in short term government economic policy, nevertheless it is essential that MIT take the lead in bringing the housing construction industry's plight to the attention of the Ministry of Finance. The urgent need to address the lack of financing and credit throughout the industry should be an important concern over the medium term if the industry is to make a timely recovery. MIT, in concert with the Ministry of Finance, should begin by estimating the credit requirements of future housing construction. Discussions should be held with industry leaders, trade associations and bankers to seek consensus on how best to address these credit needs.

4.3.5.2 Lobby Government for a VAT Tax Holiday for the Housing Industry

Consideration should be given to extending the VAT tax rebate for private owner-builders to all purchasers of housing to provide a modest stimulus to demand in the form of increased affordability. It is expected that the fiscal impact will be modest.

4.3.6 Legislative/Legal

4.3.6.1 Promote Standardized Tendering Procedures

MIT, in cooperation with the Ministry of Justice should issue guidelines on tendering procedures including pre-qualification of contractors and the requirements for bid and performance bonds. If new legislation is required this should be drafted jointly by the MIT

and Ministry of Justice. The entry of many new, undercapitalized and perhaps inexperienced contractors has resulted in irresponsible bidding and non-performance.

4.3.6.2 Promote the Enactment of New Regulations to Require Arbitration to Resolve Disputes

In parallel with issuing new tendering procedures, MIT, again in cooperation with the Ministry of Justice, should issue new regulations requiring the resolution of all construction contract disputes by arbitration, using international rules of arbitration where appropriate. Disputes in the construction industry are common throughout the world, especially during the current adverse economic period. The resultant loss of time translates into significant financial losses for all parties and in some cases their demise.

4.3.6.3 Sponsor the Creation of an Insurance Industry that Provides Bonds and Liability Insurance

The need for bid and performance bonding has been well established along with the need for construction liability insurance. The consultants were informed that two European (French and Finnish) insurance companies are entering the market for liability insurance for commercial construction. There is no evidence that any interest has been expressed in the residential market. Foreign contractors have been able to obtain bid and performance bonds from international sources. Hungarian contractors are currently at a disadvantage when bidding on large commercial projects as they do not have access to bonding from these same international sources.

4.4 Issues for Further Study

4.4.1 Strategic Policy

4.4.1.1 Feasibility of Creating an Investment Fund from the Proceeds of Asset Sales of Liquidated Companies

Several SOEs involved in housing construction have been liquidated, while several more are currently deemed insolvent. The consultants believe that more are likely to become insolvent by the end of 1992. It is recommended that MIT discuss with SPA the feasibility of creating an investment fund from the asset sales of liquidated companies. An investment fund could be used to create a pool of equity or investment capital to be reinvested in attractive and promising new ventures or enterprises that are proposed by the remaining SOEs. This fund would not be used for working or operating capital, only equity investment loans, particularly for joint ventures with foreign entities, to secure a more significant ownership position for the Hungarian partner.

Both the International Finance Corporation and the World Bank have shown interest in the housing and construction sector. MIT should consider approaching both agencies to request additional financial resources to support this investment fund.

4.4.2 Organizational/Managerial

No studies are recommended.

4.4.3 Technical/Operational

4.4.3.1 Step-by-step Upgrading of Traditional Construction Technology Using New Methods, Materials, Systems and Products

It is recommended that MIT sponsor a comprehensive study to investigate and recommend the most feasible and cost effective ways of introducing new technologies into the traditional housing construction process. A steering committee made up of private and public sector practitioners could be formed that would provide policy input and guidance to the study and disseminate the results.

4.4.3.2 Identification of Other Building Materials/Products that Impact Quality and Cost

The consultants were asked to investigate only four building materials industries of the many established in Hungary today. During the course of the work it became clear that there are a number of other key materials/products that are impacting the quality and cost of construction. It is recommended that the MIT Building Materials unit sponsor an assessment of the entire Hungarian building materials industry to identify where quality and cost distortions exist in comparison to Western European markets.

4.4.3.3 A Review of Planning, Zoning and Building Regulations and the Effectiveness of Local Governments' Implementation

The Assessment did not focus on the role or actions of local governments in terms of exercising or enforcing planning, zoning and building regulations. However, as mentioned in Section 3.1.2.4, the enforcement of especially building regulations appeared lax in some cases. MIT in cooperation with the Ministry of the Environment should sponsor a review of the effectiveness of these regulations and the effectiveness of their implementation by the local governments. While cases of delays and unpredictable results (quality, workmanship and code compliance) may exist and are of concern in the overall process of delivering housing, MIT's primary concern should be whether current regulations are facilitating or constraining the delivery of housing by the private sector and achieving the desired regulatory results, especially in terms of health and safety.

4.4.4 Market/Marketing

4.4.4.1 An International Market Research Program

A comprehensive market research program should be undertaken to assess the potential markets for Hungarian made building materials in Western Europe, Eastern Europe, the Commonwealth of Independent States (former Soviet Union), Middle East and North Africa. The study should be made part of the program to target key materials manufacturing industries for government support discussed in Section 4.2.1.

4.4.4.2 Feasibility of Rehabilitating Buildings Constructed of Pre-Cast Concrete Panels

As part of its long term interest in promoting the renovation of the existing housing stock, MIT should also sponsor a detailed technical and financial feasibility study of the renovation of housing units constructed of pre-cast concrete panels. Renovation in this case should include both rehabilitation and upgrading and be focused on the structural and mechanical systems of these buildings. An increasing proportion of this stock is in urgent need of major repair. This discourages tenants from purchasing the units when offered the opportunity and negatively impacts the housing privatization plans of some local governments.

4.4.5 Economic/Financial

4.4.5.1 Credit Requirements of the Industry

Section 4.3.5 recommended that MIT lobby government on behalf of the industry to bring attention to the critical credit problems facing both the contractors and the materials suppliers, both public and private. The credit requirements of the industry is an area that requires further study if MIT is to be able to present a well prepared case to the Ministry of Finance and others. It is recommended that MIT prepare a study that investigates the credit requirements from raw material producers to construction financing.

4.4.5.2 Impact of the Use of "Black Market" Labor

Government over the last ten years has permitted a second economy to develop as the predecessor to a true market economy. What is commonly referred to as "black market" labor is actually part of the second economy in the housing construction subsector. While the proportion of housing built with some "black market" labor has most likely increased given the higher proportion of owner-built housing, the consultants were unable to confirm this. At the same time some of the private contractors interviewed believed that since their skilled workers in particular were better paid, second jobs were on the decline. The continued use of significant amounts of "black market" labor (see **Exhibits 3.5** and **3.6**) in single family housing construction may tend to retard the growth of small contractors. MIT's desire to incorporate the "black market" or second economy into the formal economy can only be

addressed once the magnitude of the problem is known. It is recommended that MIT prepare an analysis of the problem and identify the incentives or disincentives, as the case may be, to encourage this incorporation.

4.4.5.3 The Impact of Transport and Distribution on the Materials Industry

A study should be made of the transport and distribution of materials industries. According to many of the construction and building material industry representatives interviewed, this appears to be a weak link and is hampering the development of these industries. However, not enough is known about distribution and retailing of construction materials due to rapid changes taking place in the methods of selling products and the highly fragmented nature of the Hungarian trucking industry. Additional information will be required before specific recommendations can be made.

4.4.6 Legislative/Legal

4.4.6.1 The Development of a Social Housing Policy

This report has been focused almost exclusively on new housing production and rehabilitation without reference to rental housing or to the issue of housing for those who can not afford market prices or rents. Currently it is unclear which government agency will become responsible for implementing a social housing policy: the Ministry of the Interior, the Ministry of Social Welfare or the Ministry of the Environment. While it appears that there is a general consensus at both the national and local government levels that a housing allowance system, as opposed to a construction subsidy system, should be implemented, the form this program will take, its minimum standards and the necessary inducements for the participation of private developers and contractors have not been considered yet. The consultants believe this is an area in which the MIT should take the initiative and organize, perhaps in joint venture with the Ministry of the Environment, a comprehensive study that will make recommendations on how the supply side of the social housing program should function. It will be of little use to propose a social housing policy that is reliant on the private sector to produce housing if the private sector has no incentive to do so.

APPENDIXES

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APPENDIX A

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A.9 Private Sector Materials Manufacturers

Vilmos Szántó managing director
LIGNO Kft (trussmaker)
1211 Budapest XXI,
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Postal address: 1751 Budapest Pf.46.
(36-1) 277-19-11
(36-1) 277-61-36

Sándor Mâcsai, Managing Director
Politerm, Kft (Pre-cast Concrete)
5600 Békéscsaba
Gyár ut 8
(36-1) 662-2021

Balázs Bokor, Assistant Manager
Terranova (Stucco)
1121 Budapest
Maros utca 48 L/1
(36-1) 201-0188

István Serfozo
LMS-TERV, (Concrete Panel System)
9021 Gyôr
Árpád ut 4-2
(36-1) 961-5225

János Köteles
Kunság Fenster (Windows)
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A.10 Privatization Consultants, Developers and Bankers

Gabor Jelinek
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(36-1) 201-0680 (fax)

József Villányi
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H-1852 Budapest,
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APPENDIX B

SCHEDULES

B.1 Overall Work Program

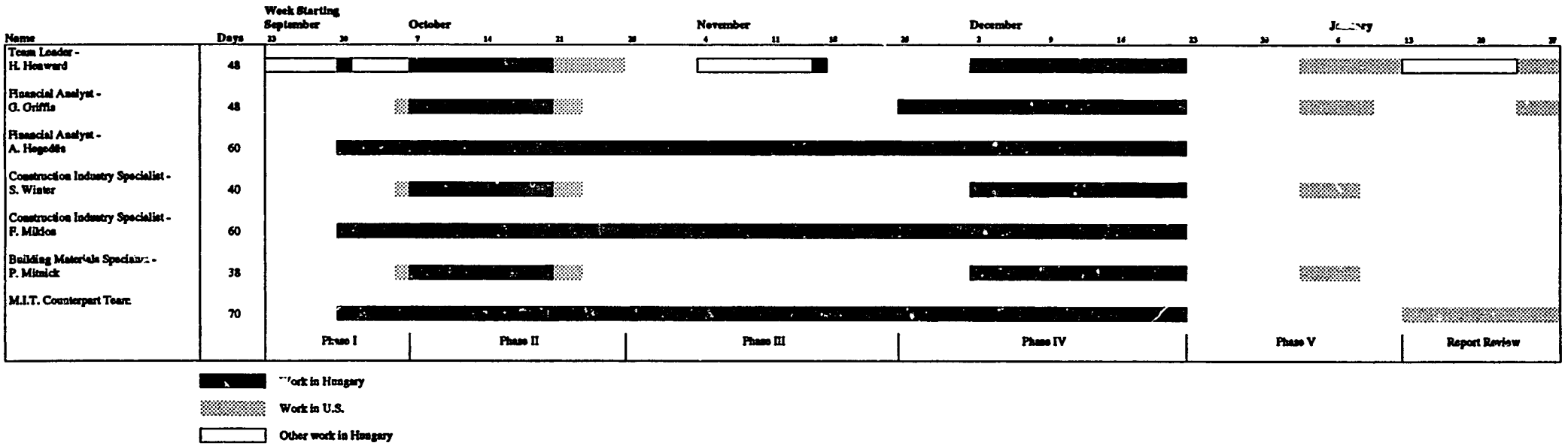
The Scope of Work and the Staffing Program for the Assessment were developed on the basis of the original Terms of Reference agreed between MIT and USAID and discussions between the consultant's Team Leader and MIT representatives prior to the start of the work. The Scope of Work is shown in **Exhibit B.1** and the Staffing program is shown in **Exhibit B.2.**

CONSTRUCTION SECTOR ASSESSMENT: SCOPE OF WORK & RESPONSIBILITIES	Team Leader H. Henward	Fin. Analyst G. Griffis	Const. Ind. Spec. S. Winter	Bldg. Mt. Spec. P. Minnick	Fin. Analyst A. Hegedus	Const. Ind. Spec. F. Miklos
1. Construction Industry						
a. Very large enterprises						
▪ Overall performance (over the past three years), including volume and mix of total output, number and type of housing units produced, unit costs, and sale prices.	●	○	○		○	○
▪ Financial status and profitability (before- and after-tax)		●			○	
▪ Technological efficiency and capacity, including flexibility of production to meet changing demand, adequacy and suitability of capital stock, and capital utilization.	○		●	●		○
▪ Adequacy of provision of material inputs (in terms of access, cost, quality, quantity, and timeliness).		○		●	○	
▪ Adequacy of workforce, including over- and under-staffing in various skills groups, skills deficits, and labor productivity.			●	●		○
▪ Organizational structure and management systems, including management information systems, strategic planning and marketing, financial planning, and project management and cost control.	○	○	●	●	○	○
b. Small privately-owned construction firms (based on a sample of at least five)						
(Same as for SOEs above)						
c. Options for reform in the construction industry						
▪ Restructuring SOEs, including breaking up or merging existing enterprises, leasing assets to private sector, and re-orienting business focus.	●	○	○		○	○
▪ Strategies for privatization of SOEs.	●	○			○	
▪ Elimination of impediments to private construction firm growth, including legal and administrative constraints, inadequate access to credit, building materials and other inputs, and shortages of managerial and financial expertise.	○	○	●		○	○
▪ Approaches to promote the creation and growth of private housing developers.	●	○			○	

CONSTRUCTION SECTOR ASSESSMENT: SCOPE OF WORK & RESPONSIBILITIES	Team Leader H. Henvard	Fin. Analyst G. Griffis	Const. Ind. Spec. S. Winter	Bldg. Mat. Spec. P. Vitnick	Fin. Analyst A. Hegedus	Const. Ind. Spec. F. Miklos
2. Building Materials Industry						
a. Local production and distribution						
▪ Comparison of cost of locally-produced materials (on a quality-adjusted basis) with internationally available alternatives.		○		●	○	
▪ Evaluation of local production technologies.				●		
▪ Description of building materials distribution system, including assessment of major bottlenecks and degree of availability of key materials.	○			●		
b. Competitiveness of building materials industry						
▪ Degree to which domestic demand for building materials is satisfied by domestic production (considering quality and variety of local materials)			○	●		○
▪ Current importance of imports to construction and limitations to further reliance on imports.			○	●		○
▪ Evaluation of extent to which greater import competition could reduce the cost of building materials and resolve imbalances in the domestic market.		○		●	○	
c. Options for reform of the building materials industry						
▪ Restructuring SOEs (in both building materials production and distribution), including breaking up or merging existing enterprises, leasing assets to private sector, and reorienting business focus.	◕	○	○	○	○	○
▪ Strategies for privatization of SOEs.	●	○	○	○	○	○
▪ Elimination of impediments to private production growth, including legal and administrative constraints, inadequate access to credit and other inputs, and shortages of managerial and financial expertise.	●	○	○	○	○	○
▪ Use of imports to spur competition in selected product areas.				●		

Key: ● Primary Responsibility
○ Contributing Responsibility

CONSTRUCTION SECTOR ASSESSMENT: STAFFING PROGRAM



Work in Hungary

Work in U.S.

Other work in Hungary

B.2 Phase II Meeting Schedule

Monday, October 7

Ministry of I & T, Room 610

09:00 Meeting between Team and Dept. for Construction Industry of the Ministry. Participants: (G. Karikås, S. Horvåth, A. Sebestyén, E. Kollár, H. Henward, G. Griffis, S. Winter, P. Mitnick)
10:30 Meeting with Mr. László Koji, General Secretary of ÉVOSZ (Association of Building Entrepreneurs)
12:00 Lunch
13:30 Meeting with Mr. György Földvári, President of Construction Department of Association of Entrepreneurs)
15:00 Meeting with Mr. Miklós Szabó, President of Association of Building Material Manufacturers

Tuesday, October 8

08:00 Meeting with Mr. László Puhr (S.P.A.)
09:00 Meeting with Mr. Elemér Pataky, President of OKISZ (Association of Small Private Contractors) (Ministry, Room 610)
11:00 Meeting with Mr. István Bokonics, managing director of F.I.T. Ltd. (1097 Budapest, Koppány u. 5-11.)
12:30 Lunch
14:30 Meeting with Mr. Zoltán Berta, managing director of Berta & Demeter Ltd. (1133 Budapest, Váci út 102.)

Wednesday, October 9

Meeting with Mr. Béla Szepcsik, general director of State Building Company of County Borsod (Miskolc, MSZB tér 4.)

Thursday, October 10

Meeting with Mr. Ferenc Jåmbor, director of State Building Company of County Békés (Békéscsaba, Kazinczy u. 4.)

Friday, October 11

Meeting with Mr. Attila Baksa, director of State Building Company of County Zala (Zalaegerszeg, Kossuth L. u. 11.)

Monday, October 14

09:00 Meeting with Mr. László Németh, director of SOFA (Sopron, Terv u. 2.) (1st part of Team)
09:00 Meeting with Mr. Lajos Sánta, director of Building Cooperative of Fertôd (Fertôd, Fő u. 38.) (2nd part of Team)

Tuesday, October 15

Ministry, Room 610

08:30 Meeting with the National Association of Building Materials Companies (Mr. Miklós Szabó)
10:00 Start to DUNABAU 43 Building Company. (Budapest, Kaposvár u. 5-7.) (1st part of Team)
10:00 Start to Salgótarján Insulation Company (Budapesti út 31.) (2nd part of Team)

Wednesday, October 16

08:00 Start to Romhány Building Ceramics Company (Felszabadulás u. 17.) (1st part of Team)
09:00 Meeting with private company 3.
12:00 Lunch.
13:00 Meeting with private company 4.
15:00 Meeting with Mr. Puhr (S.P.A.) in MIT Room 610.

Thursday, October 17

08:30 Meeting with Mr. György Garai, general director of Brick and Tile Industrial Trust (Budapest, Bánk bán u. 17).
12:00 Lunch.
13:00 Meeting with private company 5.
15:30 Review meeting with Ms. Sebestyén.

Friday, October 18

09:30 Presentation of initial findings to MIT
12:00 Lunch.
14:00 Meeting with MIT to discuss data requirements and working arrangements for Phase III.

Saturday, October 19 1991

09:00 Meeting to prepare detailed work programme for Phase III and IV.
12:00 Lunch.
14:00 Drafting of brief report for MIT and USAID.

B.3 Phase III Meeting Schedule

Tuesday, November 5th

Economic Research Institute
Béla Szabadi, Senior Researcher

Wednesday, November 6

Kocsis Ferenc and Company
Investment Consulting, Ltd.

Friday, November 8

Ministry of Industry and Trade
Department for Construction
Mózes Gábor, Consultant

Friday, November 22

Kockázat, International Investment Consulting Ltd
Gábor Jelinek, Director

Monday, November 25

OTP Real Estate Subsidiary
János Havai, Deputy General Manager

Friday, November 27

Ligno Kft, Vilmos Szántó, Managing Director
FLAV, János Tòth Jr., Chief Engineer

B.4 Phase IV Meeting Schedule

Monday, November 25th

OTP Real Estate Development Subsidiary,
János Havai, Dep. Gen. Manager, József Lillanyi

Monday, December 2nd

10:00 Team meeting at Hotel Victoria.
14:30 Meeting, Sándor Horváth and Ágnes Sebestyén in the Ministry (room 610).

Tuesday, December 3rd

Wednesday, December 4th

09:00 XVIIIth DISTRICT MUNICIPALITY and private companies building smaller housing schemes in the same area. Ernô Zurányi, Lajos Bertalan, István Beliczky, László Zöldi.
15:00 FLAV, private contractor & developer.
József Lendvai, János Tòth Sr., János Tòth Jr.
- Inner city housing project (OTP financed).

Thursday, December 5th

12:00 LMS, panel manufacturer located in Gyôr. (A.B offices, Reviczky ut. 4).
09:30 INGATLAN BANK, István Laczkò, Deputy Director. (Üllôi ut.).
14:30 CHAMBER OF REAL ESTATE, Csaba Dani, Secretary General. (Andrassy ut. 1, Floor 1).
15:00 SZIKKTI, association for silicate based materials.
Dr. Árpád Kunvári.

Friday, December 6th

11:00 ALTUS; private company contractor, developer (cooperative).

Friday, December 6th, cont.

Field visits to new construction sites of the XVIIIth DISTRICT:
- by Altus: Tavaszmezo ut. B1-B2, 170 units
11:00 MIT, Kuzma Tamás, Privatization for MIT

Monday, December 9th

07:00 Trip to Kecskemét
Visit of private manufacturers and contractors:
- KUNSÁG FENSTER (ex-DUTEP DUFA). Manufacturer of custom made doors and window. Dealer and competitor of SOFA.
- HÍRÖS ÉP. Superstructure with monolith in situ, concrete technology, Hunnebeck forms, foundation, superstructure, pitched roof, carpentry.
- EPITOK 89 KFT. (ex-EPSZER). Prime contractor.

Tuesday, December 10th

08:15 MIT, Deputy Minister Karikås.
10:00 SPA/KOCKÁZAT
10:00 OTP, Department of Housing Finance for Budapest.
Andrásné Bordås, László Boedan
10:00 Budai Téglaipari Vállalat, Brick manufacturer.
Dr. Sándorné Dani.
04:00 Macon, RT. Privatization and financial consulting firm.

Wednesday, December 11th

09:30 BUDAPEST BANK, György Endrodi, Deputy Manager. The bank manages the debts of Miskolc and DUNABAU 43, among others. (V. Deak Ferenc ut. 5).
05:00 Budapest Capital District Housing Commission\
Peter Gyôri

Thursday, December 12th

Analysis and report preparation.

Friday, December 13th

10:00 Roundtable discussion with Managers of SOE's. (MIT, Room 610).
14:00 Meeting with Sándor Horvåth and Ágnes Sebestyén. (MIT, Room 610).

Monday, December 16th

10:00 ÉMI organization involved in material standards and testing throughout Hungary.
Analysis and report preparation.

Tuesday, December 17th

09:00 Romhányi, Tile manufacturer.
, General Manager.
11:00 Meeting with György Karikás. (MIT, Room 610).

APPENDIX C

FINANCIAL DATA

C.1 Summary

While it is easy to blame the current financial problems of the state owned construction companies on the decline in solvent demand for new housing construction, the fact is that the present financial situation of the majority of the companies examined by this team, and by extension the rest of this industry, has been made many times worse than it should be because quick and decisive managerial action was not taken during the past 2-1/2 years at the individual companies to stem the losses when problems started to appear. There has been little or no effort exerted to conserve strength during this crisis period while re-organization and privatization plans were being prepared. With the exceptions of Budai Téglaipari V., ZÁÉV, Békési ÁÉV and possibly FESZ, the failure of management to quickly take corrective action in the form of:

- cutting employment
- cutting overhead expenses
- controlling inventory levels
- cutting back production
- stopping fixed asset acquisitions
- aggressively collecting receivables
- exploring new markets
- selling non-productive assets

has taken a bad situation and let it grow substantially worse. These same steps need to be taken at the four companies mentioned above if they are to maintain their financial health and survive this difficult period.

