

9. VALUERS' CERTIFICATE



# Jones Lang Wootton

(Proprietor : Singham Sulaiman Sdn. Bhd.)  
(Company No : 78217-X)

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20 January 2004

Our Ref: V/PG/15/2003/SC

The Board of Directors  
Ire-Text Corporation Berhad  
Suite 12-H, Gurney Tower Office  
18 Persiaran Gurney  
10250 Pulau Pinang

Dear Sirs

**IRE-TEXT CORPORATION BERHAD ("IRE-TEXT" OR THE "COMPANY")**

- PROSPECTUS IN RELATION TO THE PUBLIC ISSUE OF 9,800,000 NEW ORDINARY SHARES OF RM1.00 EACH AND THE OFFER FOR SALE OF 8,000,000 ORDINARY SHARES OF RM1.00 EACH AT AN ISSUE/OFFER PRICE OF RM1.40 PER ORDINARY SHARE
- VALUATION OF PROPERTY TO BE ACQUIRED BY IRE-TEXT ("PROPERTY")

This letter has been prepared for inclusion in the Prospectus dated 28 January 2004 in connection with the Public Issue of 9,800,000 new ordinary shares of RM1.00 each and Offer for Sale of 8,000,000 ordinary shares of RM1.00 each at the issue/offer price of RM1.40 per ordinary share in Ire-Text Corporation Berhad ("Ire-Text").

In accordance with your instructions, we have assessed the Market Value of the property set out below in conjunction with the restructuring and listing of Ire-Text on the Second Board of the Malaysia Securities Exchange Berhad. We have valued the Property vide our valuation report bearing the reference number as set out in the table below. Further details of the valuation of the Property are set out in our Valuation Report.

The basis of the valuation is Market Value based on the Guidelines on Asset Valuation for Submission to the Securities Commission and the Manual of Valuation Standards issued by the Board of Valuers, Appraisers and Estate Agents, Malaysia.

The term Market Value is defined as the estimated amount for which an asset should exchange on the date of valuation between a willing buyer and a willing seller in an arm's length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion.

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## 9. VALUERS' CERTIFICATE (Cont'd)


**Jones Lang Wootton**


 (Proprietor : Singham Sulaiman Sdn. Bhd.)  
 (Company No: 78217-X)

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Our opinion of the Market Value of the Property, subject to the property being free from all encumbrances is as follows:-

Property Identification	General Description of Property	Market Value
<p><b>Title Particulars</b> P.T. No. 3048 held under HS(D) 40119, Mukim 11, Daerah Seberang Perai Tengah, Pulau Pinang</p> <p><b>Postal Address</b> No. Plot 118, Jalan Perusahaan, Bukit Tengah Industrial Park, Seberang Perai Tengah.</p> <p><b>Tenure</b> 60-year leasehold interest expiring on 19 April 2056.</p> <p><b>Category of Land Use</b> Perusahaan/Perindustrian</p> <p><b>Registered Proprietor</b> Tongkah Moulding Technologies Sdn Bhd</p>	<p>The subject property is an industrial complex comprising three factory buildings with two annexed office blocks.</p> <p><b>The Site</b> Has a land area of 29,954.4639 sq. metres (322,427 sq. ft.), is trapezoidal in shape and flat in terrain.</p> <p><b>The Buildings</b> Comprise the following:- Phase I: a) Single-storey factory (5,121 sq. metres) b) Annexed 3-storey office block (1,539 sq. metres)  Phase II: a) Single-storey factory with an annexed indoor badminton court (2,541 sq. metres)  Phase III a) Single-storey factory (2,223 sq. metres) b) Annexed double-storey office block (300 sq. metres)</p> <p><b>Existing Use</b> The subject property was vacant.</p> <p><b>Planning Details</b> Designated for industrial use. Building plans approved by Majlis Perbandaran Seberang Perai as follows:-</p> <ol style="list-style-type: none"> <li>1) MPSP/40/I/5-41/46 approved on 16.06.1995</li> <li>2) MPSP/40/I/5-41/46B.1 approved on 24.04.1996</li> <li>3) MPSP/40/I/5-41/46B.2 approved on 15.05.1997 and 08.06.2000.</li> </ol>	<p><b>Date of Valuation</b> 10 June 2003</p> <p><b>Methods of Valuation</b> Comparison, Cost and Investment methods.</p> <p><b>Market Value</b> RM12,900,000 (Ringgit Malaysia: Twelve Million Nine Hundred Thousand Only)</p>