With the current high interest rates, everything possible must be done to quickly reduce and eliminate debt, including selling non-productive assets (resorts, spas, hostels, excess production facilities, etc.). The sale of these assets has the further advantage of reducing the overhead expenses incurred in operating and maintaining these facilities. None of the companies examined has been permitted to sell these assets, and the cost of this inaction has been substantial.

As an example, the situation at Borsodi ÁÉV in January 1989 was not good. It was clear the company had too many employees, both white collar and blue, and that all expense levels were too high. The prospect of terminating employees was very unpleasant, and no significant cost cutting measures were instituted. In the 36 months since that time, practically nothing has been done and the problems that existed then are still there, but they are now over 1 billion

Forint larger than they were originally, and the non-productive assets are 2-1/2 years older and possibly worth less in today's soft real estate market than they were in 1989. If workers had been laid off in 1989 they would now be 2 years further along in the process of finding a new way to earn a living (which they are still going to have to do), and there would have been 1 billion forint more to pay off suppliers accounts and other debts. Also, some, if not all, of the non-productive assets would have been sold further reducing the loss and generating much needed cash.

Inaction and delay in instituting change is destroying Romhány, is wasting HÅÉV's financial strength, is threatening SOFA's survival, and has turned a bad situation at Borsod into a disaster. The consequences at Dunabau have been hidden from view.

ZÅÉV and Békési ÅÉV are not immune to these same problems, but some action has been taken at these companies to address many of the problems and to do something positive about them. With creative thinking, continued fast and firm action (including being given authority to dispose of unnecessary assets) and some luck, ZÅÉV and Békési ÅÉV should be able to survive in some form or another, and both will be stronger companies from the experience.

The signs of these same problems are showing up at FESZ, but have been masked by the revenues generated from the sale of the joint venture. A large investment is currently being made into a new product, and careful thought should be given to the wisdom of this activity at this time.

Budai Téglaipari V. is strong, and if their sales hold up, they should be in good shape. If sales slump, however, quick managerial action will be necessary to conserve the vitality of this company.

These problems are common throughout the industry. The following table showing the 1990 pre-tax net income of state owned companies involved in housing construction spells out the situation clearly. The net income for the first half of 1991 for the companies included in this study is also shown: (million HFT)

	Year 1990 Pre-Tax Net Income	**1/2 1991 Pre-Tax NET INCOME**
DUTEP	-412	
BÁZIS	-400	
DÉLÉP	-350	
-->BORSOD	-300	-399
ESZAKM	-220	
GYÔR	-200	

KOMÁROM	-180	
-->43	-136	
23	-95	
HAVES	-70	
KELETM	-30	
NOGRÁD	-16	
SZABOLCS	-10	
VAS	1	
SZOLNOK	3	
BULAV	4	
PEST	5	
ÉPIP	6	
22	10	
-->HÅÉV	13	-287
TOLNA	15	
21	15	
-->ZALA	17	29
ALBA REGIA	18	
-->BÉKÉS	47	-66
Total (in million forint)	-3,265	

Liquidation of a few of these companies is currently underway, but based upon the findings of the companies examined, the position of the companies in this industry is substantially worse in 1991 than it was 6 months earlier. Many of them should have been shut down long ago, and significant managerial actions should have been taken at most of the others to control expenses and were not. The delays in taking action are and were costing billions of forints and only delaying the inevitable. The companies listed above lost 12.5 million forints per working day in 1990, and the figure is undoubtedly higher in 1991. Every day of inaction is bleeding the country's treasury.

C.2 Methodology

C.2.1 Data Gathering

A formal written request for financial information for the years 1989, 1990 and the period ending June 30, 1991 was submitted to all companies interviewed. (See attached request). Not surprisingly, the privately owned companies declined this information request, and Salgótarjáni Uveggyapot RT, an Hungarian/Japanese joint venture manufacturing fibre glass insulation also declined on the basis of confidentiality.

Several of the state owned companies provided information at the time of our visit and several provided it during Phases III and IV of the project. Two companies, Romhányi Építési Kerámiagyár (tile manufacturer) and HÅÉV (a very large housing construction company who's financial information was included in the study to provide a broader picture) declined the request on the basis that they were involved in joint venture negotiations and that the information was confidential, and Borsodi ÅÉV provided data only for 1989 and 1990.

While attempting to obtain this information, it was discovered that prior to 1/1/91, the MIT statistical offices for construction companies and for building materials manufacturers had historically received complete financial statements for all state owned companies in their respective industries, and with their co-operation the missing information was obtained from their files for Romhány, HÅÉV and Borsod. Unfortunately, the reporting regulations changed effective 1/1/91, and the information required to be reported to the statistical offices was greatly reduced for 1991. Only a short, two page submission with selected financial data was available at MIT. From this information, however, it was possible to build a June 30, 1991 Statement of Income up to the point of Pre-Tax Earnings, but only selected Balance Sheet information is present precluding the preparation of a Cash Flow statement for this most recent period for these three companies, and therefore for the group as a whole.

In summary, we were able to obtain complete financial information for the years 1989 and 1990 for all 9 state owned companies, complete financial information for 6/30/91 for 6 of these companies, and it was possible to construct P&L's (except for income taxes) for the 6 months ended 6/30/91 with only limited balance sheet information for the other 3 companies as follows:

	1989	1990	6/30/91
BÉKÉSI ÅÉV	All	All	All
DUNABAU	All	All	All
FESZ	All	All	All
SOFA	All	All	All
BUDAI TÉGLA.	All	All	All
ZÅÉV	All	All	All
BORSODI ÅÉV	All	All	Partial
HÅÉV	All	All	Partial
ROMHÁNY	All	All	Partial

Some supporting schedules are prepared only at year end for most companies, and therefore the June 30, 1991 financial statements are not as detailed for most of the companies as they are for the other periods. The most significant missing schedules are those which detail fixed assets, export sales and costs of export sales. As a result, the 6/30/91 statements do not have the same level of detail as those for the other periods, but this does not present a major problem.

C.2.2 Data Translation Method

A series of linked spread sheets were used to translate the Hungarian accounting data into the American system. Spread sheets were made for the Hungarian:

I. Merleg (1/1 and 12/31 Balance Sheet)
I/a. Alloeszkoz-allomany alakulasa (Fixed Asset Analysis)
II. Eredmenykimutatas (Top Summary P&L)
II/a. Eredmenykimutatas reszletezese (P&L Support Schedule)
III. Koltsegek (Cost Summary)

An American accounting system based spread sheet with Balance Sheet, Income Statement, Cash Flow and Ratio Analysis schedules was prepared and linked to the Hungarian schedules so that the data could be translated, brought forward and analyzed according to standard American presentation.

The linking process presented a number of classification issues. The Hungarian accounting classification system is not as detailed as the American system with many data items lumped together. Breaking out detailed costs was not possible in many instances, and determining the appropriate Balance Sheet classification was not always clear (i.e., is it "Current" or not).

Deciphering appropriate income tax treatment was not possible due to the lack of true accrual accounting for this item, and as a result, Statement of Income line 31 (and therefore line 34) should not be relied upon as being accurate. Line 30 "Earnings Before Taxes on Income" is the more reliable measure of profitability.

Similarly, gains and loses from the sale of fixed assets is treated quite differently (and somewhat inconsistently) under Hungarian accounting, and it was not possible to consistently classify this item. Normal on going fixed asset gains and losses are included in P&L line 27 "Other Income & Expense" when they could be determined, but the gains/losses of major asset sales due either to the sale of a subsidiary (i.e. FESZ) or in the major changes brought about during transformation (i.e. Dunabau) have an impact on Balance Sheet lines 17 "Investments in Subsidiaries", 19 "Other Assets", 33 "Paid-In Capital" and 34 "Retained Earnings".

One of the more vexing problems is that the closing 12/31 balance sheet does not always agree with the opening 1/1 balance sheet—usually in the Retained Earnings account. This is due to several reasons, including tax adjustments, fixed asset transactions, the current transformation/reorganization process and the sale/creation of subsidiaries. Statement of Cash Flows line 19 "(Charges)/Credits to Retained Earnings" shows the net effect of these closing/ opening differences in Retained Earnings.

Additionally, sub-schedules did not always agree and tie-in with the top P&L and Balance sheet, schedules did not always add up, and balance sheets did not always balance. These problems were small in size, and minor adjustments were made to clear them. These adjustments do not materially impact the reported statements.

The issue having the largest impact on the ability to compare financial statements across time periods (cash flows & ratio analysis) and with group averages is that of transformation and the lack of consolidation of subsidiaries' activities. The financial results of subsidiaries are not consolidated with the parent, and since 1/1/90 there has been an increasing rate of subsidiary creation (17 subsidiaries created at Borsod alone) with the transfer of construction activity to these subsidiaries. After the creation of these subsidiaries, only the fees charged by the parent to the subs are shown as revenues (on the same lines as construction revenues used to be accumulated), and the parent's costs are now only those of an administrative holding company. For example, all of Dunabau's 1991 building activities have been transferred to non-consolidated subsidiaries, leaving the 6/30/91 Dunabau statements representing holding company activity only. The 1991 Dunabau statements have no relationship to the other companies or to its own historical statements as it is now in an entirely new business. Furthermore, the Dunabau statements do not reflect the overall performance of the Dunabau group and are very misleading as to the performance of this company. This process is also underway at the other companies, and for this reason, combined industry wide figures for 1991 have not been prepared as they would be misleading.

While a serious effort has been made to treat all items consistently, to audit the team's work, and to tie the final figures back to their sources, undoubtedly not all of the numbers are

completely accurate. Judgements have been made in classifications and in fixing out of balance conditions, and it is likely that some errors have been made in judgements, in logic and in simple arithmetic and typing. It is felt, however, that with the possible exception of Statement of Income line 31 "Taxes on Income", the American version of the financial statements fairly present the financial histories of the companies involved in this study, and can be relied upon for the purposes intended.

C.2.3 Analysis

For purposes of the following analyses, individual lines in the Balance Sheets will be referred to by (B#), the Income Statements as (I#), Cash Flow Statements as (C#) and Ratio Analyses as (R#).

When analyzing the figures, please be reminded that the 6/30/91 Statement of Income Figures represent only 6 months of activity. The calculations based upon these figures in the Ratio Analysis have been annualized to aid comparison.

STATEMENT of INCOME
ALL CONSTRUCTION - 1990

Currency = HUF (000)

30-Apr-92
10:43 AM

		BEKESI AEV	DUNABAU	HAEV	BORSOD	ZAEV	TOTAL GROUP
1	Gross Domestic Sales	1,144,053	4,517,559	2,709,469	855,092	1,457,781	10,683,954
2	Gross Foreign Sales	0	0	0	17,998	0	17,998
3	Total Gross Sales	1,144,053	4,517,559	2,709,469	873,090	1,457,781	10,701,952
4	Less: Write-Offs & Returns	0	0	0	0	0	0
5	Net Sales	1,144,053	4,517,559	2,709,469	873,090	1,457,781	10,701,952
6	Cost of Sales-Domestic	815,607	3,882,838	1,707,265	756,715	1,051,373	8,213,798
7	Cost of Sales-Foreign	0	0	0	8,215	0	8,215
8	Gross Margin	328,446	634,721	1,002,204	108,160	406,408	2,479,939
	Operating Expenses						
9	Rent	N/A	N/A	N/A	N/A	N/A	N/A
10	Sales Salaries	N/A	N/A	N/A	N/A	N/A	N/A
11	Sales Commissions	N/A	N/A	N/A	N/A	N/A	N/A
12	Other Salaries & Wages	N/A	N/A	N/A	N/A	N/A	N/A
13	Research & Development	N/A	N/A	N/A	N/A	N/A	N/A
14	Travel & Entertainment	N/A	N/A	N/A	N/A	N/A	N/A
15	Advertising	N/A	N/A	N/A	N/A	N/A	N/A
16	Telephone & Utilities	N/A	N/A	N/A	N/A	N/A	N/A
17	Gas & Oil	N/A	N/A	N/A	N/A	N/A	N/A
18	Insurance	N/A	N/A	N/A	N/A	N/A	N/A
19	Maintenance & Repairs	N/A	N/A	N/A	N/A	N/A	N/A
20	Depreciation & Amortization	13,951	54,286	46,906	21,244	17,115	153,502
21	Non-Income Taxes & Fees	N/A	N/A	N/A	N/A	N/A	N/A
22	Other Operating Expenses	N/A	N/A	N/A	N/A	N/A	N/A
23	Total Operating Expenses	265,045	447,521	804,575	315,212	373,225	2,205,578
24	Net Operating Income	63,401	187,200	197,629	-207,052	33,183	274,361
25	Gain/(Loss) Sale of Prop, Plant & Equip	N/A	N/A	N/A	N/A	N/A	N/A
26	Gain/(Loss) Foreign Currency Translation	N/A	N/A	N/A	N/A	N/A	N/A
27	Other Income & Expense (Net)	14,248	-112,802	-2,796	-92,013	-11,223	-204,586
28	Earnings Before Interest & Tax	77,649	74,398	194,833	-299,065	21,960	69,775
29	Interest Expense	30,870	201,921	181,397	17,719	5,031	436,938
30	**EARNINGS BEFORE TAXES ON INCOME**	46,779	-127,523	13,436	-316,784	16,929	-367,163
31	Taxes on Income	31,457	4,627	157,560	-11,751	65,760	247,653
32	Income Available to Shareholders	15,322	-132,150	-144,124	-305,033	-48,831	-614,816
33	Dividends Paid to Shareholders	0	0	0	0	0	0
34	Net Income to Retained Earnings	15,322	-132,150	-144,124	-305,033	-48,831	-614,816

BALANCE SHEET
ALL CONSTRUCTION - 1990

Currency = HUF (000)

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	ASSETS	BEKESI AEV	DUNABAU	HAEV	BORSOD	ZAEV	TOTAL GROUP
	Current Assets:						
	Cash:						
1	Deposits	41,635	40,690	782,125	47,671	34,704	946,826
2	Foreign Currency Accounts	0	0	0	0	0	0
3	Marketable Securities (CD's)	2,704	3,491	55	316	800	7,366
4	Accounts Receivable:						
5	A/R-Domestic Trade	258,780	1,411,238	249,786	0	18,565	1,938,369
6	A/R-Foreign Trade	0	0	0	1,845	0	1,845
	Inventory:						
7	Self Produced (WIP + Finished - Subs)	62,164	90,[illegible]55	384,809	255,989	89,766	883,563
8	Purchased (Raw + Subcontracted)	104,920	134,450	784,858	340,786	325,764	1,690,778
9	Other Current Assets	6,873	47,276	212,675	32,485	14,353	313,662
10	Total Current Assets	477,077	1,727,980	2,4[illegible]4,308	679,092	483,952	5,782,409
	Gross Fixed or Plant Assets:						
11	Land & Buildings	212,584	880,047	533,277	386,230	348,428	2,360,566
12	Equipment & Machinery	74,744	669,606	482,669	269,577	200,152	1,696,748
13	Vehicles	1,279	122,009	38,429	24,990	59,611	246,318
14	Other Fixed Assets	3,654	177,106	233,363	29,228	34,834	478,185
15	Less Accumulated Depreciation	-106,354	-787,267	-728,681	-369,760	-259,733	-2,251,795
16	Total Net Fixed Assets	185,907	1,061,501	559,057	340,265	383,292	2,530,022
17	Investments in Subsidiaries	73,440	671,236	199,024	143,280	93,480	1,180,460
18	Investment in Good Will	0	0	0	0	0	0
19	Other Assets	10,452	13,175	63,752	0	3,721	91,100
20	Total Assets	746,876	3,473,892	3,236,141	1,162,637	964,445	9,583,991

	LIABILITIES & OWNERS EQUITY	BEKESI AEV	DUNABAU	HAEV	BORSOD	ZAEV	TOTAL GROUP
	Current Liabilities:						
21	Accounts Payable-Domestic	61,065	1,270,614	110,684	586,550	30,313	2,059,226
22	Accounts Payable-Foreign	0	0	0	1,105	0	1,105
23	Notes Payable	134,997	663,242	35,385	40,000	52,104	925,728
24	Taxes Payable	35,914	73,139	1,555	54,995	-1,340	164,263
25	Accrued Expenses	18,924	2,555	44,842	39,465	33,421	139,207
26	Other Cur. Liabilities	18,939	89,423	185,245	88,462	95,655	477,724
27	Total Current Liabilities	269,839	2,098,973	377,711	810,577	210,153	3,767,253
	Long-Term Liabilities:						
28	Long Term Debt	0	49,383	1,462,000	3,936	0	1,515,319
29	Other Long Term Liabilities	0	0	0	0	0	0
30	Total Long Term Liabilities	0	49,383	1,462,000	3,936	0	1,515,319
31	Total Liabilities	269,839	2,148,356	1,839,711	814,513	210,153	5,282,572
	Owner's Equity:						
32	Common & Preferred Stock (Par)	0	0	0	0	0	0
33	Paid-In Capital	37[illegible],074	267,994	1,428,125	182,980	111,316	2,365,489
34	Retained Earnings	101,063	1,057,542	-31,695	165,144	642,976	1,935,930
35	Total Owner's Equity	477,037	1,325,536	1,396,430	348,124	754,292	4,301,419
36	Total Liab & Owner's Equity	746,876	3,473,892	3,236,141	1,162,637	964,445	9,583,991

STATEMENT of CASH FLOWS
ALL CONSTRUCTION - 1990
Currency = HUF (000)

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		BEKESI AEV	DUNABAU	HAEV	BORSOD	ZAEV	TOTAL GROUP
	CASH FROM OPERATIONS						
1	After Tax Net Income from Operations	15,322	-132,150	-144,124	-305,033	-48,831	-614,816
	Add Back:						
2	Depreciation	13,951	54,286	46,906	21,244	17,115	153,502
3	Payment of Dividends	0	0	0	0	0	0
	Changes in Working Capital:						
4	(Incr.)/Decr. A/R-Domestic Trade	-176,440	-1,198,658	144,433	201,280	6,791	-1,022,594
5	(Incr.)/Decr. A/R-Foreign Trade	0	0	0	-463	0	-463
6	(Incr.)/Decr. Inventory	93,261	960,205	-92,323	-7,828	-29,157	924,158
7	(Incr.)/Decr. Pre-Paid Exp.	0	0	0	0	0	0
8	(Incr.)/Decr. Other Curr. Assets	5,987	53,563	-15,544	-110	20,960	64,856
9	Incr./(Decr.) A/P-Domestic	28,767	837,483	-56,496	75,375	-1,565	883,564
10	Incr./(Decr.) A/P-Foreign	0	0	0	1,105	0	1,105
11	Incr./(Decr.) Taxes Payable	1,527	31,608	-28,645	-106,010	-1,767	-103,287
12	Incr./(Decr.) Accrued Expenses	-9,092	-76,823	4,375	13,416	2,392	-65,732
13	Incr./(Decr.) Other Cur. Liab.	5,768	33,375	-20,468	74,014	-38,933	53,756
14	Total Cash from Operations	-20,949	562,889	-161,886	-33,010	-72,995	274,049
	CASH FROM INVESTING ACTIVITIES						
15	(Purchase)/Disposal Prop, Plant & Equip	19,441	-49,695	-12,556	-7,209	-31,403	-81,422
16	(Incr.)/Decr. Investments in Subsidiaries	-64,140	-443,780	-28,719	48,537	-7,580	-495,682
17	(Incr.)/Decr. Invest. in Good Will	0	0	0	0	0	0
18	(Incr.)/Decrease Other Assets	-7,970	7,122	-27,928	2,680	-2,174	-28,270
19	(Charges)/Credits to Retained Earnings	-1,385	-157,876	-3,836	-50,609	32,099	-181,607
20	Total Cash from Investing Activities	-54,054	-644,229	-73,039	-6,601	-9,058	-786,981
	CASH FROM FINANCING ACTIVITIES						
21	Incr./(Decr.) Notes Payable	113,544	7,610	-196,165	40,000	52,104	17,093
22	Incr./(Decr.) Long Term Debt	0	-11,400	793,900	-2,324	0	780,176
23	Incr./(Decr.) Other L-T Liab	0	0	0	0	0	0
24	New Issue/(Repurchase) Common Stock	0	0	0	0	0	0
25	Incr./(Decr.) Paid-In Capital	0	0	0	0	0	0
26	(Payment) of Dividends	0	0	0	0	0	0
27	Total Cash from Financing Activities	113,544	-3,790	597,735	37,676	52,104	797,269
28	Total Change in Cash Position	38,541	-85,130	362,810	-1,935	-29,949	284,337
29	Cash Balance Beginning of Period	5,799	129,311	419,370	49,922	65,453	669,855
30	Cash Balance End of Period	44,340	44,181	782,180	47,987	35,504	954,192

RATIO ANALYSIS
ALL CONSTRUCTION - 1990
Currency = HUF (000)

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		BEKESI AEV	DUNABAU	HAEV	BORSOD	ZAEV	TOTAL GROUP
	LIQUIDITY RATIOS						
1	Current Ratio	1.77	0.82	6.39	0.84	2.30	1.53
2	Quick Ratio (Acid Test)	1.15	0.72	3.30	0.10	0.33	0.85
	LEVERAGE RATIOS						
3	Debt/Total Assets	0.18	0.21	0.46	0.04	0.06	0.25
4	Debt/Total Capital	0.28	0.52	0.52	0.12	0.07	0.42
5	Debt/Equity	0.28	0.54	1.07	0.13	0.07	0.57
6	Total Assets/Equity (Financial Leverage)	1.57	2.62	2.32	3.34	1.28	2.23
7	Interest Coverge	3.05	1.93	2.09	-10.69	7.60	1.63
8	Total Coverage	0.57	0.43	0.23	-3.07	0.67	0.25
	ACTIVITY RATIOS						
9	Fixed Asset Turnover	6.15	4.26	4.85	2.57	3.80	4.23
10	Total Asset Turnover	1.53	1.30	0.84	0.75	1.[illegible]	1.12
11	Inventory Turnover	4.88	17.24	1.46	1.28	2.53	3.19
12	Average Collection Period-Dom. Trade	[illegible]	114	34	0	5	66
13	Average Collection Period-For. Trade	0	0	0	27	0	37
14	Average Collection Period-Total	83	114	34	1	5	66
15	Average Payment Period-Dom. Trade	27	119	24	283	11	92
16	Average Payment Period-For. Trade	0	0	0	49	0	49
17	Average Payment Period-Total	27	119	24	280	11	91
18	Self Produced Inventory/COGS	7.62%	2.34%	22.54%	33.47%	8.54%	10.75%
19	Purchased Inventory/COGS	12.86%	3.46%	45.97%	44.55%	30.98%	20.56%
20	Total Inventory/COGS	20.49%	5.80%	68.51%	78.02%	39.52%	31.31%
21	Self Produced Inventory Days Held	28	9	82	122	31	39
22	Purchased Inventory Days Held	47	13	168	163	113	75
23	Total Inventory Days Held	75	21	250	285	144	114
24	Sales Days Cash Held	14	4	105	20	9	33
25	Cash Cycle Period	130	16	250	5	138	89
	PROFITABILITY RATIOS						
26	Gross Margin	28.71%	14.05%	36.99%	12.39%	27.88%	23.17%
27	Operating Margin	5.54%	4.14%	7.29%	-23.71%	2.28%	2.56%
28	Pre-Tax Return on Sales	4.09%	-2.82%	0.50%	-36.28%	1.16%	-3.43%
29	After Tax Return on Sales	1.34%	-2.93%	-5.32%	-34.94%	-3.35%	-5.74%
30	Pre-Tax Return on Total Assets	6.26%	-3.67%	0.42%	-27.25%	1.76%	-3.83%
31	Pre-Tax Return on Equity	9.81%	-9.62%	0.96%	-91.00%	2.24%	-8.54%
	PERFORMANCE MEASURES						
32	Growth in Total Assets	26.07%	18.08%	12.07%	-18.28%	-0.46%	8.74%
33	Growth in Sales	26.47%	2.10%	-11.81%	-11.87%	-1.03%	-1.50%
34	Change in Gross Margin	25.23%	-50.28%	9.00%	39.83%	-5.14%	-16.33%
35	Change in Operating Margin	6.43%	-37.44%	2.14%	32.26%	-61.76%	-17.71%
36	Growth in Pre-Tax Net Income	32.83%	-201.55%	-82.32%	-59.09%	-77.55%	-424.81%
37	% Domestic Sales	100.00%	100.00%	100.00%	97.94%	100.00%	99.83%
38	% Foreign Sales	0.00%	0.00%	0.00%	2.06%	0.00%	0.17%

C.3 State-Owned-Companies, Construction Companies

C.3.1 Békés Megyei Állami Épitoipari Vállalat

Békési ÁÉV entered 1989 in a strong financial condition, but 2-1/2 years later the effects of the problems of the housing market can be clearly seen. At 12/31/88 Békési ÁÉV had very little debt (B23 & 30), very low financial leverage (R6), and low Accounts Receivable (B5). In 1990 profitability was maintained (R26, 27 & 28), but receivables grew dramatically (B5) and borrowed funds were required to finance them. With falling sales in '91 and greatly increased interest expense, a significant loss was realized. By 6/30/91, debt had climbed by HFT 122 million (C27) to represent 19 percent of total assets (R3), increasing the financial leverage while the accounts receivable collection period more than doubled from 33 days to 77 days (R14). Békési ÁÉV current ratio dropped from a very strong 5.44 (R1) to a barely acceptable 1.53.

Management kept the situation from becoming a disaster by aggressively cutting inventories (C6) and (R11), stretching payables (C9) and cutting employees (**Appendix D.5**). Békési ÁÉV had close to the highest forint sales per blue collar employee among the group of State Owned Construction firms examined, as well as the highest forint sales per white collar employee.

The balance sheet at 6/30/91 is much weaker than it was 2-1/2 years prior, but it is still viable if the current operating loss can be stemmed quickly through further reductions in employment and non-essential expenses, if an aggressive receivables collection effort is mounted and if non-productive assets are sold to eliminate their carrying costs and to pay down debt and halt interest expense. At the current rate of loss (HFT 132 million per year), Békési ÁÉV will be insolvent in 3 years. These continuing losses will require further borrowings which will increase the interest expense to higher levels and bring about the failure sooner. Quick action is essential.

STATEMENT of INCOME
BEKES MEGYEI ALLAMI EPITOIPARI VALLALAT

30-Apr-92
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Currency = HUF (000)

		Year - 1989	Year - 1990	6 Mos. 1991
1	Gross Domestic Sales	904,569	1,144,053	507,866
2	Gross Foreign Sales	0	0	Incl. Above
3	Total Gross Sales	904,569	1,144,053	507,866
4	Less: Write-Offs & Returns	0	0	0
5	Net Sales	904,569	1,144,053	507,866
6	Cost of Sales-Domestic	642,297	815,607	423,204
7	Cost of Sales-Foreign	0	0	Incl. Above
8	Gross Margin	262,272	328,446	84,662
	Operating Expenses			
9	Rent	N/A	N/A	N/A
10	Sales Salaries	N/A	N/A	N/A
11	Sales Commissions	N/A	N/A	N/A
12	Other Salaries & Wages	N/A	N/A	N/A
13	Research & Development	N/A	N/A	N/A
14	Travel & Entertainment	N/A	N/A	N/A
15	Advertising	N/A	N/A	N/A
16	Telephone & Utilities	N/A	N/A	N/A
17	Gas & Oil	N/A	N/A	N/A
18	Insurance	N/A	N/A	N/A
19	Maintenance & Repairs	N/A	N/A	N/A
20	Depreciation & Amortization	14,887	13,951	4,125
21	Non-Income Taxes & Fees	N/A	N/A	N/A
22	Other Operating Expenses	N/A	N/A	N/A
23	Total Operating Expenses	202,702	265,045	121,897
24	Net Operating Income	59,570	63,401	-37,235
25	Gain/(Loss) Sale of Prop, Plant & Equip	N/A	N/A	N/A
26	Gain/(Loss) Foreign Currency Translation	N/A	N/A	N/A
27	Other Income & Expense (Net)	-8,996	14,248	-4,442
28	Earnings Before Interest & Tax	50,574	77,649	-41,677
29	Interest Expense	15,357	30,870	24,465
30	**EARNINGS BEFORE TAXES ON INCOME**	35,217	46,779	-66,142
31	Taxes on Income	36,206	31,457	11,529
32	Income Available to Shareholders	-989	15,322	-77,671
33	Dividends Paid to Shareholders	0	0	0
34	Net Income to Retained Earnings	-989	15,322	-77,671

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BALANCE SHEET
BEKES MEGYEI ALLAMI EPITOIPARI VALLALAT

30-Apr-92
9:29 AM

Currency = HUF (000)

	ASSETS	12/31/88	12/31/89	12/31/90	6/30/91
	Current Assets:				
	Cash:				
1	Deposits	3,928	2,794	41,636	59,817
2	Foreign Currency Accounts	0	0	0	0
3	Marketable Securities (CD's)	3,005	3,005	2,704	2,404
4	Accounts Receivable:				
5	A/R-Domestic Trade	18,167	82,340	258,780	215,272
6	A/R-Foreign Trade	0	0	0	0
	Inventory:				
7	Self Produced (WIP + Finished - Subs)	89,187	79,330	62,164	36,837
8	Purchased (Raw + Subcontracted)	172,027	181,015	104,920	96,096
9	Other Current Assets	5,761	12,860	6,873	4,991
10	Total Current Assets	292,075	361,344	477,077	415,417
	Gross Fixed or Plant Assets:				
11	Land & Buildings	198,311	211,970	212,584	266,434
12	Equipment & Machinery	129,261	147,325	74,744	Incl. Above
13	Vehicles	15,772	20,535	1,278	Incl. Above
14	Other Fixed Assets	7,411	5,325	3,654	154
15	Less Accumulated Depreciation	-140,062	-165,856	-106,354	-93,418
16	Total Net Fixed Assets	210,693	219,299	185,907	173,172
17	Investments in Subsidiaries	18,728	9,300	73,440	68,740
18	Investment in Good Will	0	0	0	0
19	Other Assets	14,697	2,482	10,452	14,296
20	Total Assets	536,193	592,425	746,876	671,625

	LIABILITIES & OWNERS EQUITY	12/31/88	12/31/89	12/31/90	6/30/91
	Current Liabilities:				
21	Accounts Payable-Domestic	26,130	32,298	61,065	94,948
22	Accounts Payable-Foreign	0	0	0	0
23	Notes Payable	0	21,453	134,997	124,970
24	Taxes Payable	3,578	34,387	35,914	26,963
25	Accrued Expenses	15,738	28,016	18,924	15,650
26	Other Cur. Liabilities	8,212	13,171	18,939	8,166
27	Total Current Liabilities	53,658	129,325	269,839	270,697
	Long-Term Liabilities:				
28	Long Term Debt	2,508	0	0	0
29	Other Long Term Liabilities	0	0	0	0
30	Total Long Term Liabilities	2,508	0	0	0
31	Total Liabilities	56,166	129,325	269,839	270,697
	Owner's Equity:				
32	Common & Preferred Stock (Par)	0	0	0	0
33	Paid-In Capital	375,074	375,074	375,074	375,074
34	Retained Earnings	104,953	88,026	101,963	25,854
35	Total Owner's Equity	480,027	463,100	477,037	400,928
36	Total Liab & Owner's Equity	536,193	592,425	746,876	671,625

STATEMENT of CASH FLOWS
BEKES MEGYEI ALLAMI EPITOIPARI VALLALAT

Currency = HUF (000)

30-Apr-92
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		Year - 1989	Year - 1990	6 Mos. 1991	2-1/2 Years 12/88 - 6/91
	CASH FROM OPERATIONS				
1	After Tax Net Income from Operations	-989	15,322	-77,671	-63,338
	Add Back:				
2	Depreciation	14,887	13,951	4,125	32,963
3	Payment of Dividends	0	0	0	0
	Changes in Working Capital:				
4	(Incr.)/Decr. A/R-Domestic Trade	-64,173	-176,440	43,508	-197,105
5	(Incr.)/Decr. A/R-Foreign Trade	0	0	0	0
6	(Incr.)/Decr. Inventory	869	93,261	34,151	128,281
7	(Incr.)/Decr. Pre Paid Exp.				
8	(Incr.)/Decr. Other Curr. Assets	-7,099	5,997	1,882	770
9	Incr./(Decr.) A/P-Domestic	6,168	28,767	33,883	68,818
10	Incr./(Decr.) A/P-Foreign	0	0	0	0
11	Incr./(Decr.) Taxes Payable	30,809	1,527	-8,951	23,385
12	Incr./(Decr.) Accrued Expenses	12,278	-9,092	-3,274	-88
13	Incr./(Decr.) Other Cur. Liab.	4,959	5,768	-10,773	-46
14	Total Cash from Operations	-2,291	-20,949	16,880	-6,360
	CASH FROM INVESTING ACTIVITIES				
15	(Purchase)/Disposal Prop, Plant & Equip	-23,493	19,441	8,610	4,558
16	(Incr.)/Decr. Investments in Subsidiaries	9,428	-64,140	4,700	-50,012
17	(Incr.)/Decr. Invest. in Good Will	0	0	0	0
18	(Incr.)/Decrease Other Assets	12,215	-7,970	-3,844	401
19	(Charges)/Credits to Retained Earnings	-15,938	-1,365	1,562	-15,761
20	Total Cash from Investing Activities	-17,788	-54,054	11,028	-60,814
	CASH FROM FINANCING ACTIVITIES				
21	Incr./(Decr.) Notes Payable	21,453	113,544	-10,027	124,970
22	Incr./(Decr.) Long Term Debt	-2,508	0	0	-2,508
23	Incr./(Decr.) Other L-T Liab	0	0	0	0
24	New Issue/(Repurchase) Common Stock	0	0	0	0
25	Incr./(Decr.) Paid-In Capital	0	0	0	0
26	(Payment) of Dividends	0	0	0	0
27	Total Cash from Financing Activities	18,945	113,544	-10,027	122,462
28	Total Change in Cash Position	-1,134	38,541	17,881	55,288
29	Cash Balance Beginning of Period	6,933	5,799	44,340	6,933
30	Cash Balance End of Period	5,799	44,340	62,221	62,221

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RATIO ANALYSIS
BEKES MEGYEI ALLAMI EPITOIPARI VALLALAT

Currency = HUF (000)

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		12/31/88	12/31/89	12/31/90	6 Months 6/30/91 Annualized
	LIQUIDITY RATIOS				
1	Current Ratio	5.44	2.79	1.77	1.53
2	Quick Ratio (Acid Test)	0.53	0.78	1.15	1.04
	LEVERAGE RATIOS				
3	Debt/Total Assets	0.00	0.04	0.18	0.19
4	Debt/Total Capital	0.01	0.05	0.28	0.31
5	Debt/Equity	0.01	0.05	0.28	0.31
6	Total Assets/Equity (Financial Leverage)	1.12	1.28	1.57	1.68
7	Interest Coverge		4.88	3.05	-0.52
8	Total Coverage		2.04	0.57	-0.15
	ACTIVITY RATIOS				
9	Fixed Asset Turnover		4.12	6.15	5.87
10	Total Asset Turnover		1.53	1.53	1.51
11	Inventory Turnover		2.47	4.88	6.37
12	Average Collection Period-Dom. Trade		33	83	77
13	Average Collection Period-For. Trade		0	0	Incl. Above
14	Average Collection Period-Total		33	83	77
15	Average Payment Period-Dom. Trade		18	27	41
16	Average Payment Period-For. Trade		0	0	Incl. Above
17	Average Payment Period-Total		18	27	41
18	Self Produced Inventory/COGS		12.35%	7.62%	4.35%
19	Purchased Inventory/COGS		28.18%	12.86%	11.35%
20	Total Inventory/COGS		40.53%	20.49%	15.71%
21	Self Produced Inventory Days Held		45	28	16
22	Purchased Inventory Days Held		103	47	41
23	Total Inventory Days Held		148	75	57
24	Sales Days Cash Held		2	14	22
25	Cash Cycle Period		163	130	94
	PROFITABILITY RATIOS				
26	Gross Margin		28.99%	28.71%	16.67%
27	Operating Margin		6.59%	5.54%	-7.33%
28	Pre-Tax Return on Sales		3.89%	4.09%	-13.02%
29	After Tax Return on Sales		-0.11%	1.34%	-15.29%
30	Pre-Tax Return on Total Assets		5.94%	6.26%	-19.70%
31	Pre-Tax Return on Equity		7.60%	9.81%	-32.99%
	PERFORMANCE MEASURES				
32	Growth in Total Assets		10.49%	26.07%	-10.08%
33	Growth in Sales		N/A	26.47%	-11.22%
34	Change in Gross Margin		N/A	25.23%	-48.45%
35	Change in Operating Margin		N/A	6.43%	-217.46%
36	Growth in Pre-Tax Net Income		N/A	32.83%	-382.79%
37	% Domestic Sales		100.00%	100.00%	100.00%
38	% Foreign Sales		0.00%	0.00%	N/A

C.3.2 Dunabau #43

Dunabau underwent transformation/reorganization late in 1990, and as a result the 1991 financial information is not meaningful to this analysis and the 1990 information is also affected by this change. Prior to 1990, Dunabau #43 was the largest housing manufacturer in Hungary, and one of the largest in all of Europe, but it produced almost exclusively state subsidized housing, and as the state exited the housing market, their housing starts and completions collapsed (See **Exhibit D.1**) and the order book emptied. Currently, operations have been shredded into a number of smaller subsidiaries, and the financial statements reflect those solely of an unconsolidated holding company.

At 12/31/88 Dunabau's financial condition was not particularly strong with a current ratio of 1.54 (R1), but the liabilities were almost entirely accounts payable and the debt/equity ratio (R5) was low. In 1989, contrary to indications that the market was changing, Dunabau increased investments in vehicles and other fixed assets by HFT 106 million (C15), and let purchased inventory grow by almost 50 percent (B8 & C6) even while cutting employees (**Exhibit D.5**), requiring an increase in debt financing of HFT 527 million (C27) saddling the company with substantial interest expense for the future (I29). With large interest expense and a vanishing market, Dunabau started the transformation process in 1990, effectively hiding the results of operations from that time forward, but its financial future can be fairly accurately presumed to be poor unless significant sales of fixed assets, at or above book value, can be achieved and both employment and debt further reduced.

STATEMENT of INCOME
DUNABAU 43 ALTALANOS EPITO VALLALAT

30-Apr-92
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Currency = HUF (000)

		Year - 1989	Year - 1990	6 Mos. 1991
1	Gross Domestic Sales	4,424,646	4,517,559	1,547,862
2	Gross Foreign Sales	0	0	Incl. Above
3	Total Gross Sales	4,424,646	4,517,559	1,547,862
4	Less: Write-Offs & Returns	0	0	0
5	Net Sales	4,424,646	4,517,559	1,547,862
6	Cost of Sales-Domestic	3,148,043	3,882,838	662,885
7	Cost of Sales-Foreign	0	0	Incl. Above
8	Gross Margin	1,276,603	634,721	884,977
	Operating Expenses			
9	Rent	N/A	N/A	N/A
10	Sales Salaries	N/A	N/A	N/A
11	Sales Commissions	N/A	N/A	N/A
12	Other Salaries & Wages	N/A	N/A	N/A
13	Research & Development	N/A	N/A	N/A
14	Travel & Entertainment	N/A	N/A	N/A
15	Advertising	N/A	N/A	N/A
16	Telephone & Utilities	N/A	N/A	N/A
17	Gas & Oil	N/A	N/A	N/A
18	Insurance	N/A	N/A	N/A
19	Maintenance & Repairs	N/A	N/A	N/A
20	Depreciation & Amortization	48,725	54,286	25,478
21	Non-Income Taxes & Fees	N/A	N/A	N/A
22	Other Operating Expenses	N/A	N/A	N/A
23	Total Operating Expenses	977,351	447,521	419,881
24	Net Operating Income	299,252	187,200	465,096
25	Gain/(Loss) Sale of Prop, Plant & Equip	N/A	N/A	N/A
26	Gain/(Loss) Foreign Currency Translation	N/A	N/A	N/A
27	Other Income & Expense (Net)	-54,467	-112,802	-28,443
28	Earnings Before Interest & Tax	244,785	74,398	436,653
29	Interest Expense	119,213	201,921	84,261
30	**EARNINGS BEFORE TAXES ON INCOME**	125,572	-127,523	352,392
31	Taxes on Income	17,651	4,627	684
32	Income Available to Shareholders	107,921	-132,150	351,708
33	Dividends Paid to Shareholders	0	0	0
34	Net Income to Retained Earnings	107,921	-132,150	351,708

BALANCE SHEET
DUNABAU 43 ALTALANOS EPITO VALLALAT

30-Apr-92
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Currency = HUF (000)

	ASSETS	12/31/88	12/31/89	12/31/90	6/30/91
	Current Assets:				
	Cash:				
1	Deposits	72,080	125,667	40,690	19,213
2	Foreign Currency Accounts	0	0	0	0
3	Marketable Securities (CD's)	3,644	3,644	3,491	3,364
4	Accounts Receivable:				
5	A/R-Domestic Trade	172,424	212,580	1,411,238	786,704
6	A/R-Foreign Trade	0	0	0	0
	Inventory:				
7	Self Produced (WIP + Finished - Subs)	173,730	279,652	90,835	37,713
8	Purchased (Raw + Subcontracted)	666,695	905,838	134,450	171,145
9	Other Current Assets	35,879	100,839	47,276	38,566
10	Total Current Assets	1,124,452	1,628,220	1,727,980	1,056,705
	Gross Fixed or Plant Assets:				
11	Land & Buildings	909,723	905,468	880,047	1,665,071
12	Equipment & Machinery	761,907	737,396	669,606	Incl. Above
13	Vehicles	96,829	140,531	122,009	Incl. Above
14	Other Fixed Assets	99,992	103,525	177,106	36,132
15	Less Accumulated Depreciation	-859,791	-820,828	-787,267	-794,037
16	Total Net Fixed Assets	1,008,660	1,066,092	1,061,501	907,166
17	Investments in Subsidiaries	203,111	227,456	671,236	708,730
18	Investment in Good Will	0	0	0	0
19	Other Assets	23,555	20,297	13,175	192,490
20	Total Assets	2,359,778	2,942,065	3,473,892	2,865,091

	LIABILITIES & OWNERS EQUITY	12/31/88	12/31/89	12/31/90	6/30/91
	Current Liabilities:				
21	Accounts Payable-Domestic	510,027	433,131	1,270,614	259,487
22	Accounts Payable-Foreign	0	0	0	0
23	Notes Payable	0	655,632	663,242	385,202
24	Taxes Payable	82,313	41,531	73,139	239,011
25	Accrued Expenses	55,689	79,378	2,555	15,514
26	Other Cur. Liabilities	80,579	56,048	89,423	194,542
27	Total Current Liabilities	728,608	1,265,720	2,098,973	1,087,756
	Long-Term Liabilities:				
28	Long Term Debt	88,929	60,783	49,383	45,588
29	Other Long Term Liabilities	0	0	0	0
30	Total Long Term Liabilities	88,929	60,783	49,383	45,588
31	Total Liabilities	817,537	1,326,503	2,148,356	1,133,344
	Owner's Equity:				
32	Common & Preferred Stock (Par)	0	0	0	0
33	Paid-In Capital	267,994	267,994	267,994	267,994
34	Retained Earnings	1,274,247	1,347,568	1,057,542	1,463,753
35	Total Owner's Equity	1,542,241	1,615,562	1,325,536	1,731,747
36	Total Liab & Owner's Equity	2,359,778	2,942,065	3,473,892	2,865,091

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STATEMENT of CASH FLOWS
DUNABAU 43 ALTALANOS EPITO VALLALAT

Currency = HUF (000)

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		Year - 1989	Year - 1990	6 Mos. 1991	2-1/2 Years 12/88 - 6/91
	CASH FROM OPERATIONS				
1	After Tax Net Income from Operations	107,921	-132,150	351,708	327,479
	Add Back:				
2	Depreciation	48,725	54,286	25,478	128,489
3	Payment of Dividends	0	0	0	0
	Changes in Working Capital:				
4	(Incr.)/Decr. A/R-Domestic Trade	-40,156	-1,198,658	624,534	-614,280
5	(Incr.)/Decr. A/R-Foreign Trade	0	0	0	0
6	(Incr.)/Decr. Inventory	-345,065	960,205	16,427	631,567
7	(Incr.)/Decr. Pre-Paid Exp.				
8	(Incr.)/Decr. Other Curr. Assets	-64,960	53,563	8,710	-2,687
9	Incr./(Decr.) A/P-Domestic	-76,896	837,483	-1,011,127	-250,540
10	Incr./(Decr.) A/P-Foreign	0	0	0	0
11	Incr./(Decr.) Taxes Payable	-40,782	31,608	159,872	150,698
12	Incr./(Decr.) Accrued Expenses	23,689	-76,823	12,959	-40,175
13	Incr./(Decr.) Other Cur. Liab.	-24,531	33,375	105,119	113,963
14	Total Cash from Operations	-412,055	562,889	293,680	444,514
	CASH FROM INVESTING ACTIVITIES				
15	(Purchase)/Disposal Prop, Plant & Equip	-106,157	-49,695	128,857	-26,995
16	(Incr.)/Decr. Investments in Subsidiaries	-24,345	-443,780	-37,494	-505,619
17	(Incr.)/Decr. Invest. in Good Will	0	0	0	0
18	(Incr.)/Decrease Other Assets	3,258	7,122	-179,315	-168,935
19	(Charges)/Credits to Retained Earnings	-34,600	-157,876	54,503	-137,973
20	Total Cash from Investing Activities	-161,844	-644,229	-33,449	-839,522
	CASH FROM FINANCING ACTIVITIES				
21	Incr./(Decr.) Notes Payable	655,632	7,610	-278,040	385,202
22	Incr./(Decr.) Long Term Debt	-28,146	-11,400	-3,795	-43,341
23	Incr./(Decr.) Other L-T Liab	0	0	0	0
24	New Issue/(Repurchase) Common Stock	0	0	0	0
25	Incr./(Decr.) Paid-In Capital	0	0	0	0
26	(Payment) of Dividends	0	0	0	0
27	Total Cash from Financing Activities	627,486	-3,790	-281,835	341,861
28	Total Change in Cash Position	53,587	-85,130	-21,604	-53,147
29	Cash Balance Beginning of Period	75,724	129,311	44,181	75,724
30	Cash Balance End of Period	129,311	44,181	22,577	22,577