Yours faithfully  
for and on behalf of  
**JONES LANG WOOTTON**

  
**TAY TAM, FISM**  
**B.SURV. (HONS) PROP. MGT.**  
**REGISTERED VALUER**  
**NO. V-219**

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**10. INDEPENDENT MARKET RESEARCH REPORT**

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**VITAL FACTOR CONSULTING**  
Creating Winning Business Solutions

**Vital Factor Consulting Sdn Bhd**  
(Company No.: 266797-T)

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20 January 2004

The Board of Directors  
Ire-Tex Corporation Berhad  
Suite 12-H, Gurney Tower Office  
18, Persiaran Gurney  
10250 Penang

Dear Sirs

**Assessment of the Polymer Based Protective Packaging Industry**

The following is an extract of the Assessment of the Polymer Based Protective Packaging Industry in Malaysia prepared by Vital Factor Consulting Sdn Bhd for inclusion in the Prospectus of Ire-Tex Corporation Berhad (herein together with its subsidiaries will be referred to as **Ire-Tex Group**) in relation to its listing on the Second Board of the Malaysia Securities Exchange Berhad.

**1. Background**

- The objective of the report is to provide an independent assessment of the Polymer Based Protective Packaging Industry in Malaysia.
- The Ire-Tex Group operates within the Polymer Based Protective Packaging Industry and is principally involved in the design and fabrication of polymer based protective and cushion packaging products.
- The Group's protective packaging products are primarily fabricated from polymer based materials such as:
  - Polyethylene foams;
  - Polyurethane foams;
  - Polypropylene foams;
  - Polystyrene foams.
- Other business activities of the Group include:
  - Provision of contract manufacturing services;
  - Manufacture of polymer-based materials;
  - Conversion of corrugated paper boxes;
  - Provision of material testing and equipment calibration services;
  - Property investment.

**2. Overview of the Polymer Based Protective Packaging Industry**

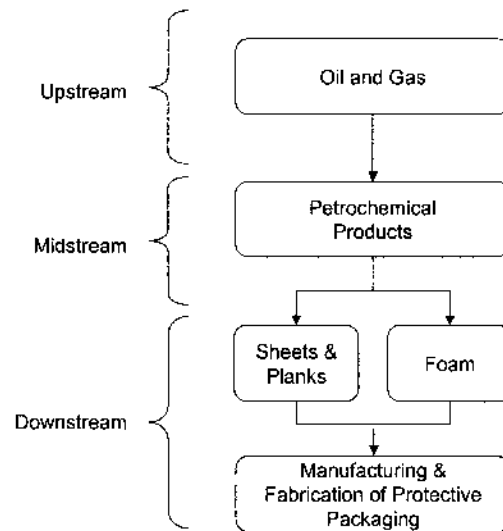
- The Polymer Based Protective Packaging Industry focuses on the manufacturing and fabrication of protective materials to be used in the internal packaging of fragile finished products, components and materials such as electronics and electrical products, food and other consumer products.



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- There are approximately 50 to 55 operators in the Polymer Based Protective Packaging Industry focusing on foam manufacturing and fabrication. *(Source: Primary Market Research undertaken by Vital Factor Consulting Sdn Bhd).*
- The Polymer Based Protective Packaging is linked to various upstream, midstream and downstream industries as follows:



**Figure 1 Vertical Structure of Manufacturing and Fabrication of the Polymer Based Protective Packaging Industry**

- The upstream sector of the Polymer Based Protective Packaging Industry primarily involves the exploration and production of crude oil and gas.
- Midstream activities comprise the refining of petrochemicals including plastic resins, methanol, acetic acid, acrylic acid, oxo-alcohols, aromatics, purified terephthalic acid, fatty acids and fatty alcohols.
- Downstream activities include the manufacture and fabrication of foam, sheets and planks for polymer based protective packaging.

### 3. Government Legislation, Policies and Incentives

#### Government Laws and Regulations

- Apart from the normal manufacturing licence, there are no material government laws, regulations and policies that may impede on the performance and growth of operators within the Polymer Based Protective Packaging Industry.



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### Equity Policies

- The level of exports previously governed foreign equity participation in manufacturing projects. However, effective from 31 July 1998, the government liberalised the equity policy for the Manufacturing Industry whereby, for all applications received until 31 December 2000, foreign investors can hold 100% equity irrespective of the level of exports. However, this equity liberalisation is not applicable to certain specific products/activities where Malaysian small and medium scale companies have the capabilities and expertise. These activities are paper packaging, plastic packaging (bottles, films, sheets and bags), plastic injection moulded components, metal stamping and metal fabrication, wire harness, printing and steel service centres (*Source: Malaysian Industrial Development Authority*).