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RATIO ANALYSIS
DUNABAU 43 ALTALANOS EPITO VALLALAT

Currency = HUF (000)

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		12/31/88	12/31/89	12/31/90	6 Months 6/30/91 Annualized
	LIQUIDITY RATIOS				
1	Current Ratio	1.54	1.29	0.82	0.97
2	Quick Ratio (Acid Test)	0.39	0.35	0.72	0.78
	LEVERAGE RATIOS				
3	Debt/Total Assets	0.04	0.24	0.21	0.15
4	Debt/Total Capital	0.05	0.43	0.52	0.24
5	Debt/Equity	0.06	0.44	0.54	0.25
6	Total Assets/Equity (Financial Leverage)	1.53	1.82	2.62	1.65
7	Interest Coverge		3.51	1.93	6.52
8	Total Coverage		0.50	0.43	1.83
	ACTIVITY RATIOS				
9	Fixed Asset Turnover		4.15	4.26	3.41
10	Total Asset Turnover		1.50	1.30	1.08
11	Inventory Turnover		2.66	17.24	6.35
12	Average Collection Period-Dom. Trade		18	114	93
13	Average Collection Period-For. Trade		0	0	Incl. Above
14	Average Collection Period-Total		18	114	93
15	Average Payment Period-Dom. Trade		50	119	71
16	Average Payment Period-For. Trade		0	0	Incl. Above
17	Average Payment Period-Total		50	119	71
18	Self Produced Inventory/COGS		8.88%	2.34%	2.84%
19	Purchased Inventory/COGS		28.77%	3.46%	12.91%
20	Total Inventory/COGS		37.66%	5.80%	15.75%
21	Self Produced Inventory Days Held		32	9	10
22	Purchased Inventory Days Held		105	13	47
23	Total Inventory Days Held		137	21	58
24	Sales Days Cash Held		11	4	3
25	Cash Cycle Period		105	16	79
	PROFITABILITY RATIOS				
26	Gross Margin		28.85%	14.05%	57.17%
27	Operating Margin		6.76%	4.14%	30.05%
28	Pre-Tax Return on Sales		2.84%	-2.82%	22.77%
29	After Tax Return on Sales		2.44%	-2.93%	22.72%
30	Pre-Tax Return on Total Assets		4.27%	-3.67%	24.60%
31	Pre-Tax Return on Equity		7.77%	-9.62%	40.70%
	PERFORMANCE MEASURES				
32	Growth in Total Assets		24.68%	18.08%	-17.53%
33	Growth in Sales		N/A	2.10%	-31.47%
34	Change in Gross Margin		N/A	-50.28%	178.86%
35	Change in Operating Margin		N/A	-37.44%	396.90%
36	Growth in Pre-Tax Net Income		N/A	-201.55%	652.67%
37	% Domestic Sales		100.00%	100.00%	100.00%
38	% Foreign Sales		0.00%	0.00%	N/A

C.3.3 Hajdú Megyei Állami Épitoipari Vállalat (HÁÉV)

The financial management practices at HÁÉV over the past 2-1/2 years are difficult to understand. With starts and completions falling rapidly (**Appendix D.1**), inventories have been allowed to grow by 35 percent (C6, R11 & R21-23); operating expenses (overhead) have increased (I23); and the employee count (**Appendix D.5**) has remained quite level, taking HÁÉV's revenues per employee from one of the highest in the group to the lowest (**Appendix D.5.1**). This is especially striking among white collar employees. There appears to have been no action taken to deal with the financial implications of a shrinking market.

Even more striking, though the company had very substantial cash balances (which more than doubled from 1/1/89 to 12/31/90 (B1) to HFT 782 million or 24 percent of total assets), it borrowed over HFT 1 billion during the 2-1/2 year period, causing interest expense to consume earnings (I30). In 36 months, HÁÉV spent HFT 400 million in interest expense on loans taken out so that its already large cash balances could grow.

Unless debt, employee counts and operating expenses (overhead) are quickly and substantially reduced, non-productive expenses will quickly destroy what's left of the financial capital of this company.

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STATEMENT of INCOME
HAJDU MEGYEI ALLAMI EPITOIPARI VALLALAT

30-Apr-92
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Currency = HUF (000)

		Year - 1989	Year - 1990	6 Mos. 1991
1	Gross Domestic Sales	3,072,424	2,709,469	825,931
2	Gross Foreign Sales	0	0	0
3	Total Gross Sales	3,072,424	2,709,469	825,931
4	Less: Write-Offs & Returns	0	0	0
5	Net Sales	3,072,424	2,709,469	825,931
6	Cost of Sales-Domestic	2,152,974	1,707,265	582,542
7	Cost of Sales-Foreign	0	0	0
8	Gross Margin	919,450	1,002,204	243,389
	Operating Expenses			
9	Rent	N/A	N/A	N/A
10	Sales Salaries	N/A	N/A	N/A
11	Sales Commissions	N/A	N/A	N/A
12	Other Salaries & Wages	N/A	N/A	N/A
13	Research & Development	N/A	N/A	N/A
14	Travel & Entertainment	N/A	N/A	N/A
15	Advertising	N/A	N/A	N/A
16	Telephone & Utilities	N/A	N/A	N/A
17	Gas & Oil	N/A	N/A	N/A
18	Insurance	N/A	N/A	N/A
19	Maintenance & Repairs	N/A	N/A	N/A
20	Depreciation & Amortization	57,365	46,906	16,971
21	Non-Income Taxes & Fees	N/A	N/A	N/A
22	Other Operating Expenses	N/A	N/A	N/A
23	Total Operating Expenses	725,971	804,575	416,341
24	Net Operating Income	193,479	197,629	-172,952
25	Gain/(Loss) Sale of Prop, Plant & Equip	N/A	N/A	N/A
26	Gain/(Loss) Foreign Currency Translation	N/A	N/A	N/A
27	Other Income & Expense (Net)	-12,833	-2,796	-1,020
28	Earnings Before Interest & Tax	180,646	194,833	-173,972
29	Interest Expense	104,664	181,397	112,702
30	**EARNINGS BEFORE TAXES ON INCOME**	75,982	13,436	-286,674
31	Taxes on Income	84,416	157,560	N/A
32	Income Available to Shareholders	-8,434	-144,124	-286,674
33	Dividends Paid to Shareholders	0	0	0
34	Net Income to Retained Earnings	-8,434	-144,124	-286,674

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BALANCE SHEET
HAJDU MEGYEI ALLAMI EPITOIPARI VALLALAT

30-Apr-92
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Currency = HUF (000)

	ASSETS	12/31/88	12/31/89	12/31/90	6/30/91
	Current Assets:				
	Cash:				
1	Deposits	310,193	419,309	782,125	N/A
2	Foreign Currency Accounts	0	0	0	N/A
3	Marketable Securities (CD's)	61	61	55	N/A
4	Accounts Receivable:				
5	A/R-Domestic Trade	286,980	394,219	249,786	134,666
6	A/R-Foreign Trade	0	0	0	N/A
	Inventory:				
7	Self Produced (WIP + Finished - Subs)	242,445	304,464	384,809	612,648
8	Purchased (Raw + Subcontracted)	819,241	772,880	784,858	806,735
9	Other Current Assets	124,693	197,131	212,675	N/A
10	Total Current Assets	1,783,613	2,088,064	2,414,308	N/A
	Gross Fixed or Plant Assets:				
11	Land & Buildings	523,728	528,807	533,277	N/A
12	Equipment & Machinery	500,395	484,726	482,669	N/A
13	Vehicles	73,382	42,308	38,429	N/A
14	Other Fixed Assets	219,107	260,206	233,363	N/A
15	Less Accumulated Depreciation	-691,622	-722,640	-728,681	N/A
16	Total Net Fixed Assets	624,990	593,407	559,057	N/A
17	Investments in Subsidiaries	155,685	170,305	199,024	N/A
18	Investment in Good Will	0	0	0	N/A
19	Other Assets	87,854	35,824	63,752	N/A
20	Total Assets	2,652,142	2,887,600	3,236,141	N/A

	LIABILITIES & OWNERS EQUITY	12/31/88	12/31/89	12/31/90	6/30/91
	Current Liabilities:				
21	Accounts Payable-Domestic	172,803	167,180	110,684	152,203
22	Accounts Payable-Foreign	0	0	0	N/A
23	Notes Payable	646,300	231,550	35,385	915,100
24	Taxes Payable	26,237	30,200	1,555	N/A
25	Accrued Expenses	39,661	40,467	44,842	N/A
26	Other Cur. Liabilities	51,938	205,713	185,245	N/A
27	Total Current Liabilities	936,939	675,110	377,711	N/A
	Long-Term Liabilities:				
28	Long Term Debt	0	668,100	1,462,000	771,000
29	Other Long Term Liabilities	0	0	0	N/A
30	Total Long Term Liabilities	0	668,100	1,462,000	N/A
31	Total Liabilities	936,939	1,343,210	1,839,711	N/A
	Owner's Equity:				
32	Common & Preferred Stock (Par)	0	0	0	0
33	Paid-In Capital	1,428,125	1,428,125	1,428,125	1,428,125
34	Retained Earnings	287,078	116,265	-31,695	-318,369
35	Total Owner's Equity	1,715,203	1,544,390	1,396,430	1,109,756
36	Total Liab & Owner's Equity	2,652,142	2,887,600	3,236,141	N/A

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STATEMENT of CASH FLOWS
HAJDU MEGYEI ALLAMI EPITOIPARI VALLALAT

Currency = HUF (000)

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		Year - 1989	Year - 1990	6 Mos. 1991	2-1/2 Years 12/88 - 6/91
	CASH FROM OPERATIONS				
1	After Tax Net Income from Operations	-8,434	-144,124	-286,674	-439,232
	Add Back:				
2	Depreciation	57,365	46,906	16,971	121,242
3	Payment of Dividends	0	0		
	Changes in Working Capital:				
4	(Incr.)/Decr. A/R-Domestic Trade	-107,239	144,433	115,120	152,314
5	(Incr.)/Decr. A/R-Foreign Trade	0	0	0	0
6	(Incr.)/Decr. Inventory	-15,658	-92,323	-249,716	-357,697
7	(Incr.)/Decr. Pre-Paid Exp.				
8	(Incr.)/Decr. Other Curr. Assets	-72,438	-15,544		
9	Incr./(Decr.) A/P-Domestic	-5,623	-56,496	41,519	-20,600
10	Incr./(Decr.) A/P-Foreign	0	0		
11	Incr./(Decr.) Taxes Payable	3,963	-28,645		
12	Incr./(Decr.) Accrued Expenses	806	4,375		
13	Incr./(Decr.) Other Cur. Liab.	153,775	-20,468		
14	Total Cash from Operations	6,517	-161,886		
	CASH FROM INVESTING ACTIVITIES				
15	(Purchase)/Disposal Prop, Plant & Equip	-25,762	-12,556		
16	(Incr.)/Decr. Investments in Subsidiaries	-14,620	-28,719		
17	(Incr.)/Decr. Invest. in Good Will	0	0		
18	(Incr.)/Decrease Other Assets	52,030	-27,928		
19	Direct Charges to Retained Earnings	-162,379	-3,836		
20	Total Cash from Investing Activities	-150,751	-73,039		
	CASH FROM FINANCING ACTIVITIES				
21	Incr./(Decr.) Notes Payable	-414,750	-196,165	879,715	268,800
22	Incr./(Decr.) Long Term Debt	668,100	793,900	-691,000	771,000
23	Incr./(Decr.) Other L-T Liab	0	0		
24	New Issue/(Repurchase) Common Stock	0	0		
25	Incr./(Decr.) Paid-In Capital	0	0		
26	(Payment) of Dividends	0	0		
27	Total Cash from Financing Activities	253,350	597,735	188,715	1,039,800
28	Total Change in Cash Position	109,116	362,810		
29	Cash Balance Beginning of Period	310,254	419,370	782,180	310,254
30	Cash Balance End of Period	419,370	782,180	N/A	N/A

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RATIO ANALYSIS
HAJDU MEGYEI ALLAMI EPITOIPARI VALLALAT

Currency = HUF (000)

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		12/31/88	12/31/89	12/31/90	6 Months 6/30/91 Annualized
	LIQUIDITY RATIOS				
1	Current Ratio	1.90	3.09	6.39	
2	Quick Ratio (Acid Test)	0.77	1.50	3.30	
	LEVERAGE RATIOS				
3	Debt/Total Assets	0.24	0.31	0.46	
4	Debt/Total Capital	0.38	0.41	0.52	0.90
5	Debt/Equity	0.38	0.58	1.07	1.52
6	Total Assets/Equity (Financial Leverage)	1.55	1.87	2.32	
7	Interest Coverge		2.85	2.09	-0.53
8	Total Coverage		0.20	0.23	-0.06
	ACTIVITY RATIOS				
9	Fixed Asset Turnover		5.18	4.85	
10	Total Asset Turnover		1.06	0.84	
11	Inventory Turnover		2.00	1.46	0.82
12	Average Collection Period-Dom. Trade		47	34	30
13	Average Collection Period-For. Trade		0	0	0
14	Average Collection Period-Total		47	34	30
15	Average Payment Period-Dom. Trade		28	24	48
16	Average Payment Period-For. Trade		0	0	
17	Average Payment Period-Total		28	24	
18	Self Produced Inventory/COGS		14.14%	22.54%	52.58%
19	Purchased Inventory/COGS		35.90%	45.97%	69.24%
20	Total Inventory/COGS		50.04%	68.51%	121.83%
21	Self Produced Inventory Days Held		52	82	192
22	Purchased Inventory Days Held		131	168	253
23	Total Inventory Days Held		183	250	445
24	Sales Days Cash Held		50	105	
25	Cash Cycle Period		201	260	
	PROFITABILITY RATIOS				
26	Gross Margin		29.93%	36.99%	29.47%
27	Operating Margin		6.30%	7.29%	-20.94%
28	Pre-Tax Return on Sales		2.47%	0.50%	-34.71%
29	After Tax Return on Sales		-0.27%	-5.32%	-34.71%
30	Pre-Tax Return on Total Assets		2.63%	0.42%	
31	Pre-Tax Return on Equity		4.92%	0.96%	-51.66%
	PERFORMANCE MEASURES				
32	Growth in Total Assets		8.88%	12.07%	
33	Growth in Sales		N/A	-11.81%	-39.03%
34	Change in Gross Margin		N/A	9.00%	-51.43%
35	Change in Operating Margin		N/A	2.14%	-275.03%
36	Growth in Pre-Tax Net Income		N/A	-82.32%	-4367.25%
37	% Domestic Sales		100.00%	100.00%	100.00%
38	% Foreign Sales		0.00%	0.00%	0.00%

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C.3.4 Borsodi Megyei Ållami Épitoipari Vállalat

A quick look at line 35 of Borsod's balance sheet shows this company to be insolvent at 6/30/91. In addition to the information on the financial statements, we were advised that Borsod increased its borrowings by HFT 200 million between 6/30/91 and 10/9/91.

The primary concerns at this time are first to halt all on going expenses (terminate employees) to keep the problem from getting even bigger, and second to attempt to sell inventory and fixed assets to raise the funds necessary to pay off the bank loans and the HFT 759 million in accounts payable so that the failure of this company will not create further economic harm to its suppliers.

This problem would have been significantly smaller if strong action had been taken in 1989. Over the 36 months from 1/1/89 to 6/30/91, Borsod's equity dropped by HFT 1,147 million (B35) as a result of inefficient operations (I6 & 8 and **Appendix D.5.1**), and the failure to drastically reduce overhead expenses as the market declined. These losses were financed by stretching accounts payable. Delay in taking action has made what was basically a problem of what to do with terminated employees into a severe problem of financial bankruptcy and high debts to other companies, undoubtedly creating financial problems for the creditors.

STATEMENT of INCOME
BORSOD MEGYEI ALLAMI EPITOIPARI VALLALAT

30-Apr-92
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Currency = HUF (000)

		Year - 1989	Year - 1990	6 Mos. 1991
1	Gross Domestic Sales	990,689	855,092	405,770
2	Gross Foreign Sales	0	17,998	0
3	Total Gross Sales	990,689	873,090	405,770
4	Less: Write-Offs & Returns	0	0	0
5	Net Sales	990,689	873,090	405,770
6	Cost of Sales-Domestic	913,336	756,715	541,184
7	Cost of Sales-Foreign	0	8,215	0
8	Gross Margin	77,353	108,160	-135,414
	Operating Expenses			
9	Rent	N/A	N/A	N/A
10	Sales Salaries	N/A	N/A	N/A
11	Sales Commissions	N/A	N/A	N/A
12	Other Salaries & Wages	N/A	N/A	N/A
13	Research & Development	N/A	N/A	N/A
14	Travel & Entertainment	N/A	N/A	N/A
15	Advertising	N/A	N/A	N/A
16	Telephone & Utilities	N/A	N/A	N/A
17	Gas & Oil	N/A	N/A	N/A
18	Insurance	N/A	N/A	N/A
19	Maintenance & Repairs	N/A	N/A	N/A
20	Depreciation & Amortization	22,695	21,244	8,956
21	Non-Income Taxes & Fees	N/A	N/A	N/A
22	Other Operating Expenses	N/A	N/A	N/A
23	Total Operating Expenses	383,001	315,212	197,382
24	Net Operating Income	-305,648	-207,052	-332,796
25	Gain/(Loss) Sale of Prop, Plant & Equip	N/A	N/A	N/A
26	Gain/(Loss) Foreign Currency Translation	N/A	N/A	N/A
27	Other Income & Expense (Net)	109,054	-92,013	-49,347
28	Earnings Before Interest & Tax	-196,594	-299,065	-382,143
29	Interest Expense	2,531	17,719	16,474
30	**EARNINGS BEFORE TAXES ON INCOME**	-199,125	-316,784	-398,617
31	Taxes on Income	200,338	-11,751	N/A
32	Income Available to Shareholders	-399,463	-305,033	-398,617
33	Dividends Paid to Shareholders	0	0	0
34	Net Income to Retained Earnings	-399,463	-305,033	-398,617

BALANCE SHEET
BORSOD MEGYEI ALLAMI EPITOIPARI VALLALAT

30-Apr-92
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Currency = HUF (000)

	ASSETS	12/31/88	12/31/89	12/31/90	6/30/91
	Current Assets:				
	Cash:				
1	Deposits	21,740	43,006	47,671	N/A
2	Foreign Currency Accounts	0	0	0	N/A
3	Marketable Securities (CD's)	6,916	6,916	316	N/A
4	Accounts Receivable:				
5	A/R-Domestic Trade	495,785	201,280	0	34,260
6	A/R-Foreign Trade	2,247	1,382	1,845	1,845
	Inventory:				
7	Self Produced (WIP + Finished - Subs)	96,118	143,448	255,989	169,210
8	Purchased (Raw + Subcontracted)	450,384	443,499	340,786	311,194
9	Other Current Assets	41,257	32,375	32,485	N/A
10	Total Current Assets	1,114,447	873,906	679,092	N/A
	Gross Fixed or Plant Assets:				
11	Land & Buildings	356,298	354,464	386,230	N/A
12	Equipment & Machinery	371,120	375,728	269,577	N/A
13	Vehicles	27,762	25,350	24,990	N/A
14	Other Fixed Assets	26,110	31,708	29,228	N/A
15	Less Accumulated Depreciation	-414,791	-432,950	-369,760	N/A
16	Total Net Fixed Assets	366,499	354,300	340,265	N/A
17	Investments in Subsidiaries	184,817	191,817	143,280	N/A
18	Investment in Good Will	0	0	0	N/A
19	Other Assets	13,086	2,680	0	N/A
20	Total Assets	1,678,849	1,422,703	1,162,637	N/A

	LIABILITIES & OWNERS EQUITY	12/31/88	12/31/89	12/31/90	6/30/91
	Current Liabilities:				
21	Accounts Payable-Domestic	370,620	511,175	586,550	759,277
22	Accounts Payable-Foreign	0	0	1,105	N/A
23	Notes Payable	0	0	40,000	40,000
24	Taxes Payable	90,987	161,005	54,995	N/A
25	Accrued Expenses	35,962	28,049	39,465	N/A
26	Other Cur. Liabilities	76,001	14,448	88,462	N/A
27	Total Current Liabilities	573,570	712,677	810,577	N/A
	Long-Term Liabilities:				
28	Long Term Debt	8,760	6,260	3,936	2,985
29	Other Long Term Liabilities	0	0	0	N/A
30	Total Long Term Liabilities	8,760	6,260	3,936	N/A
31	Total Liabilities	582,330	718,937	814,513	N/A
	Owner's Equity:				
32	Common & Preferred Stock (Par)	0	0	0	0
33	Paid-In Capital	182,980	182,980	182,980	182,980
34	Retained Earnings	913,539	520,786	165,144	-233,473
35	Total Owner's Equity	1,096,519	703,766	348,124	-50,493
36	Total Liab & Owner's Equity	1,678,849	1,422,703	1,162,637	N/A

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STATEMENT of CASH FLOWS
BORSOD MEGYEI ALLAMI EPITOIPARI VALLALAT

Currency = HUF (000)

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		Year - 1989	Year - 1990	6 Mos. 1991	2-1/2 Years 12/88 - 6/91
	CASH FROM OPERATIONS				
1	After Tax Net Income from Operations	-399,463	-305,033	-398,617	-1,103,113
	Add Back:				
2	Depreciation	22,695	21,244	8,956	52,895
3	Payment of Dividends	0	0		
	Changes in Working Capital:				
4	(Incr.)/Decr. A/R-Domestic Trade	294,505	201,280	-34,260	461,525
5	(Incr.)/Decr. A/R-Foreign Trade	865	-463		
6	(Incr.)/Decr. Inventory	-42,445	-7,828	116,371	66,098
7	(Incr.)/Decr. Pre-Paid Exp.				
8	(Incr.)/Decr. Other Curr. Assets	8,882	-110		
9	Incr./(Decr.) A/P-Domestic	140,555	75,375	172,727	388,657
10	Incr./(Decr.) A/P-Foreign	0	1,105		
11	Incr./(Decr.) Taxes Payable	70,018	-106,010		
12	Incr./(Decr.) Accrued Expenses	-9,913	13,416		
13	Incr./(Decr.) Other Cur. Liab.	-61,553	74,014		
14	Total Cash from Operations	24,146	-33,010		
	CASH FROM INVESTING ACTIVITIES				
15	(Purchase)/Disposal Prop, Plant & Equip	-10,496	-7,209		
16	(Incr.)/Decr. Investments in Subsidiaries	-7,000	48,537		
17	(Incr.)/Decr. Invest. in Good Will	0	0		
18	(Incr.)/Decrease Other Assets	10,406	2,680		
19	Direct Charges to Retained Earnings	6,710	-50,609		
20	Total Cash from Investing Activities	-380	-6,601		
	CASH FROM FINANCING ACTIVITIES				
21	Incr./(Decr.) Notes Payable	0	40,000	0	40,000
22	Incr./(Decr.) Long Term Debt	-2,500	-2,324	-951	-5,775
23	Incr./(Decr.) Other L-T Liab	0	0		
24	New Issue/(Repurchase) Common Stock	0	0		
25	Incr./(Decr.) Paid-In Capital	0	0		
26	(Payment) of Dividends	0	0		
27	Total Cash from Financing Activities	-2,500	37,676	-951	34,225
28	Total Change in Cash Position	21,266	-1,935		
29	Cash Balance Beginning of Period	28,656	49,922	47,987	28,656
30	Cash Balance End of Period	49,922	47,987	N/A	N/A

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RATIO ANALYSIS
BORSOD MEGYEI ALLAMI EPITOIPARI VALLALAT

Currency = HUF (000)

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		12/31/88	12/31/89	12/31/90	6 Months 6/30/91 Annualized
	LIQUIDITY RATIOS				
1	Current Ratio	1.94	1.23	0.84	
2	Quick Ratio (Acid Test)	0.99	0.40	0.10	
	LEVERAGE RATIOS				
3	Debt/Total Assets	0.01	0.00	0.04	
4	Debt/Total Capital	0.01	0.01	0.12	-0.90
5	Debt/Equity	0.01	0.01	0.13	-0.85
6	Total Assets/Equity (Financial Leverage)	1.53	2.02	3.34	
7	Interest Coverge		-119.76	-10.69	-19.20
8	Total Coverage		-34.48	-3.07	-8.33
	ACTIVITY RATIOS				
9	Fixed Asset Turnover		2.80	2.57	
10	Total Asset Turnover		0.70	0.75	
11	Inventory Turnover		1.55	1.28	2.25
12	Average Collection Period-Dom. Trade		74	0	15
13	Average Collection Period-For. Trade		0	37	
14	Average Collection Period-Total		75	1	15
15	Average Payment Period-Dom. Trade		204	283	256
16	Average Payment Period-For. Trade		0	49	
17	Average Payment Period-Total		204	280	
18	Self Produced Inventory/COGS		15.92%	33.47%	15.63%
19	Purchased Inventory/COGS		48.56%	44.55%	28.75%
20	Total Inventory/COGS		64.48%	78.02%	44.38%
21	Self Produced Inventory Days Held		58	122	57
22	Purchased Inventory Days Held		177	163	105
23	Total Inventory Days Held		235	285	162
24	Sales Days Cash Held		18	20	
25	Cash Cycle Period		106	5	
	PROFITABILITY RATIOS				
26	Gross Margin		7.81%	12.39%	-33.37%
27	Operating Margin		-30.85%	-23.71%	-82.02%
28	Pre-Tax Return on Sales		-20.10%	-36.28%	-98.24%
29	After Tax Return on Sales		-40.32%	-34.94%	-98.24%
30	Pre-Tax Return on Total Assets		-14.00%	-27.25%	
31	Pre-Tax Return on Equity		-28.29%	-91.00%	1578.90%
	PERFORMANCE MEASURES				
32	Growth in Total Assets		-15.26%	-18.28%	
33	Growth in Sales		N/A	-11.87%	-7.05%
34	Change in Gross Margin		N/A	39.83%	-350.40%
35	Change in Operating Margin		N/A	32.26%	-221.46%
36	Growth in Pre-Tax Net Income		N/A	-59.09%	-151.66%
37	% Domestic Sales		100.00%	97.94%	100.00%
38	% Foreign Sales		0.00%	2.06%	0.00%

C.3.5 Zala Megyei Állami Épitoipari Vállalat (ZÁÉV)

Through 12/31/90, ZÁÉV's financial statements represent those of a strong company. As housing activity diminished (**Appendix D.1**) management put increased emphasis on non-housing business (**Exhibit D.2**), helping to maintain revenue. Costs of sales have been kept under control (R26), but high overhead expenses (I23) have kept the operating margin (R27) thin, leaving little room for error. While the current ratio (R1) has declined, it was still good at 2.3.

The 6/30/91 statements indicate the situation is starting to get out of control. Accounts receivable (C4) and inventories (C6, R11, R21-23) have been allowed to grow, necessitating an increase in debt (C27). In fact, the entire outstanding debt has been required solely to finance the increases in these two accounts. The resulting interest cost will have a negative impact on future earnings.

Quick action in controlling inventory levels and receivables is necessary in an effort to return ZÁÉV to a zero debt position. Non-productive assets should be sold off as quickly as possible to eliminate their contribution to overhead expenses. These actions, along with continued aggressive efforts to obtain non-housing business, should keep ZÁÉV as a profitable and viable enterprise.

STATEMENT of INCOME
ZALA MEGYEI ALLAMI EPITOIPARI VALLALAT

30-Apr-92
9:35 AM

Currency = HUF (000)

		Year - 1989	Year - 1990	6 Mos. 1991
1	Gross Domestic Sales	1,472,881	1,457,781	755,943
2	Gross Foreign Sales	0	0	Incl. Above
3	Total Gross Sales	1,472,881	1,457,781	755,943
4	Less: Write-Offs & Returns	0	0	0
5	Net Sales	1,472,881	1,457,781	755,943
6	Cost of Sales-Domestic	1,044,446	1,051,373	516,649
7	Cost of Sales-Foreign	0	0	Incl. Above
8	Gross Margin	428,435	406,408	239,294
	Operating Expenses			
9	Rent	N/A	N/A	N/A
10	Sales Salaries	N/A	N/A	N/A
11	Sales Commissions	N/A	N/A	N/A
12	Other Salaries & Wages	N/A	N/A	N/A
13	Research & Development	N/A	N/A	N/A
14	Travel & Entertainment	N/A	N/A	N/A
15	Advertising	N/A	N/A	N/A
16	Telephone & Utilities	N/A	N/A	N/A
17	Gas & Oil	N/A	N/A	N/A
18	Insurance	N/A	N/A	N/A
19	Maintenance & Repairs	N/A	N/A	N/A
20	Depreciation & Amortization	17,664	17,115	8,649
21	Non-Income Taxes & Fees	N/A	N/A	N/A
22	Other Operating Expenses	N/A	N/A	N/A
23	Total Operating Expenses	341,663	373,225	191,284
24	Net Operating Income	86,772	33,183	48,010
25	Gain/(Loss) Sale of Prop, Plant & Equip	N/A	N/A	N/A
26	Gain/(Loss) Foreign Currency Translation	N/A	N/A	N/A
27	Other Income & Expense (Net)	-7,875	-11,223	-2,693
28	Earnings Before Interest & Tax	78,897	21,960	45,317
29	Interest Expense	3,502	5,031	15,618
30	**EARNINGS BEFORE TAXES ON INCOME**	75,395	16,929	29,699
31	Taxes on Income	87,514	65,760	20,504
32	Income Available to Shareholders	-12,119	-48,831	9,195
33	Dividends Paid to Shareholders	0	0	0
34	Net Income to Retained Earnings	-12,119	-48,831	9,195

BALANCE SHEET
ZALA MEGYEI ALLAMI EPITOIPARI VALLALAT

30-Apr-92
9:35 AM

Currency = HUF (000)

	ASSETS	12/31/88	12/31/89	12/31/90	6/30/91
	Current Assets:				
	Cash:				
1	Deposits	61,822	57,905	34,704	24,690
2	Foreign Currency Accounts	0	0	0	0
3	Marketable Securities (CD's)	9,153	7,548	800	600
4	Accounts Receivable:				
5	A/R-Domestic Trade	52,182	25,356	18,565	81,916
6	A/R-Foreign Trade	0	0	0	0
	Inventory:				
7	Self Produced (WIP + Finished - Subs)	54,717	63,653	89,766	150,729
8	Purchased (Raw + Subcontracted)	277,563	322,720	325,764	317,269
9	Other Current Assets	57,607	35,313	14,353	17,540
10	Total Current Assets	513,044	512,495	483,952	592,744
	Gross Fixed or Plant Assets:				
11	Land & Buildings	327,587	338,158	348,428	621,412
12	Equipment & Machinery	186,599	191,160	200,152	Incl. Above
13	Vehicles	54,946	56,320	59,611	Incl. Above
14	Other Fixed Assets	17,286	29,130	34,834	19,609
15	Less Accumulated Depreciation	-234,637	-245,764	-259,733	-266,281
16	Total Net Fixed Assets	351,781	369,004	383,292	374,740
17	Investments in Subsidiaries	39,200	85,900	93,480	101,890
18	Investment in Good Will	0	0	0	0
19	Other Assets	304	1,547	3,721	6,138
20	Total Assets	904,329	968,946	964,445	1,075,512

	LIABILITIES & OWNERS EQUITY	12/31/88	12/31/89	12/31/90	6/30/91
	Current Liabilities:				
21	Accounts Payable-Domestic	27,581	31,878	30,313	32,161
22	Accounts Payable-Foreign	0	0	0	0
23	Notes Payable	0	0	52,104	150,200
24	Taxes Payable	28,663	427	-1,340	18,071
25	Accrued Expenses	34,736	31,029	33,421	35,876
26	Other Cur. Liabilities	7,981	134,588	95,655	30,916
27	Total Current Liabilities	98,961	197,922	210,153	267,224
	Long-Term Liabilities				
28	Long Term Debt	0	0	0	0
29	Other Long Term Liabilities	0	0	0	0
30	Total Long Term Liabilities	0	0	0	0
31	Total Liabilities	98,961	197,922	210,153	267,224
	Owner's Equity:				
32	Common & Preferred Stock (Par)	0	0	0	0
33	Paid-In Capital	111,316	111,316	111,316	111,316
34	Retained Earnings	694,052	659,708	642,976	696,972
35	Total Owner's Equity	805,368	771,024	754,292	808,288
36	Total Liab & Owner's Equity	904,329	968,946	964,445	1,075,512

STATEMENT of CASH FLOWS
ZALA MEGYEI ALLAMI EPITOIPARI VALLALAT

Currency = HUF (000)

30-Apr-92
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		Year - 1989	Year - 1990	6 Mos. 1991	2-1/2 Years 12/88 - 6/91
	CASH FROM OPERATIONS				
1	After Tax Net Income from Operations	-12,119	-48,831	9,195	-51,755
	Add Back:				
2	Depreciation	17,664	17,115	8,649	43,428
3	Payment of Dividends	0	0	0	0
	Changes in Working Capital:				
4	(Incr.)/Decr. A/R-Domestic Trade	26,826	6,791	-63,351	-29,734
5	(Incr.)/Decr. A/R-Foreign Trade	0	0	0	0
6	(Incr.)/Decr. Inventory	-54,093	-29,157	-52,468	-135,718
7	(Incr.)/Decr. Pre-Paid Exp.				
8	(Incr.)/Decr. Other Curr. Assets	22,294	20,960	-3,187	40,067
9	Incr./(Decr.) A/P-Domestic	4,297	-1,565	1,848	4,580
10	Incr./(Decr.) A/P-Foreign	0	0	0	0
11	Incr./(Decr.) Taxes Payable	-28,236	-1,767	19,411	-10,592
12	Incr./(Decr.) Accrued Expenses	-3,707	2,392	2,455	1,140
13	Incr./(Decr.) Other Cur. Liab.	126,607	-38,933	-64,739	22,935
14	Total Cash from Operations	99,533	-72,995	-142,187	-115,649
	CASH FROM INVESTING ACTIVITIES				
15	(Purchase)/Disposal Prop, Plant & Equip	-34,887	-31,403	-97	-66,387
16	(Incr.)/Decr. Investments in Subsidiaries	-46,700	-7,580	-8,410	-62,690
17	(Incr.)/Decr. Invest. in Good Will	0	0	0	0
18	(Incr.)/Decrease Other Assets	-1,243	-2,174	-2,417	-5,834
19	(Charges)/Credits to Retained Earnings	-22,225	32,099	44,801	54,675
20	Total Cash from Investing Activities	-105,055	-9,058	33,877	-80,236
	CASH FROM FINANCING ACTIVITIES				
21	Incr./(Decr.) Notes Payable	0	52,104	98,096	150,200
22	Incr./(Decr.) Long Term Debt	0	0	0	0
23	Incr./(Decr.) Other L-T Liab	0	0	0	0
24	New Issue/(Repurchase) Common Stock	0	0	0	0
25	Incr./(Decr.) Paid-In Capital	0	0	0	0
26	(Payment) of Dividends	0	0	0	0
27	Total Cash from Financing Activities	0	52,104	98,096	150,200
28	Total Change in Cash Position	-5,522	-29,949	-10,214	-45,685
29	Cash Balance Beginning of Period	70,975	65,453	35,504	70,975
30	Cash Balance End of Period	65,453	35,504	25,290	25,290

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RATIO ANALYSIS
ZALA MEGYEI ALLAMI EPITOIPARI VALLALAT

Currency = HUF (000)

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		12/31/88	12/31/89	12/31/90	6 Months 6/30/91 Annualized
	LIQUIDITY RATIOS				
1	Current Ratio	5.18	2.59	2.30	2.22
2	Quick Ratio (Acid Test)	1.83	0.64	0.33	0.47
	LEVERAGE RATIOS				
3	Debt/Total Assets	0.00	0.00	0.05	0.14
4	Debt/Total Capital	0.00	0.00	0.07	0.19
5	Debt/Equity	0.00	0.00	0.07	0.19
6	Total Assets/Equity (Financial Leverage)	1.12	1.26	1.28	1.33
7	Interest Coverge		25.78	7.60	4.07
8	Total Coverage		25.78	0.67	0.70
	ACTIVITY RATIOS				
9	Fixed Asset Turnover		3.99	3.80	4.03
10	Total Asset Turnover		1.52	1.51	1.41
11	Inventory Turnover		2.70	2.53	2.21
12	Average Collection Period-Dom. Trade		6	5	20
13	Average Collection Period-For. Trade		0	0	Incl. Above
14	Average Collection Period-Total		6	5	20
15	Average Payment Period-Dom. Trade		11	11	11
16	Average Payment Period-For. Trade		0	0	Incl. Above
17	Average Payment Period-Total		11	11	11
18	Self Produced Inventory/COGS		6.09%	8.54%	14.59%
19	Purchased Inventory/COGS		30.90%	30.98%	30.70%
20	Total Inventory/COGS		36.99%	39.52%	45.29%
21	Self Produced Inventory Days Held		22	31	53
22	Purchased Inventory Days Held		113	113	112
23	Total Inventory Days Held		135	144	165
24	Sales Days Cash Held		16	9	6
25	Cash Cycle Period		130	138	174
	PROFITABILITY RATIOS				
26	Gross Margin		29.09%	27.88%	31.66%
27	Operating Margin		5.89%	2.28%	6.35%
28	Pre-Tax Return on Sales		5.12%	1.16%	3.93%
29	After Tax Return on Sales		-0.82%	-3.35%	1.22%
30	Pre-Tax Return on Total Assets		7.78%	1.76%	5.52%
31	Pre-Tax Return on Equity		9.78%	2.24%	7.35%
	PERFORMANCE MEASURES				
32	Growth in Total Assets		7.15%	-0.46%	11.52%
33	Growth in Sales		N/A	-1.03%	3.71%
34	Change in Gross Margin		N/A	-5.14%	17.76%
35	Change in Operating Margin		N/A	-61.76%	189.37%
36	Growth in Pre-Tax Net Income		N/A	-77.55%	250.87%
37	% Domestic Sales		100.00%	100.00%	100.00%
38	% Foreign Sales		0.00%	0.00%	N/A

C.4 State-Owned Enterprises, Material Companies

C.4.1 Romhányi Építési Kerámiagyár

Unfortunately the data available through MIT for Romhány tile works is missing the notes payable outstanding balance at 6/30/91 and Romhány management has refused financial information. This is an important figure in assessing the current status of this company as interest expense has become a major item and basic liquidity a significant issue.

From an operating standpoint, Romhány returned a good gross margin (I8 & R26) in 1989, but overhead was high (I23 and R27) so pre-tax return was nominal (I30). However, investment in fixed assets was increased by HFT 100 million (C15) and inventory was allowed to grow by HFT 96 million creating an increase instead of a paydown of debt (C27).

In 1990, Gross margin (I8 & R26) declined significantly (higher energy costs certainly contributed), while overhead and interest expenses grew and a large loss was realized. Failure to control overhead expenses has had a significant negative effect over the past 2-1/2 years.

The first 6 months of 1991 brought a 10.6 percent decline in sales, but no control was put on production, and the output was stockpiled in inventory (B7, B8, C6, & R23). Significant labor cuts were not made until September, 1991, after the production lines were permitted to operate long after demand for their output was met. Production costs continued to rise (R34) and little reduction was made in overhead (I23 & R34). This coupled with increasing interest expense created a large loss (I30). To finance the loss, the increased inventory and the increasing receivables, accounts payable were stretched (C9 & R15) and undoubtedly additional debt was obtained. Retained earnings has declined from HFT 520 million to HFT 228 million in just 36 months. The company is facing a liquidity crisis as a result of the production run over. At the current rate of loss, Romhány will be insolvent within a year.

The failures to put a stop to unsold production, to institute a strict efficiency program and to reduce overhead expenses have been the primary causes of the severe problems at this facility.

STATEMENT of INCOME
MATERIAL MANUFACTURERS - 1990

30-Apr-92
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Currency = HUF (000)

		ROMHANY	SOFA	BUDAI TEGLA	TOTAL GROUP
1	Gross Domestic Sales	970,554	1,204,318	694,993	2,869,865
2	Gross Foreign Sales	214,813	47,764	0	262,577
3	Total Gross Sales	1,185,367	1,252,082	694,993	3,132,442
4	Less: Write-Offs & Returns	0	0	0	0
5	Net Sales	1,185,367	1,252,082	694,993	3,132,442
6	Cost of Sales-Domestic	663,412	788,041	448,654	1,900,107
7	Cost of Sales-Foreign	156,741	33,495	0	190,236
8	Gross Margin	365,214	430,546	246,339	1,042,099
	Operating Expenses				
9	Rent	N/A	N/A	N/A	N/A
10	Sales Salaries	N/A	N/A	N/A	N/A
11	Sales Commissions	N/A	N/A	N/A	N/A
12	Other Salaries & Wages	N/A	N/A	N/A	N/A
13	Research & Development	N/A	N/A	N/A	N/A
14	Travel & Entertainment	N/A	N/A	N/A	N/A
15	Advertising	N/A	N/A	N/A	N/A
16	Telephone & Utilities	N/A	N/A	N/A	N/A
17	Gas & Oil	N/A	N/A	N/A	N/A
18	Insurance	N/A	N/A	N/A	N/A
19	Maintenance & Repairs	N/A	N/A	N/A	N/A
20	Depreciation & Amortization	78,698	48,788	42,171	169,657
21	Non-Income Taxes & Fees	N/A	N/A	N/A	N/A
22	Other Operating Expenses	N/A	N/A	N/A	N/A
23	Total Operating Expenses	432,814	275,098	160,049	867,961
24	Net Operating Income	-67,600	155,448	86,290	174,138
25	Gain/(Loss) Sale of Prop, Plant & Equip	N/A	N/A	N/A	N/A
26	Gain/(Loss) Foreign Currency Translation	N/A	N/A	N/A	N/A
27	Other Income & Expense (Net)	-45,796	4,412	19,044	-22,340
28	Earnings Before Interest & Tax	-113,396	159,860	105,334	151,798
29	Interest Expense	75,669	67,074	18,535	161,278
30	**EARNINGS BEFORE TAXES ON INCOME**	-189,065	92,786	86,799	-9,480
31	Taxes on Income	5,528	42,919	44,406	92,853
32	Income Available to Shareholders	-194,593	49,867	42,393	-102,333
33	Dividends Paid to Shareholders	0	0	0	0
34	Net Income to Retained Earnings	-194,593	49,867	42,393	-102,333

BALANCE SHEET
MATERIAL MANUFACTURERS - 1990

30-Apr-92
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Currency = HUF (000)

	ASSETS	ROMHANY	SOFA	BUDAI TEGLA	TOTAL GROUP
	Current Assets:				
	Cash:				
1	Deposits	5,864	12,277	61,720	79,861
2	Foreign Currency Accounts	0	0	0	0
3	Marketable Securities (CD's)	1,000	0	0	1,000
4	Accounts Receivable:				
5	A/R-Domestic Trade	59,904	71,358	75,411	206,673
6	A/R-Foreign Trade	38,163	24,078	0	62,241
	Inventory:				
7	Self Produced (WIP + Finished - Subs)	92,676	40,760	15,964	149,400
8	Purchased (Raw + Subcontracted)	222,835	203,314	100,701	526,850
9	Other Current Assets	5,443	2,359	33,308	41,110
10	Total Current Assets	425,885	354,146	287,104	1,067,135
	Gross Fixed or Plant Assets:				
11	Land & Buildings	732,505	199,285	628,873	1,560,663
12	Equipment & Machinery	861,605	424,317	383,776	1,669,698
13	Vehicles	7,070	2,849	14,419	24,338
14	Other Fixed Assets	42,012	1,216	32,426	75,654
15	Less Accumulated Depreciation	-661,370	-313,096	-593,929	-1,568,395
16	Total Net Fixed Assets	981,822	314,571	465,565	1,761,958
17	Investments in Subsidiaries	26,929	1,486	401,358	429,773
18	Investment in Good Will	0	0	0	0
19	Other Assets	16,077	22,625	156	38,858
20	Total Assets	1,450,713	692,828	1,154,183	3,297,724

	LIABILITIES & OWNERS EQUITY	ROMHANY	SOFA	BUDAI TEGLA	TOTAL GROUP
	Current Liabilities:				
21	Accounts Payable-Domestic	115,938	33,606	29,731	179,275
22	Accounts Payable-Foreign	12,888	3,176	0	16,064
23	Notes Payable	147,400	53,291	0	200,691
24	Taxes Payable	59,394	-7,164	-4,751	47,479
25	Accrued Expenses	13,651	10,054	12,623	36,328
26	Other Cur. Liabilities	50,598	6,662	13,268	70,528
27	Total Current Liabilities	399,869	99,625	50,871	550,365
	Long-Term Liabilities:				
28	Long Term Debt	66,034	262,300	95,030	423,364
29	Other Long Term Liabilities	0	0	0	0
30	Total Long Term Liabilities	66,034	262,300	95,030	423,364
31	Total Liabilities	465,903	361,925	145,901	973,729
	Owner's Equity:				
32	Common & Preferred Stock (Par)	0	0	0	0
33	Paid-In Capital	646,197	139,837	242,048	1,028,082
34	Retained Earnings	338,613	191,066	766,234	1,295,913
35	Total Owner's Equity	984,810	330,903	1,008,282	2,323,995
36	Total Liab & Owner's Equity	1,450,713	692,828	1,154,183	3,297,724

STATEMENT of CASH FLOWS
MATERIAL MANUFACTURERS - 1990

Currency = HUF (000)

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		ROMHANY	SOFA	BUDAI TEGLA	TOTAL GROUP
	CASH FROM OPERATIONS				
1	After Tax Net Income from Operations	-194,593	49,867	42,393	-102,333
	Add Back:				
2	Depreciation	78,698	48,788	42,171	169,657
3	Payment of Dividends	0	0	0	0
	Changes in Working Capital:				
4	(Incr.)/Decr. A/R-Domestic Trade	-10,501	10,834	-36,599	-36,266
5	(Incr.)/Decr. A/R-Foreign Trade	22,076	-9,914	0	12,162
6	(Incr.)/Decr. Inventory	22,498	-31,033	5,711	-2,824
7	(Incr.)/Decr. Pre-Paid Exp.	0	0	0	0
8	(Incr.)/Decr. Other Curr. Assets	474	226	-24,574	-23,874
9	Incr./(Decr.) A/P-Domestic	9,119	-15,615	18,267	11,771
10	Incr./(Decr.) A/P-Foreign	2,132	3,176	0	5,308
11	Incr./(Decr.) Taxes Payable	20,836	-9,430	-13,853	-2,447
12	Incr./(Decr.) Accrued Expenses	-1,800	450	3,543	2,193
13	Incr./(Decr.) Other Cur. Liab.	20,860	-11,339	8,432	17,953
14	Total Cash from Operations	-30,201	36,010	45,491	51,300
	CASH FROM INVESTING ACTIVITIES				
15	(Purchase)/Disposal Prop, Plant & Equip	-9,219	-9,458	231,488	212,811
16	(Incr.)/Decr. Investments in Subsidiaries	0	-10	-401,098	-401,108
17	(Incr.)/Decr. Invest. in Good Will	0	0	0	0
18	(Incr.)/Decrease Other Assets	41,714	-6,808	6,919	41,825
19	(Charges)/Credits to Retained Earnings	19,068	11,710	143,864	174,642
20	Total Cash from Investing Activities	51,563	-4,566	-18,827	28,170
	CASH FROM FINANCING ACTIVITIES				
21	Incr./(Decr.) Notes Payable	5,840	33,291	0	39,131
22	Incr./(Decr.) Long Term Debt	-23,878	-70,000	-18,985	-112,863
23	Incr./(Decr.) Other L-T Liab	0	0	0	0
24	New Issue/(Repurchase) Common Stock	0	0	0	0
25	Incr./(Decr.) Paid-In Capital	0	0	-308	-308
26	(Payment) of Dividends	0	0	0	0
27	Total Cash from Financing Activities	-18,038	-36,709	-19,293	-74,040
28	Total Change in Cash Position	3,324	-5,265	7,371	5,430
29	Cash Balance Beginning of Period	3,540	17,542	54,349	75,431
30	Cash Balance End of Period	6,864	12,277	61,720	80,861

RATIO ANALYSIS
MATERIAL MANUFACTURERS - 1990

Currency = HUF (000)

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		ROMHANY	SOFA	BUDAI TEGLA	TOTAL GROUP
	LIQUIDITY RATIOS				
1	Current Ratio	1.07	3.55	5.64	1.94
2	Quick Ratio (Acid Test)	0.28	1.10	3.35	0.71
	LEVERAGE RATIOS				
3	Debt/Total Assets	0.15	0.46	0.08	0.19
4	Debt/Total Capital	0.20	0.53	0.09	0.23
5	Debt/Equity	0.22	0.95	0.09	0.27
6	Total Assets/Equity (Financial Leverage)	1.47	2.09	1.14	1.42
7	Interest Coverge	0.11	3.32	5.66	2.08
8	Total Coverage	0.03	0.58	0.92	0.43
	ACTIVITY RATIOS				
9	Fixed Asset Turnover	1.21	3.98	1.49	1.78
10	Total Asset Turnover	0.82	1.81	0.60	0.95
11	Inventory Turnover	2.60	3.37	3.85	4.88
12	Average Collection Period-Dom. Trade	23	22	40	26
13	Average Collection Period-For. Trade	65	184	0	87
14	Average Collection Period-Total	30	28	40	31
15	Average Payment Period-Dom. Trade	64	16	24	34
16	Average Payment Period-For. Trade	30	35	0	31
17	Average Payment Period-Total	57	16	24	34
18	Self Produced Inventory/COGS	11.30%	4.96%	3.56%	7.15%
19	Purchased Inventory/COGS	27.17%	24.75%	22.45%	25.20%
20	Total Inventory/COGS	38.47%	29.71%	26.00%	32.35%
21	Self Produced Inventory Days Held	41	18	13	26
22	Purchased Inventory Days Held	99	90	82	92
23	Total Inventory Days Held	140	108	95	118
24	Sales Days Cash Held	2	4	32	9
25	Cash Cycle Period	113	120	110	115
	PROFITABILITY RATIOS				
26	Gross Margin	30.81%	34.39%	35.44%	33.27%
27	Operating Margin	-5.70%	12.42%	12.42%	5.56%
28	Pre-Tax Return on Sales	-15.95%	7.41%	12.49%	-0.30%
29	After Tax Return on Sales	-16.42%	3.98%	6.10%	-3.27%
30	Pre-Tax Return on Total Assets	-13.03%	13.39%	7.52%	-0.29%
31	Pre-Tax Return on Equity	-19.20%	28.04%	8.61%	-0.41%
	PERFORMANCE MEASURES				
32	Growth in Total Assets	-8.94%	-1.13%	18.89%	2.15%
33	Growth in Sales	7.52%	6.02%	5.52%	6.47%
34	Change in Gross Margin	-17.81%	3.74%	-8.63%	-7.71%
35	Change in Operating Margin	-182.76%	-13.31%	23.62%	-47.36%
36	Growth in Pre-Tax Net Income	-6568.18%	-19.25%	74.14%	-105.65%
37	% Domestic Sales	81.88%	96.19%	100.00%	91.62%
38	% Foreign Sales	18.12%	3.81%	0.00%	8.38%

STATEMENT of INCOME
ROMHANYI EPITESI KERAMIAGYAR

30-Apr-92
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Currency = HUF (000)

		Year - 1989	Year - 1990	6 Mos. 1991
1	Gross Domestic Sales	933,256	970,554	357,400
2	Gross Foreign Sales	169,174	214,813	172,378
3	Total Gross Sales	1,102,430	1,185,367	529,778
4	Less: Write-Offs & Returns	0	0	0
5	Net Sales	1,102,430	1,185,367	529,778
6	Cost of Sales-Domestic	533,388	663,412	370,133
7	Cost of Sales-Foreign	124,670	156,741	Incl. Above
8	Gross Margin	444,372	365,214	159,645
	Operating Expenses			
9	Rent	N/A	N/A	N/A
10	Sales Salaries	N/A	N/A	N/A
11	Sales Commissions	N/A	N/A	N/A
12	Other Salaries & Wages	N/A	N/A	N/A
13	Research & Development	N/A	N/A	N/A
14	Travel & Entertainment	N/A	N/A	N/A
15	Advertising	N/A	N/A	N/A
16	Telephone & Utilities	N/A	N/A	N/A
17	Gas & Oil	N/A	N/A	N/A
18	Insurance	N/A	N/A	N/A
19	Maintenance & Repairs	N/A	N/A	N/A
20	Depreciation & Amortization	60,531	78,698	37,768
21	Non-Income Taxes & Fees	N/A	N/A	N/A
22	Other Operating Expenses	N/A	N/A	N/A
23	Total Operating Expenses	362,694	432,814	208,109
24	Net Operating Income	81,678	-67,600	-48,464
25	Gain/(Loss) Sale of Prop, Plant & Equip	N/A	N/A	N/A
26	Gain/(Loss) Foreign Currency Translation	N/A	N/A	N/A
27	Other Income & Expense (Net)	-46,347	-45,796	-18,022
28	Earnings Before Interest & Tax	35,331	-113,396	-66,486
29	Interest Expense	32,408	75,669	44,556
30	**EARNINGS BEFORE TAXES ON INCOME**	2,923	-189,065	-111,042
31	Taxes on Income	41,031	5,528	N/A
32	Income Available to Shareholders	-38,108	-194,593	-111,042
33	Dividends Paid to Shareholders	0	0	0
34	Net Income to Retained Earnings	-38,108	-194,593	-111,042

BALANCE SHEET
ROMHANYI EPITESI KERAMIAGYAR

30-Apr-92
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Currency = HUF (000)

	ASSETS	12/31/88	12/31/89	12/31/90	6/30/91
	Current Assets:				
	Cash:				
1	Deposits	72,327	2,540	5,864	N/A
2	Foreign Currency Accounts	0	0	0	N/A
3	Marketable Securities (CD's)	1,000	1,000	1,000	N/A
4	Accounts Receivable:				
5	A/R-Domestic Trade	72,189	49,403	59,904	75,802
6	A/R-Foreign Trade	45,575	60,239	38,163	72,499
	Inventory:				
7	Self Produced (WIP + Finished - Subs)	34,686	106,625	92,676	173,772
8	Purchased (Raw + Subcontracted)	207,207	231,384	222,835	208,805
9	Other Current Assets	3,334	5,917	5,443	N/A
10	Total Current Assets	436,318	457,108	425,885	N/A
	Gross Fixed or Plant Assets:				
11	Land & Buildings	687,505	732,862	732,505	N/A
12	Equipment & Machinery	624,062	850,245	861,605	N/A
13	Vehicles	6,395	7,857	7,070	N/A
14	Other Fixed Assets	280,238	42,295	42,012	N/A
15	Less Accumulated Depreciation	-586,339	-581,958	-661,370	N/A
16	Total Net Fixed Assets	1,011,861	1,051,301	981,822	N/A
17	Investments in Subsidiaries	24,326	26,929	26,929	N/A
18	Investment in Good Will	0	0	0	N/A
19	Other Assets	15,122	57,791	16,077	N/A
20	Total Assets	1,487,627	1,593,129	1,450,713	N/A

	LIABILITIES & OWNERS EQUITY	12/31/88	12/31/89	12/31/90	6/30/91
	Current Liabilities:				
21	Accounts Payable-Domestic	31,090	106,819	115,938	226,452
22	Accounts Payable-Foreign	0	10,756	12,838	17,704
23	Notes Payable	40,000	141,560	147,400	
24	Taxes Payable	28,918	38,558	59,394	N/A
25	Accrued Expenses	24,120	15,451	13,651	N/A
26	Other Cur. Liabilities	33,783	29,738	50,598	N/A
27	Total Current Liabilities	157,911	342,882	399,869	N/A
	Long-Term Liabilities:				
28	Long Term Debt	163,365	89,912	66,034	42,356
29	Other Long Term Liabilities	0	0	0	N/A
30	Total Long Term Liabilities	163,365	89,912	66,034	N/A
31	Total Liabilities	321,276	432,794	465,903	N/A
	Owner's Equity:				
32	Common & Preferred Stock (Par)	0	0	0	0
33	Paid-In Capital	646,197	646,197	646,197	646,197
34	Retained Earnings	520,154	514,138	338,613	227,571
35	Total Owner's Equity	1,166,351	1,160,335	984,810	873,768
36	Total Liab & Owner's Equity	1,487,627	1,593,129	1,450,713	N/A

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STATEMENT of CASH FLOWS
ROMHANYI EPITESI KERAMIAGYAR

Currency = HUF (000)

30-Apr-92
9:36 AM

		Year - 1989	Year - 1990	6 Mos. 1991	2-1/2 Years 12/88 - 6/91
	CASH FROM OPERATIONS				
1	After Tax Net Income from Operations	-38,108	-194,593	-111,042	-343,743
	Add Back:				
2	Depreciation	60,531	78,698	37,768	176,997
3	Payment of Dividends	0	0		
	Changes in Working Capital:				
4	(Incr.)/Decr. A/R-Domestic Trade	22,786	-10,501	-15,898	-3,613
5	(Incr.)/Decr. A/R-Foreign Trade	-14,664	22,076	-34,336	-26,924
6	(Incr.)/Decr. Inventory	-96,116	22,498	-67,066	-140,684
7	(Incr.)/Decr. Pre-Paid Exp.				
8	(Incr.)/Decr. Other Curr. Assets	-2,583	474		
9	Incr./(Decr.) A/P-Domestic	75,729	9,119	110,514	195,362
10	Incr./(Decr.) A/P-Foreign	10,756	2,132	4,816	17,704
11	Incr./(Decr.) Taxes Payable	9,640	20,836		
12	Incr./(Decr.) Accrued Expenses	-8,669	-1,800		
13	Incr./(Decr.) Other Cur. Liab.	-4,045	20,860		
14	Total Cash from Operations	15,257	-30,201		
	CASH FROM INVESTING ACTIVITIES				
15	(Purchase)/Disposal Prop, Plant & Equip	-99,971	-9,219		
16	(Incr.)/Decr. Investments in Subsidiaries	-2,603	0		
17	(Incr.)/Decr. Invest. in Good Will	0	0		
18	(Incr.)/Decrease Other Assets	-42,669	41,714		
19	Direct Charges to Retained Earnings	32,092	19,068		
20	Total Cash from Investing Activities	-113,151	51,563		
	CASH FROM FINANCING ACTIVITIES				
21	Incr./(Decr.) Notes Payable	101,560	5,840		
22	Incr./(Decr.) Long Term Debt	-73,453	-23,878	-23,678	-121,009
23	Incr./(Decr.) Other L-T Liab	0	0		
24	New Issue/(Repurchase) Common Stock	0	0		
25	Incr./(Decr.) Paid-In Capital	0	0	0	0
26	(Payment) of Dividends	0	0		
27	Total Cash from Financing Activities	28,107	-18,038		
28	Total Change in Cash Position	-69,787	3,324		
29	Cash Balance Beginning of Period	73,327	3,540	6,864	73,327
30	Cash Balance End of Period	3,540	6,864	N/A	N/A

RATIO ANALYSIS
ROMHANYI EPITESI KERAMIAGYAR
Currency = HUF (000)

30-Apr-92
9:36 AM

		12/31/88	12/31/89	12/31/90	6 Months 6/30/91 Annualized
	LIQUIDITY RATIOS				
1	Current Ratio	2.76	1.33	1.07	
2	Quick Ratio (Acid Test)	1.23	0.35	0.28	
	LEVERAGE RATIOS				
3	Debt/Total Assets	0.14	0.15	0.15	
4	Debt/Total Capital	0.15	0.19	0.20	
5	Debt/Equity	0.17	0.20	0.22	
6	Total Assets/Equity (Financial Leverage)	1.28	1.37	1.47	
7	Interest Coverge		3.52	0.11	-0.09
8	Total Coverage		0.43	0.03	
	ACTIVITY RATIOS				
9	Fixed Asset Turnover		1.05	1.21	
10	Total Asset Turnover		0.69	0.82	
11	Inventory Turnover		1.95	2.60	1.93
12	Average Collection Period-Dom. Trade		19	23	39
13	Average Collection Period-For. Trade		130	65	77
14	Average Collection Period-Total		36	30	51
15	Average Payment Period-Dom. Trade		73	64	112
16	Average Payment Period-For. Trade		31	30	
17	Average Payment Period-Total		65	57	120
18	Self Produced Inventory/COGS		16.20%	11.30%	23.47%
19	Purchased Inventory/COGS		35.16%	27.17%	28.21%
20	Total Inventory/COGS		51.36%	38.47%	51.68%
21	Self Produced Inventory Days Held		59	41	86
22	Purchased Inventory Days Held		128	99	103
23	Total Inventory Days Held		187	140	189
24	Sales Days Cash Held		1	2	
25	Cash Cycle Period		159	113	
	PROFITABILITY RATIOS				
26	Gross Margin		40.31%	30.81%	30.13%
27	Operating Margin		7.41%	-5.70%	-9.15%
28	Pre-Tax Return on Sales		0.27%	-15.95%	-20.96%
29	After Tax Return on Sales		-3.46%	-16.42%	-20.96%
30	Pre-Tax Return on Total Assets		0.18%	-13.03%	
31	Pre-Tax Return on Equity		0.25%	-19.20%	-25.42%
	PERFORMANCE MEASURES				
32	Growth in Total Assets		7.09%	-8.94%	
33	Growth in Sales		N/A	7.52%	-10.61%
34	Change in Gross Margin		N/A	-17.81%	-12.57%
35	Change in Operating Margin		N/A	-182.76%	-43.38%
36	Growth in Pre-Tax Net Income		N/A	-6568.18%	-17.46%
37	% Domestic Sales		84.65%	81.88%	67.46%
38	% Foreign Sales		15.35%	18.12%	32.54%

C.4.2 Soproni Faipari Vállalat (SOFA)

SOFA had a good year in 1989, and even though sales fell sharply in the first 6 months of 1991, a good gross margin was maintained (I8 & R26). However, overhead expenses (I23) grew during 1990 and 1991, not only in percentage terms during a period of sharply declining sales, but also in absolute levels, severely impacting the operating margin (I24 & R27). Rather than curtailing production when sales fell, management let the production lines continue to produce causing a large increase in inventory (B7, C6 & R23) which forced an increase in debt and future increased interest expenses.

The entire 6 month loss of 1991 could have been prevented if overhead expenses had been kept at 1989 levels, and a profit could have been returned if they had been reduced to more reasonable levels. The past growth in inventory will continue to cause cash problems for SOFA, and it is essential that inventory levels be decreased and that overhead expenses cut sharply.

The equity investment in this company is small (B36) so that profitable years yield a very attractive return (R31), but leverage of this sort acts in both directions, and in difficult times there is very little room for error. Quick and decisive action is needed to save this operation.

STATEMENT of INCOME
SOPRONI FAIPARI VALLALAT

30-Apr-92
9:40 AM

Currency = HUF (000)

		Year - 1989	Year - 1990	6 Mos. 1991
1	Gross Domestic Sales	1,150,808	1,204,318	492,698
2	Gross Foreign Sales	30,168	47,764	36,440
3	Total Gross Sales	1,180,976	1,252,082	529,138
4	Less: Write-Offs & Returns	0	0	0
5	Net Sales	1,180,976	1,252,082	529,138
6	Cost of Sales-Domestic	741,953	788,041	309,902
7	Cost of Sales-Foreign	24,004	33,495	31,653
8	Gross Margin	415,019	430,546	187,583
	Oporating Expenses			
9	Rent	N/A	N/A	N/A
10	Sales Salaries	N/A	N/A	N/A
11	Sales Commissions	N/A	N/A	N/A
12	Other Salaries & Wages	N/A	N/A	N/A
13	Research & Development	N/A	N/A	N/A
14	Travel & Entertainment	N/A	N/A	N/A
15	Advertising	N/A	N/A	N/A
16	Telephone & Utilities	N/A	N/A	N/A
17	Gas & Oil	N/A	N/A	N/A
18	Insurance	N/A	N/A	N/A
19	Maintenance & Repairs	N/A	N/A	N/A
20	Depreciation & Amortization	48,036	48,788	24,773
21	Non-Income Taxes & Fees	N/A	N/A	N/A
22	Other Operating Expenses	N/A	N/A	N/A
23	Total Operating Expenses	235,706	275,098	158,186
24	Net Operating Income	179,313	155,448	29,397
25	Gain/(Loss) Sale of Prop, Plant & Equip	N/A	N/A	N/A
26	Gain/(Loss) Foreign Currency Translation	N/A	N/A	N/A
27	Other Income & Expense (Net)	-2,645	4,412	303
28	Earnings Before Interest & Tax	176,668	159,860	29,700
29	Interest Expense	61,758	67,074	41,866
30	**EARNINGS BEFORE TAXES ON INCOME**	114,910	92,786	-12,166
31	Taxes on Income	74,949	42,919	21,088
32	Income Available to Shareholders	39,961	49,867	-33,254
33	Dividends Paid to Shareholders	0	0	0
34	Net Income to Retained Earnings	39,961	49,867	-33,254

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BALANCE SHEET
SOPRONI FAIPARI VALLALAT

Currency = HUF (000)

20-Apr-92
9:40 AM

	ASSETS	12/31/88	12/31/89	12/31/90	6/30/91
	Current Assets:				
	Cash:				
1	Deposits	16,022	17,542	12,277	7,468
2	Foreign Currency Accounts	0	0	0	0
3	Marketable Securities (CD's)	0	0	0	0
4	Accounts Receivable:				
5	A/R-Domestic Trade	36,481	82,192	71,358	57,553
6	A/R-Foreign Trade	17,125	14,164	24,078	20,445
	Inventory:				
7	Self Produced (WIP + Finished - Subs)	40,185	49,226	40,760	126,922
8	Purchased (Raw + Subcontracted)	205,764	163,815	203,314	200,565
9	Other Current Assets	6,731	2,585	2,359	4,509
10	Total Current Assets	322,308	329,524	354,146	417,462
	Gross Fixed or Plant Assets:				
11	Land & Buildings	192,775	197,883	199,285	628,032
12	Equipment & Machinery	405,939	417,280	424,317	Incl. Above
13	Vehicles	1,831	2,211	2,849	Incl. Above
14	Other Fixed Assets	4,418	3,387	1,216	3,277
15	Less Accumulated Depreciation	-219,652	-266,860	-313,096	-339,168
16	Total Net Fixed Assets	385,311	353,901	314,571	292,141
17	Investments in Subsidiaries	1,200	1,476	1,486	1,614
18	Investment in Good Will	0	0	0	0
19	Other Assets	9,780	15,817	22,625	12,638
20	Total Assets	718,599	700,718	692,828	723,855

	LIABILITIES & OWNERS EQUITY	12/31/88	12/31/89	12/31/90	6/30/91
	Current Liabilities:				
21	Accounts Payable-Domestic	74,168	49,221	33,606	59,265
22	Accounts Payable-Foreign	0	0	3,176	0
23	Notes Payable	37,200	20,000	53,291	153,178
24	Taxes Payable	-1,211	2,266	-7,164	-2,982
25	Accrued Expenses	7,666	9,604	10,054	7,278
26	Other Cur. Liabilities	18,858	18,001	6,662	4,632
27	Total Current Liabilities	136,681	99,092	99,625	221,371
	Long-Term Liabilities:				
28	Long Term Debt	367,300	332,300	262,300	214,800
29	Other Long Term Liabilities	0	0	0	0
30	Total Long Term Liabilities	367,300	332,300	262,300	214,800
31	Total Liabilities	503,981	431,392	361,925	436,171
	Owner's Equity:				
32	Common & Preferred Stock (Par)	0	0	0	0
33	Paid-In Capital	139,837	139,837	139,837	139,837
34	Retained Earnings	74,781	129,489	191,066	147,847
35	Total Owner's Equity	214,618	269,326	330,903	287,684
36	Total Liab & Owner's Equity	718,599	700,718	692,828	723,855

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STATEMENT of CASH FLOWS
SOPRONI FAIPARI VALLALAT
Currency = HUF (000)

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		Year - 1989	Year - 1990	6 Mos. 1991	2-1/2 Years 12/88 - 6/91
	CASH FROM OPERATIONS				
1	After Tax Net Income from Operations	39,961	49,867	-33,254	56,574
	Add Back:				
2	Depreciation	48,036	48,788	24,773	121,597
3	Payment of Dividends	0	0	0	0
	Changes in Working Capital:				
4	(Incr.)/Decr. A/R-Domestic Trade	-45,711	10,834	13,805	-21,072
5	(Incr.)/Decr. A/R-Foreign Trade	2,961	-9,914	3,633	-3,320
6	(Incr.)/Decr. Inventory	32,908	-31,033	-83,413	-81,538
7	(Incr.)/Decr. Pre-Paid Exp.				
8	(Incr.)/Decr. Other Curr. Assets	4,146	226	-2,150	2,222
9	Incr./(Decr.) A/P-Domestic	-24,947	-15,615	25,659	-14,903
10	Incr./(Decr.) A/P-Foreign	0	3,176	-3,176	0
11	Incr./(Decr.) Taxes Payable	3,477	-9,430	4,182	-1,771
12	Incr./(Decr.) Accrued Expenses	1,938	450	-2,776	-388
13	Incr./(Decr.) Other Cur. Liab.	-857	-11,339	-2,030	-14,226
14	Total Cash from Operations	61,912	36,010	-54,747	43,175
	CASH FROM INVESTING ACTIVITIES				
15	(Purchase)/Disposal Prop, Plant & Equip	-16,626	-9,458	-2,343	-28,427
16	(Incr.)/Decr. Investments in Subsidiaries	-276	-10	-128	-414
17	(Incr.)/Decr. Invest. in Good Will	0	0	0	0
18	(Incr.)/Decrease Other Assets	-6,037	-6,808	9,987	-2,858
19	(Charges)/Credits to Retained Earnings	14,747	11,710	-9,964	16,493
20	Total Cash from Investing Activities	-8,192	-4,566	-2,448	-15,206
	CASH FROM FINANCING ACTIVITIES				
21	Incr./(Decr.) Notes Payable	-17,200	33,291	99,887	115,978
22	Incr./(Decr.) Long Term Debt	-35,000	-70,000	-47,500	-152,500
23	Incr./(Decr.) Other L-T Liab	0	0	0	0
24	New Issue/(Repurchase) Common Stock	0	0	0	0
25	Incr./(Decr.) Paid-In Capital	0	0	0	0
26	(Payment) of Dividends	0	0	0	0
27	Total Cash from Financing Activities	-52,200	-36,709	52,387	-36,522
28	Total Change in Cash Position	1,520	-5,265	-4,808	-8,553
29	Cash Balance Beginning of Period	16,022	17,542	12,277	16,022
30	Cash Balance End of Period	17,542	12,277	7,468	7,468

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RATIO ANALYSIS
SOPRONI FAIPARI VALLALAT
Currency = HUF (000)

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		12/31/88	12/31/89	12/31/90	6 Months 6/30/91 Annualized
	LIQUIDITY RATIOS				
1	Current Ratio	2.36	3.33	3.55	1.89
2	Quick Ratio (Acid Test)	0.56	1.18	1.10	0.41
	LEVERAGE RATIOS				
3	Debt/Total Assets	0.56	0.50	0.46	0.51
4	Debt/Total Capital	0.70	0.59	0.53	0.73
5	Debt/Equity	1.88	1.31	0.95	1.28
6	Total Assets/Equity (Financial Leverage)	3.35	2.60	2.09	2.52
7	Interest Coverge		3.90	3.32	1.70
8	Total Coverage		0.58	0.58	0.32
	ACTIVITY RATIOS				
9	Fixed Asset Turnover		3.34	3.98	3.62
10	Total Asset Turnover		1.69	1.81	1.46
11	Inventory Turnover		3.60	3.37	2.09
12	Average Collection Period-Dom. Trade		26	22	21
13	Average Collection Period-For. Trade		171	184	102
14	Average Collection Period-Total		30	28	27
15	Average Payment Period-Dom. Trade		24	16	35
16	Average Payment Period-For. Trade		0	35	0
17	Average Payment Period-Total		23	16	32
18	Self Produced Inventory/COGS		6.43%	4.96%	18.58%
19	Purchased Inventory/COGS		21.39%	24.75%	29.36%
20	Total Inventory/COGS		27.81%	29.71%	47.94%
21	Self Produced Inventory Days Held		23	18	68
22	Purchased Inventory Days Held		78	90	107
23	Total Inventory Days Held		102	108	175
24	Sales Days Cash Held		5	4	3
25	Cash Cycle Period		108	120	170
	PROFITABILITY RATIOS				
26	Gross Margin		35.14%	34.39%	35.45%
27	Operating Margin		15.18%	12.42%	5.56%
28	Pre-Tax Return on Sales		9.73%	7.41%	-2.30%
29	After Tax Return on Sales		3.38%	3.98%	-6.28%
30	Pre-Tax Return on Total Assets		16.40%	13.39%	-3.36%
31	Pre-Tax Return on Equity		42.67%	28.04%	-8.46%
	PERFORMANCE MEASURES				
32	Growth in Total Assets		-2.49%	-1.13%	4.48%
33	Growth in Sales		N/A	6.02%	-15.48%
34	Change in Gross Margin		N/A	3.74%	-12.86%
35	Change in Operating Margin		N/A	-13.31%	-62.18%
36	Growth in Pre-Tax Net Income		N/A	-19.25%	-126.22%
37	% Domestic Sales		97.45%	96.19%	93.11%
38	% Foreign Sales		2.55%	3.81%	6.89%

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C.4.3 Budai Téglaipari Vállalat

The financial statements of this company are very strong. Good liquidity ratios (I1 & 2), very low leverage ratios (I3-6) and strong profitability ratios (I26-31) all show a financially solid company. Sales for the first half of 1991 actually increased by 4 percent (I1 & R33). The only negatives, and at 6/30/91 they were not yet significant issues, are receivables growth (C4 & R12), inventory growth (C6 & R23) and overhead growth (I23 & R35). Hopefully these are just period to period fluctuations and do not represent trends.

In 1990, Budai Téglaipari V. entered into a joint venture, contributing some of their production facilities for a percentage of ownership. The book value of the fixed assets involved was deducted from Land & Buildings (B11) and from Equipment and Machinery (B12), while a marked up value of these assets (presumably market value) was placed into Investments in Subsidiaries (B17) with the resulting gain credited directly to Retained Earnings (B34). This transaction shows up quite clearly on the cash flow lines C15,16 & 19.

STATEMENT of INCOME
BUDAI TEGLAIPARI

Currency = HUF (000)

30-Apr-92
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		Year - 1989	Year - 1990	6 Mos. 1991
1	Gross Domestic Sales	658,626	694,993	361,926
2	Gross Foreign Sales	0	0	0
3	Total Gross Sales	658,626	694,993	361,926
4	Less: Write-Offs & Returns	0	0	0
5	Net Sales	658,626	694,993	361,926
6	Cost of Sales-Domestic	388,881	448,654	232,962
7	Cost of Sales-Foreign	0	0	0
8	Gross Margin	269,745	246,339	128,964
	Operating Expenses			
9	Rent	N/A	N/A	N/A
10	Sales Salaries	N/A	N/A	N/A
11	Sales Commissions	N/A	N/A	N/A
12	Other Salaries & Wages	N/A	N/A	N/A
13	Research & Development	N/A	N/A	N/A
14	Travel & Entertainment	N/A	N/A	N/A
15	Advertising	N/A	N/A	N/A
16	Telephone & Utilities	N/A	N/A	N/A
17	Gas & Oil	N/A	N/A	N/A
18	Insurance	N/A	N/A	N/A
19	Maintenance & Repairs	N/A	N/A	N/A
20	Depreciation & Amortization	62,727	42,171	20,012
21	Non-Income Taxes & Fees	N/A	N/A	N/A
22	Other Operating Expenses	N/A	N/A	N/A
23	Total Operating Expenses	199,941	160,049	90,535
24	Net Operating Income	69,804	86,290	38,429
25	Gain/(Loss) Sale of Prop, Plant & Equip	N/A	N/A	N/A
26	Gain/(Loss) Foreign Currency Translation	N/A	N/A	N/A
27	Other Income & Expense (Net)	-810	19,044	-3,822
28	Earnings Before Interest & Tax	58,994	105,334	34,607
29	Interest Expense	19,150	18,535	10,748
30	**EARNINGS BEFORE TAXES ON INCOME**	49,844	86,799	23,859
31	Taxes on Income	24,253	44,406	-13,754
32	Income Available to Shareholders	25,591	42,393	37,613
33	Dividends Paid to Shareholders	0	0	0
34	Net Income to Retained Earnings	25,591	42,393	37,613

BALANCE SHEET
BUDAI TEGLAIPARI

Currency = HUF (000)

30-Apr-92
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	ASSETS	12/31/88	12/31/89	12/31/90	6/30/91
	Current Assets:				
	Cash:				
1	Deposits	64,109	54,349	61,720	41,902
2	Foreign Currency Accounts	0	0	0	0
3	Marketable Securities (CD's)	0	0	0	20,000
4	Accounts Receivable:				
5	A/R-Domestic Trade	21,204	38,812	75,411	74,279
6	A/R-Foreign Trade	0	0	0	0
	Inventory:				
7	Self Produced (WIP + Finished - Subs)	18,084	20,970	15,964	50,166
8	Purchased (Raw + Subcontracted)	98,616	101,406	100,701	93,554
9	Other Current Assets	6,883	8,734	33,308	43,601
10	Total Current Assets	208,996	224,271	287,104	323,502
	Gross Fixed or Plant Assets:				
11	Land & Buildings	878,026	893,933	628,873	1,047,134
12	Equipment & Machinery	488,790	498,143	383,776	Incl. Above
13	Vehicles	18,654	18,655	14,419	Incl. Above
14	Other Fixed Assets	35,083	26,792	32,426	29,017
15	Less Accumulated Depreciation	-645,613	-698,299	-593,929	-612,610
16	Total Net Fixed Assets	774,940	739,224	465,565	463,541
17	Investments in Subsidiaries	0	260	401,358	400,858
18	Investment in Good Will	0	0	0	0
19	Other Assets	38,284	7,075	156	5,970
20	Total Assets	1,022,220	970,830	1,154,183	1,193,871

	LIABILITIES & OWNERS EQUITY	12/31/88	12/31/89	12/31/90	6/30/91
	Current Liabilities:				
21	Accounts Payable-Domestic	24,614	11,464	29,731	25,786
22	Accounts Payable-Foreign	0	0	0	0
23	Notes Payable	0	0	0	0
24	Taxes Payable	2,861	9,102	-4,751	10,588
25	Accrued Expenses	9,196	9,080	12,623	11,724
26	Other Cur. Liabilities	9,794	4,836	13,268	33,786
27	Total Current Liabilities	46,465	34,482	50,871	81,884
	Long-Term Liabilities:				
28	Long Term Debt	199,335	114,015	95,030	88,035
29	Other Long Term Liabilities	0	0	0	0
30	Total Long Term Liabilities	199,335	114,015	95,030	88,035
31	Total Liabilities	245,800	148,497	145,901	169,919
	Owner's Equity:				
32	Common & Preferred Stock (Par)	0	0	0	0
33	Paid-In Capital	242,048	242,356	242,048	242,048
34	Retained Earnings	534,372	579,977	766,234	781,904
35	Total Owner's Equity	776,420	822,333	1,008,282	1,023,952
36	Total Liab & Owner's Equity	1,022,220	970,830	1,154,183	1,193,871

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STATEMENT of CASH FLOWS
BUDAI TEGLAIPARI
Currency = HUF (000)

30-Apr-92
9:41 AM

		Year - 1989	Year - 1990	6 Mos. 1991	2-1/2 Years 12/88 - 6/91
	CASH FROM OPERATIONS				
1	After Tax Net Income from Operations	25,591	42,393	37,613	105,597
	Add Back:				
2	Depreciation	62,727	42,171	20,012	124,910
3	Payment of Dividends	0	0	0	0
	Changes in Working Capital:				
4	(Incr.)/Decr. A/R-Domestic Trade	-17,508	-36,599	1,132	-52,975
5	(Incr.)/Decr. A/R-Foreign Trade	0	0	0	0
6	(Incr.)/Decr. Inventory	-5,676	5,711	-27,055	-27,020
7	(Incr.)/Decr. Pre-Paid Exp.				
8	(Incr.)/Decr. Other Curr. Assets	-1,851	-24,574	-10,293	-36,718
9	Incr./(Decr.) A/P-Domestic	-13,150	18,267	-3,945	1,172
10	Incr./(Decr.) A/P-Foreign	0	0	0	0
11	Incr./(Decr.) Taxes Payable	6,241	-13,853	15,339	7,727
12	Incr./(Decr.) Accrued Expenses	-116	3,543	-899	2,528
13	Incr./(Decr.) Other Cur. Liab.	-4,958	8,432	20,518	23,992
14	Total Cash from Operations	51,300	45,491	52,422	149,213
	CASH FROM INVESTING ACTIVITIES				
15	(Purchase)/Disposal Prop, Plant & Equip	-27,011	231,488	-17,988	186,489
16	(Incr.)/Decr. Investments in Subsidiaries	-260	-401,098	500	-400,858
17	(Incr.)/Decr. Invest. in Good Will	0	0	0	0
18	(Incr.)/Decrease Other Assets	31,209	6,919	-5,814	32,314
19	(Charges)/Credits to Retained Earnings	20,014	143,864	-21,943	141,935
20	Total Cash from Investing Activities	23,952	-18,827	-45,245	-40,120
	CASH FROM FINANCING ACTIVITIES				
21	Incr./(Decr.) Notes Payable	0	0	0	0
22	Incr./(Decr.) Long Term Debt	-85,320	-18,985	-6,995	-111,300
23	Incr./(Decr.) Other L-T Liab	0	0	0	0
24	New Issue/(Repurchase) Common Stock	0	0	0	0
25	Incr./(Decr.) Paid-In Capital	308	-308	0	0
26	(Payment) of Dividends	0	0	0	0
27	Total Cash from Financing Activities	-85,012	-19,293	-6,995	-111,300
28	Total Change in Cash Position	-9,760	7,371	182	-2,207
29	Cash Balance Beginning of Period	64,109	54,349	61,720	64,109
30	Cash Balance End of Period	54,349	61,720	61,902	61,902

RATIO ANALYSIS
BUDAI TEGLAIPARI
Currency = HUF (000)

30-Apr-92
9:41 AM

		12/31/88	12/31/89	12/31/90	6 Months 6/30/91 Annualized
	LIQUIDITY RATIOS				
1	Current Ratio	4.50	6.50	5.64	3.95
2	Quick Ratio (Acid Test)	1.99	2.96	3.35	2.20
	LEVERAGE RATIOS				
3	Debt/Total Assets	0.20	0.12	0.08	0.07
4	Debt/Total Capital	0.20	0.12	0.09	0.08
5	Debt/Equity	0.26	0.14	0.09	0.09
6	Total Assets/Equity (Financial Leverage)	1.32	1.18	1.14	1.17
7	Interest Coverge		4.65	5.66	4.58
8	Total Coverage		0.67	0.92	0.90
	ACTIVITY RATIOS				
9	Fixed Asset Turnover		0.89	1.49	1.56
10	Total Asset Turnover		0.68	0.60	0.61
11	Inventory Turnover		3.13	3.85	3.24
12	Average Collection Period-Dom. Trade		22	40	37
13	Average Collection Period-For. Trade		0	0	0
14	Average Collection Period-Total		22	40	37
15	Average Payment Period-Dom. Trade		11	24	20
16	Average Payment Period-For. Trade		0	0	0
17	Average Payment Period-Total		11	24	20
18	Self Produced Inventory/COGS		5.39%	3.56%	10.77%
19	Purchased Inventory/COGS		26.08%	22.45%	20.08%
20	Total Inventory/COGS		31.47%	26.00%	30.85%
21	Self Produced Inventory Days Held		20	13	39
22	Purchased Inventory Days Held		95	82	73
23	Total Inventory Days Held		115	95	113
24	Sales Days Cash Held		30	32	31
25	Cash Cycle Period		126	110	130
	PROFITABILITY RATIOS				
26	Gross Margin		40.96%	35.44%	35.63%
27	Operating Margin		10.60%	12.42%	10.62%
28	Pre-Tax Return on Sales		7.57%	12.49%	6.59%
29	After Tax Return on Sales		3.89%	6.10%	10.39%
30	Pre-Tax Return on Total Assets		5.13%	7.52%	4.00%
31	Pre-Tax Return on Equity		6.06%	8.61%	4.66%
	PERFORMANCE MEASURES				
32	Growth in Total Assets		-5.03%	18.89%	3.44%
33	Growth in Sales		N/A	5.52%	4.15%
34	Change in Gross Margin		N/A	-8.68%	4.70%
35	Change in Operating Margin		N/A	23.62%	-10.53%
36	Growth in Pre-Tax Net Income		N/A	74.14%	-45.02%
37	% Domestic Sales		100.00%	100.00%	100.00%
38	% Foreign Sales		0.00%	0.00%	0.00%

C.5 Cooperatives

C.5.1 Fertôd Épitoipari Szovetkezet (FESZ)

FESZ, with its diversified activities, is difficult to characterize. Even though sales revenues have fallen by 25 percent over the 36 month period (I1 & R33), there has been excellent production cost control, and the cooperative has maintained an excellent 48 percent gross margin (R26). Unfortunately, the same controls have not been applied to overhead expenses (I23) which have increased by 21 percent, and the net operating margin (I24 & R27) has suffered accordingly to the point where 6/30/91 net operating income (I24) failed to cover interest expense (I29). Only extraordinary items (27) kept a loss from showing. Accounts receivable collection periods are long (R12) and inventories have been allowed to creep upwards (C6 & R23).

On the balance sheet there has been a lot of moving around due to the sale of a participation in a joint venture (1990), and the increased investment in a new product line. Notwithstanding the cash realized from the sale of the joint venture participation (B17, B19, I27) the cooperative has felt the need to increase its borrowings by HFT 110 million (C21 & C22). There has been a significant jump in interest expense in 1991 (I29) which will continue to be a factor in future earnings. Even though HFT 186 million in cash has been generated over the past 36 months (C1 + C2) from operations, and HFT 110 million more cash has been obtained from new borrowings (C21 + C22), the cash balances of the cooperative have only increased by HFT 37.4 million (C28).

The situation at FESZ is uncertain and voluable. Sales are falling, production cost control is excellent, overhead expenses are climbing along with receivables and inventories, and the newly incurred interest burden could become decisive. While the cooperative has recently received a cash gain from an earlier investment, that money, plus operating profits and newly borrowed money is being sunk into a new product outside the scope of their normally familiar technology and which is intended for the collapsing construction industry. It appears that everything has been bet on the new product, and whether it succeeds or fails will have a major impact on the financial fate of this operation.

STATEMENT of INCOME
FERTODI EPITOIPARI SZOVETKEZET

30-Apr-92
9:42 AM

Currency = HUF (000)

		Year - 1989	Year - 1990	6 Mos. 1991
1	Gross Domestic Sales	417,709	348,614	156,971
2	Gross Foreign Sales	0	0	Incl. Above
3	Total Gross Sales	417,709	348,614	156,971
4	Less: Write-Offs & Returns	0	0	0
5	Net Sales	417,709	348,614	156,971
6	Cost of Sales-Domestic	230,485	182,668	80,320
7	Cost of Sales-Foreign	0	0	Incl. Above
8	Gross Margin	187,224	165,946	76,651
	Operating Expenses			
9	Rent	N/A	N/A	N/A
10	Sales Salaries	N/A	N/A	N/A
11	Sales Commissions	N/A	N/A	N/A
12	Other Salaries & Wages	N/A	N/A	N/A
13	Research & Development	N/A	N/A	N/A
14	Travel & Entertainment	N/A	N/A	N/A
15	Advertising	N/A	N/A	N/A
16	Telephone & Utilities	N/A	N/A	N/A
17	Gas & Oil	N/A	N/A	N/A
18	Insurance	N/A	N/A	N/A
19	Maintenance & Repairs	N/A	N/A	N/A
20	Depreciation & Amortization	6,732	6,402	2,583
21	Non-Income Taxes & Fees	N/A	N/A	N/A
22	Other Operating Expenses	N/A	N/A	N/A
23	Total Operating Expenses	102,966	125,717	62,226
24	Net Operating Income	84,258	40,229	14,425
25	Gain/(Loss) Sale of Prop, Plant & Equip	N/A	N/A	N/A
26	Gain/(Loss) Foreign Currency Translation	N/A	N/A	N/A
27	Other Income & Expense (Net)	-5,160	118,513	32,920
28	Earnings Before Interest & Tax	79,098	158,742	47,345
29	Interest Expense	1,797	7,996	15,495
30	**EARNINGS BEFORE TAXES ON INCOME**	77,301	150,746	31,850
31	Taxes on Income	36,329	26,627	26,586
32	Income Available to Shareholders	40,972	124,119	5,264
33	Dividends Paid to Shareholders	0	0	0
34	Net Income to Retained Earnings	40,972	124,119	5,264

BALANCE SHEET
FERTODI EPITOIPARI SZOVETKEZET

30-Apr-92
9:42 AM

Currency = HUF (000)

	ASSETS	12/31/88	12/31/89	12/31/90	6/30/91
	Current Assets:				
	Cash:				
1	Deposits	40,425	10,187	12,387	9,289
2	Foreign Currency Accounts	0	0	0	0
3	Marketable Securities (CD's)	2,664	27,200	32,200	71,200
4	Accounts Receivable:				
5	A/R-Domestic Trade	35,732	47,470	52,193	45,888
6	A/R-Foreign Trade	0	0	0	0
	Inventory:				
7	Self Produced (WIP + Finished - Subs)	0	4,464	11,467	23,018
8	Purchased (Raw + Subcontracted)	36,498	35,133	46,499	47,397
9	Other Current Assets	1,868	31,802	4,004	98,066
10	Total Current Assets	117,187	156,256	158,840	294,858
	Gross Fixed or Plant Assets:				
11	Land & Buildings	71,101	70,489	70,772	141,232
12	Equipment & Machinery	44,934	48,272	49,443	Incl. Above
13	Vehicles	22,517	21,335	21,848	Incl. Above
14	Other Fixed Assets	2,090	4,025	3,726	5,668
15	Less Accumulated Depreciation	-53,778	-58,364	-63,629	-60,622
16	Total Net Fixed Assets	86,864	85,757	82,160	86,278
17	Investments in Subsidiaries	126,092	128,000	3,500	5,341
18	Investment in Good Will	0	0	0	0
19	Other Assets	3,037	8,896	265,993	102,525
20	Total Assets	333,180	378,909	510,493	489,002

	LIABILITIES & OWNERS EQUITY	12/31/88	12/31/89	12/31/90	6/30/91
	Current Liabilities:				
21	Accounts Payable-Domestic	92,865	19,434	14,762	17,161
22	Accounts Payable-Foreign	0	0	0	0
23	Notes Payable	0	15,000	15,000	80,000
24	Taxes Payable	3,785	2,311	5,279	11,524
25	Accrued Expenses	3,314	5,735	9,045	6,398
26	Other Cur. Liabilities	10,601	78,715	77,813	32,269
27	Total Current Liabilities	110,565	121,195	121,899	147,352
	Long-Term Liabilities:				
28	Long Term Debt	0	0	30,000	30,000
29	Other Long Term Liabilities	0	0	0	0
30	Total Long Term Liabilities	0	0	30,000	30,000
31	Total Liabilities	110,565	121,195	151,899	177,352
	Owner's Equity:				
32	Common & Preferred Stock (Par)	0	0	0	0
33	Paid-In Capital	186,900	186,900	187,990	168,827
34	Retained Earnings	35,715	70,814	170,604	142,823
35	Total Owner's Equity	222,615	257,714	358,594	311,650
36	Total Liab & Owner's Equity	333,180	378,909	510,493	489,002

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STATEMENT of CASH FLOWS
FERTODI EPITOIPARI SZOVETKEZET
Currency = HUF (000)

30-Apr-92
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		Year - 1989	Year - 1990	6 Mos. 1991	2-1/2 Years 12/88 - 6/91
	CASH FROM OPERATIONS				
1	After Tax Net Income from Operations	40,972	124,119	5,264	170,355
	Add Back:				
2	Depreciation	6,732	6,402	2,583	15,717
3	Payment of Dividends	0	0	0	0
	Changes in Working Capital:				
4	(Incr.)/Decr. A/R-Domestic Trade	-11,738	-4,723	6,305	-10,156
5	(Incr.)/Decr. A/R-Foreign Trade	0	0	0	0
6	(Incr.)/Decr. Inventory	-3,099	-18,369	-12,449	-33,917
7	(Incr.)/Decr. Pre-Paid Exp.				
8	(Incr.)/Decr. Other Curr. Assets	-29,934	27,708	-93,972	-96,198
9	Incr./(Decr.) A/P-Domestic	-73,431	-4,672	2,399	-75,704
10	Incr./(Decr.) A/P-Foreign	0	0	0	0
11	Incr./(Decr.) Taxes Payable	-1,474	2,968	6,245	7,739
12	Incr./(Decr.) Accrued Expenses	2,421	3,310	-2,647	3,084
13	Incr./(Decr.) Other Cur. Liab.	68,114	-902	-45,544	21,668
14	Total Cash from Operations	-1,437	135,841	-131,816	2,588
	CASH FROM INVESTING ACTIVITIES				
15	(Purchase)/Disposal Prop, Plant & Equip	-5,625	-2,805	-6,701	-15,131
16	(Incr.)/Decr. Investments in Subsidiaries	-1,908	124,500	-1,841	120,751
17	(Incr.)/Decr. Invest. in Good Will	0	0	0	0
18	(Incr.)/Decrease Other Assets	-5,859	-257,097	163,468	-99,488
19	(Charges)/Credits to Retained Earnings	-5,873	-24,329	-33,045	-63,247
20	Total Cash from Investing Activities	-19,265	-159,731	121,881	-57,115
	CASH FROM FINANCING ACTIVITIES				
21	Incr./(Decr.) Notes Payable	15,000	0	65,000	80,000
22	Incr./(Decr.) Long Term Debt	0	30,000	0	30,000
23	Incr./(Decr.) Other L-T Liab	0	0	0	0
24	New Issue/(Repurchase) Common Stock	0	0	0	0
25	Incr./(Decr.) Paid-In Capital	0	1,090	-19,163	-18,073
26	(Payment) of Dividends	0	0	0	0
27	Total Cash from Financing Activities	15,000	31,090	45,837	91,927
28	Total Change in Cash Position	-5,702	7,200	35,902	37,400
29	Cash Balance Beginning of Period	43,089	37,387	44,587	43,089
30	Cash Balance End of Period	37,387	44,587	80,489	80,489

RATIO ANALYSIS
FERTODI EPITOIPARI SZOVETKEZET
Currency = HUF (000)

30-Apr-92
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		12/31/88	12/31/89	12/31/90	6 Months 6/30/91 Annualized
	LIQUIDITY RATIOS				
1	Current Ratio	1.06	1.29	1.30	2.00
2	Quick Ratio (Acid Test)	0.73	0.96	0.83	1.52
	LEVERAGE RATIOS				
3	Debt/Total Assets	0.00	0.04	0.09	0.22
4	Debt/Total Capital	0.00	0.06	0.12	0.32
5	Debt/Equity	0.00	0.06	0.13	0.35
6	Total Assets/Equity (Financial Leverage)	1.50	1.47	1.42	1.57
7	Interest Coverge		47.89	6.03	1.93
8	Total Coverage		5.12	0.91	0.42
	ACTIVITY RATIOS				
9	Fixed Asset Turnover		4.87	4.24	3.64
10	Total Asset Turnover		1.10	0.68	0.64
11	Inventory Turnover		5.82	3.15	2.28
12	Average Collection Period-Dom. Trade		41	55	53
13	Average Collection Period-For. Trade		0	0	Incl. Above
14	Average Collection Period-Total		41	55	53
15	Average Payment Period-Dom. Trade		31	29	39
16	Average Payment Period-For. Trade		0	0	Incl. Above
17	Average Payment Period-Total		31	29	39
18	Self Produced Inventory/COGS		1.94%	6.28%	14.33%
19	Purchased Inventory/COGS		15.24%	25.46%	29.51%
20	Total Inventory/COGS		17.18%	31.73%	43.83%
21	Self Produced Inventory Days Held		7	23	52
22	Purchased Inventory Days Held		56	93	108
23	Total Inventory Days Held		63	116	160
24	Sales Days Cash Held		33	47	94
25	Cash Cycle Period		73	141	174
	PROFITABILITY RATIOS				
26	Gross Margin		44.82%	47.60%	48.83%
27	Operating Margin		20.17%	11.54%	9.19%
28	Pre-Tax Return on Sales		18.51%	43.24%	20.29%
29	After Tax Return on Sales		9.31%	35.60%	3.35%
30	Pre-Tax Return on Total Assets		20.40%	29.53%	13.03%
31	Pre-Tax Return on Equity		29.99%	42.04%	20.44%
	PERFORMANCE MEASURES				
32	Growth in Total Assets		13.73%	34.73%	-4.21%
33	Growth in Sales		N/A	-16.54%	-9.95%
34	Change in Gross Margin		N/A	-11.36%	-7.62%
35	Change in Operating Margin		N/A	-52.25%	-28.29%
36	Growth in Pre-Tax Net Income		N/A	95.01%	-57.74%
37	% Domestic Sales		100.00%	100.00%	100.00%
38	% Foreign Sales		0.00%	0.00%	N/A

APPENDIX D

Appendix D.1

HOUSING UNIT STARTS

	1986	1987	1988	1989	1990	9 Mos. 1991
43.SZ.ÁÉV & KFT's	2,752	3,519	2,730	2,387	990	0
BÉKÉS M. ÁÉV	476	258	0	246	109	26
ZALA M.ÁÉV	651	679	550	791	230	129
BORSOD M.ÁÉV	951	1,034	490	203	203	0
HAJDU M.ÁÉV	1,210	705	1,726	962	571	355
FERTÖDI ÉPITÖIPARI SZÖV				12	28	54
GROUP TOTAL	6,040	6,195	5,496	4,601	2,131	564
STATE OWNED CO. TOTAL	17,985	16,547	13,571	10,031	5,500	1,325

HOUSING UNIT COMPLETIONS

	1986	1987	1988	1989	1990	9 Mos. 1991
BÉKÉS M. ÁÉV	409	425	338	217	37	30
43.SZ.ÁÉV & KFT's	4,192	4,691	3,234	2,667	1,971	854
HAJDU M.ÁÉV	1,476	1,445	1,162	1,237	971	272
BORSOD M.ÁÉV	1,313	778	846	372	150	72
ZALA M.ÁÉV	677	541	617	663	727	308
FERTÖDI ÉPITÖIPARI SZÖV				2	7	27
GROUP TOTAL	7,658	7,455	5,859	4,941	3,826	1,533
STATE OWNED CO. TOTAL	21,846	20,525	15,012	12,648	8,746	3,439

HOUSING UNITS IN PROCESS @ 12/31

	1986	1987	1988	1989	1990	9 Mos. 1991
BÉKÉS M. ÁÉV	571	404	66	95	139	135
43.SZ.ÁÉV & KFT's	4,490	3,318	2,814	2,534	1,553	454
HAJDU M.ÁÉV	1,316	576	1,140	865	449	532
BORSOD M.ÁÉV	616	872	516	347	400	328
ZALA M.ÁÉV	734	872	805	933	436	257
FERTÖDI ÉPITÖIPARI SZÖV				10	31	58
GROUP TOTAL	7,156	5,638	5,275	4,689	2,869	1,629
STATE OWNED CO. TOTAL	23,261	18,350	15,644	12,040	8,356	5,121

Data provided by Ministry of Industry and Trade

MIX OF OUTPUT - % HOUSING REVENUE

BÉKÉS M. ÁÉV:	1989	1990	6 Mos. 1991
Residential Revenue	23.1%	12.3%	26.7%
Non-Residential Revenue	76.9%	87.7%	73.3%
TOTAL	100.0%	100.0%	100.0%

43.SZ.ÁÉV & KFT's:	1989	1990	6 Mos. 1991
Residential Revenue	87.6%	91.7%	97.9%
Non-Residential Revenue	12.4%	8.3%	2.1%
TOTAL	100.0%	100.0%	100.0%

HAJDU M.ÁÉV:	1989	1990	6 Mos. 1991
Residential Revenue	57.4%	26.6%	10.0%
Non-Residential Revenue	42.6%	73.4%	90.0%
TOTAL	100.0%	100.0%	100.0%

BORSOD M.ÁÉV:	1989	1990	6 Mos. 1991
Residential Revenue	46.9%	43.5%	49.0%
Non-Residential Revenue	53.1%	56.5%	51.0%
	100.0%	100.0%	100.0%

ZALA M.ÁÉV:	1989	1990	6 Mos. 1991
Residential Revenue	71.9%	67.7%	48.3%
Non-Residential Revenue	28.1%	32.3%	51.7%
TOTAL	100.0%	100.0%	100.0%

FERTŐDI ÉPITŐIPARI SZÖV:	1989	1990	6 Mos. 1991
Residential Revenue	17.8%	22.6%	21.0%
Non-Residential Construction Revenue	51.6%	41.6%	28.2%
Other: Non-Construction Revenue	30.6%	35.8%	50.8%
TOTAL	100.0%	100.0%	100.0%

MIX OF OUTPUT – NUMBER OF UNITS BY SIZE

BÉKÉS M. ÁÉV:	1989	1990	6 Mos. 1991
Up to 50 square meters	96	3	–
51 to 75 square meters	121	27	12
76 to 100 square meters	–	7	18
Over 100 square meters	–	–	–
TOTAL UNITS	217	37	30

43.SZ.ÁÉV & KFT's:	1989	1990	6 Mos. 1991
Up to 50 square meters	933	679	350
51 to 75 square meters	1,601	1,095	351
76 to 100 square meters	133	197	78
Over 100 square meters	–	–	–
TOTAL UNITS	2,667	1,971	779

HAJDU M.ÁÉV: HAEV does not record production by size of units.

BORSOD M.ÁÉV: Miskolc does not record production by size of units.

ZALA M.ÁÉV:	1989	1990	6 Mos. 1991
Up to 50 square meters	74	127	39
51 to 75 square meters	499	448	164
76 to 100 square meters	87	152	29
Over 100 square meters	3	–	–
TOTAL UNITS	663	727	232

FERTŐDI ÉPITŐIPARI SZÖV: Fertod does not record production by size of units.

UNIT COSTS (HUF PER SQUARE METER)

BÉKÉS M. ÁÉV:	1989	1990	6 Mos. 1991
Up to 50 square meters	15,792	14,308	–
51 to 75 square meters	15,976	14,264	28,750
76 to 100 square meters	–	16,599	28,750
Over 100 square meters	–	–	–

43.SZ.ÁÉV & KFT's:	1989	1990	6 Mos. 1991
Up to 50 square meters	22,800	25,500	28,500
51 to 75 square meters	21,700	24,300	27,800
76 to 100 square meters	20,600	24,200	27,600
Over 100 square meters	–	–	–

HAJDU M.ÁÉV: HAEV does not record production by size of units, rather for entire projects including communal infrastructure. However the following data is available:

INCLUDES LAND, LAND SERVICING & COMMUNAL FACILITIES:	1989	1990	6 Mos. 1991
Multi–storied Flats (Average size: 68 sq.m.)	31,500	36,000	34,200
Detached (Average size: 90 square meters)	38,200	44,000	40,500

BORSOD M.ÁÉV: Miskolc does not record costs by size of units.

	1989	1990	6 Mos. 1991
Average Costs per square meter	22,200	26,500	28,900

ZALA M.ÁÉV: ZAEV does not record costs by size of units.

FERTÖDI ÉPITÖIPARI SZÖV: Fertodi does not record costs by size of units.

BLUE COLLAR EMPLOYEES

	1988	1989	1990	9 Mos. 1991
BÉKÉS M. ÁÉV	1,191	1,075	1,015	767
43.SZ.ÁÉV & KFT's	3,394	2,687	1,283	1,003
HAJDU M.ÁÉV	2,748	2,521	2,317	2,043
BORSOD M.ÁÉV	2,355	1,632	1,302	881
ZALA M.ÁÉV	2,060	1,952	1,826	1,732
FERTÖDI ÉPITÖIPARI SZÖV	280	359	347	293
GROUP TOTAL	10,837	9,151	7,075	5,952

WHITE COLLAR EMPLOYEES

	1988	1989	1990	9 Mos. 1991
BÉKÉS M. ÁÉV	289	263	242	155
43.SZ.ÁÉV & KFT's	914	892	453	279
HAJDU M.ÁÉV	785	748	713	649
BORSOD M.ÁÉV	616	476	333	215
ZALA M.ÁÉV	440	448	427	369
FERTÖDI ÉPITÖIPARI SZÖV	66	85	82	66
GROUP TOTAL	2,821	2,649	2,008	1,578

TOTAL EMPLOYEES

	1988	1989	1990	9 Mos. 1991
BÉKÉS M. ÁÉV	1,480	1,338	1,257	922
43.SZ.ÁÉV & KFT's	4,308	3,579	1,736	1,282
HAJDU M.ÁÉV	3,533	3,269	3,030	2,692
BORSOD M.ÁÉV	2,971	2,108	1,635	1,096
ZALA M.ÁÉV	2,500	2,400	2,253	2,101
FERTÖDI ÉPITÖIPARI SZÖV	346	444	429	359
GROUP TOTAL	13,658	11,800	9,083	7,530

Data provided by Ministry of Industry and Trade

TOTAL EMPLOYEES

	1988	1989	1990	9 Mos. 1991
SOFA	567	560	551	524
BUDAI TEGLA	829	726	521	523

Data provided by Ministry of Industry and Trade

1,000 HUF IN SALES PER BLUE COLLAR EMPLOYEE

Appendix D.5.1

	1989	1990	6 Mos. 1991 An. Rate	
BÉKÉS M. ÁÉV	0.84	1.13	1.32	
43.SZ.ÁÉV & KFT's	1.65	N/A	N/A	<– Transformed
HAJDU M.ÁÉV	1.22	1.17	0.81	
BORSOD M.ÁÉV	0.61	0.67	0.92	
ZALA M.ÁÉV	0.75	0.80	0.87	
FERTÖDI ÉPITÖIPARI SZÖV	1.16	1.00	1.09	
GROUP AVERAGE	1.43	2.24	1.43	

1,000 HUF IN SALES PER WHITE COLLAR EMPLOYEE

Appendix D.5.2

	1989	1990	6 Mos. 1991 An. Rate	
BÉKÉS M. ÁÉV	3.44	4.73	6.55	
43.SZ.ÁÉV & KFT's	4.96	N/A	N/A	<– Transformed
HAJDU M.ÁÉV	4.11	3.80	2.55	
BORSOD M.ÁÉV	2.08	2.62	3.77	
ZALA M.ÁÉV	3.29	3.41	4.10	
FERTÖDI ÉPITÖIPARI SZÖV	4.91	4.25	4.85	
GROUP TOTAL	0.20	8.36	5.46	

APPENDIX E

SOFA:	1988	1989	1990	6 Mos. 1991
TOTAL UNITS PRODUCED	267,693	227,828	201,200	102,000
# Blue Collar Employees	473	464	449	432
# White Collar Employees	94	96	102	92
TOTAL EMPLOYEES	567	560	551	524
Units Produced per Blue Collar Empl	566	491	448	472
Units Produced per White Collar Empl	2,848	2,373	1,973	2,217
TOTAL LABOR COST PER UNIT (huf)	314	448	633	670
MATERIAL COST PER UNIT (huf)	2,413	3,062	3,648	4,217
GENERAL OVERHEAD PER UNIT (huf)	1,076	1,306	1,701	1,961
ENERGY COST PER UNIT (huf)	181	199	267	332

Incoming freight = 2% of material costs
Outgoing freight = 1% of sales price

BUDAI TEGLAIPARI:	1988	1989	1990	6 Mos. 1991
TOTAL UNITS PRODUCED (Million Bricks)	169.5	152.4	163.5	129.7
# Blue Collar Employees			382	389
# White Collar Employees			139	134
TOTAL EMPLOYEES	829	726	521	523
Units Produced per Blue Collar Empl			0.43	0.67
Units Produced per White Collar Empl			1.18	1.94
Units Produced per Employee (Total)		0.21	0.31	0.25
TOTAL LABOR COST PER UNIT (1,000 huf)		1,023	1,014	750
MATERIAL COST PER UNIT (1,000 huf)		1,812	1,859	1,490
GENERAL OVERHEAD PER UNIT (1,000 huf)		1,438	1,092	781
ENERGY COST PER UNIT (1,000 huf)		1,243	1,280	1,151

Freight = 0% – shipped FOB factory.

SALGOTARJANI:
Average price of fibre glass insulation = 155ft/kg
Freight costs = 7% of total production costs

ROMHANY TILE WORKS:
The company declined information requests.

THE ESTIMATED CAPACITY OF THE BRICK AND TILE INDUSTRY

Brick

- Capacity: 1.5 billion units (equivalent unit: 6.5x12x25 cm) in 1991.
- Used capacity in 1991: about 1 billion units.
- About ten years ago the capacity reached the 2 billion unit level. Since 1988 the capacity has rapidly decreased by about 2-300 million units per year.

Roof tile

(excluding the concrete rooftile)

- Capacity: 90 million units (1991).
- Used capacity in 1991: 60-70 million units.
- Since 1988 the capacity has decreased by 20 million units.

Joinery

- Windows capacity: 1.6 million sqm in 1991. This level of capacity has not changed since 1986.
- Interior doors capacity: 1.8 million sqm in 1991. This capacity has increased from 1.3 million sqm in 1988.
- Entrance doors capacity: 75,000 units = about 140-150,000 sqm. The capacity has not changed since 1988 however the number of units sold decreased from 70,000 units to 35,000 units in 1991.

Insulation materials

- Basalt wool capacity: 30,000 tones (1991)
- Glass wool capacity: 12,000 tones (1991)

BRICK									
				TOTAL SALES					
	TOTAL PRODUCTION			Volume (Thousands of Pieces)			Value (HUF 000)		
Types	1988	1989	1990	1988	1989	1990	1988	1989	1990
1. Masonry brick	1,650,271	1,568,093	1,624,729	1,630,331	1,539,936	1,629,616	4,319,861	4,411,325	5,586,642
2. Floor brick*	1,601	281	3,128	1,387	484	3,040	3,786	1,309	9,110
3. Wall covering bricks	110,893	83,263	74,979	110,083	77,468	75,242	256,410	208,686	234,231
4. Total burnt bricks	1,762,765	1,651,645	1,702,836	1,741,801	1,617,888	1,707,898	4,580,057	4,621,320	5,829,983
5. Limesand brick	8,123	7,353	1,290	7,543	7,225	2,277	25,188	29,323	10,411
6. Clinker brick	142	19	29	82	9	44	1,052	500	44

*Hollowed inserts put in between reinforced concrete beams.

Appendix E.3.2

CERAMIC TILES									
	TOTAL PRODUCTION			TOTAL SALES					
				Volume (tonnes)			Value (HUF 000)		
Types	1988	1989	1990	1988	1989	1990	1988	1989	1990
1.Wall tiles*	73	52	2,954	69	52	2,392	7,196	4,983	75,488
2. Glazed wall tile	51,085	62,825	55,850	51,276	59,449	57,259	917,927	1,334,152	1,419,706
3. Ceramic floor tile**	76,594	61,277	35,476	75,399	61,734	34,641	1,503,073	1,261,685	882,312

* Mosaic, ceramic and pyrogranite
** Glazed ceramic and clay stone

Appendix E.3.3

JOINERY									
	TOTAL PRODUCTION			TOTAL SALES					
				Volume (square meters)			Value (HUF 1000)		
Types	1988	1989	1990	1988	1989	1990	1988	1989	1990
1.Wooden doorframe	963,643	716,621	661,179	962,028	695,616	658,657	425,581	571,298	610,787
2. Wooden window	947,276	838,064	750,683	902,584	830,079	754,285	2,108,136	2,159,754	2,517,276
3. Wooden door	1,102,472	928,669	875,580	1,107,072	902,072	863,283	871,573	1,085.338	1,099,052
4. French window	109,603	111,258	113,769	111,213	108,593	116,201	203,776	252,607	318,422

Appendix E.3.4

INSULATION MATERIALS									
	TOTAL PRODUCTION			TOTAL SALES					
				Volume (tonnes)			Value (HUF 1000)		
Types	1988	1989	1990	1988	1989	1990	1988	1989	1990
1. Glass wool	1	873	8,702	1	873	7,458	141	116,472	671,026
2. Basalt wool*	56,682	40,190	2,837	4,115	4,287	2,089	34,412	37,415	28,215
3. Basalt products	52,473	50,172	18,851	49,007	48,137	18,961	1,307,206	1,328,961	584,489

* of different density

Appendix E.3.5

TOTAL PRODUCTION		
TYPES	first nine months 1991	% of 1990
Brick		
1. Burnt bricks * (thousand pcs)	1,035,807	71.2
2. Burnt clay tile** (thousand pcs)	60,217	68.3
Tile		
3. Glazed wall tile (sqm)	3,274,847	90.9
4. Ceramic floor tile (sqm)	2,098,475	104.4
Joinery		
5. Wooden doorframe (sqm)	299,751	--
6. Wooden door (sqm)	382,858	--
7. Wooden window (sqm)	439,372	--
8. Wooden frenchwindow (sqm)	76,776	--

* includes: building bricks, floor bricks, wall covering bricks
** includes: burnt roof tiles, other burnt building tiles

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