### Government Incentives

- The Government has helped stimulate the growth of the Polymer Based Protective Packaging Industry with both direct and indirect tax incentives.
- The direct incentives are designed to grant partial or total relief from the payment of income tax for a limited period of time. Indirect tax incentives are given in the form of exemptions from import duty, sales tax and excise duty.
- The major incentives for companies investing in the manufacturing sector are the pioneer status, investment tax allowance and reinvestment allowance (*Source: Malaysian Industrial Development Authority*).
- Eligible manufacturers producing for the export market may also apply for incentives for exports such as Double Deduction for Promotion of Exports where certain expenses incurred in the course of seeking opportunities for exports of manufactured products are eligible for double deduction. In addition, incentives for export are also available.

### Environmental Regulations

- The bulk of waste materials from the activities of polymer-based fabricators are the cut-offs after the desired shapes are cut from the foam planks. These waste materials do not discharge any hazardous liquid or vapour emissions and are generally sold as scrap for recycling. Certain types of scrap can also be converted back to resins.
- During the assembly of the foam parts with other materials such as corrugated paper boxes or wood crates, operators generally use hot melt glue, which may emit fumes.
- The prescribed permissible limits of concentration of air impurities or smoke emission, resulting from manufacturing activities, is regulated under the Environmental Quality Act 1947 and Environmental Quality (Clean Air) Regulations 1978 (*Source: Environmental Quality Act and Regulations*).
- The use of any controlled substance as blowing agent to produce extruded Polystyrene (PS) foam, thermoformed plastic packaging and moulded flexible Polyurethane (PU) foam is prohibited with effect from 1<sup>st</sup> July 1995 under the Environmental Quality Act 1974 and Environmental Quality (Prohibition on the use of Chlorofluorocarbons and other Gases as Propellants and Blowing Agents) Order 1993 (*Source: Environmental Quality Act and Regulations*).

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**4. Labour Usage**

- Polymer Based Protective Packaging sector falls under the total umbrella of the Plastics Industry, therefore the Plastics Industry is used to provide an indication of usage of labour.
- The usage of labour in the manufacture of Plastic Products is more intensive compared to the Manufacturing Industry. In 2002, in comparison with the overall Manufacturing Industry, the Plastics Products sector utilised approximately 2.7 times more labour for each Ringgit of sales generated (*Source: Monthly Manufacturing Statistics March 2003, Department of Statistics Malaysia*).

**5. Barriers to Entry**

- Barriers to entry into the Polymer Based Protective Packaging Industry are **low** mainly predicated by the ease of entry into the industry in terms of government policies, capital and set-up costs required, skills and experience

**Government Policies**

- Apart from the normal manufacturing licence, there are no other Government regulations prohibiting the entry of operators in the Polymer Based Protective Packaging Industry.
- The Government has imposed a 30% import tariffs on the import of Polystyrene (PS), Polyethylene (PE), Polyurethane (PU) and Polypropylene (PP), either in plates, sheets, foil or strips (*Source: Royal Customs Malaysia*). This will provide some form of barrier to entry for imports of these types of materials. With the implementation of Asean Free Trade Area (AFTA) through Common Effective Preferential Tariff (CEPT), the tariff for the import of these types of materials is between 0% and 5% (*Source: Royal Customs Malaysia*).

**Capital and Set-up Costs**

- For fabrication activities, the barriers to entry based on capital requirements, excluding land and building, are **low**. This is mainly predicated by the low capital costs in setting up a small-sized plant where production is low. There would be no substantial investment required on machinery and equipment, as the business would be mainly dependent on labour for manual fabrication.
- However, for testing and equipment calibration services, some investment would be required in the set-up of the testing laboratory. The typical laboratory set-up cost for a medium-sized plant with the capability to conduct various types of tests would be approximately RM800,000 (*Source: Ire-Tex Group*).
- Testing is a critical requirement for multinational customers as part of their product quality assurance. The quality of the protective packaging impacts on the condition of the end-product upon delivery to its final destination. Any failure of the protective packaging could result in major losses.
- Due to the investment cost, only larger operators are able to incorporate testing and calibration facilities into their operation. As such, the barriers to entry for larger-sized operators incorporating testing facilities are higher.



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### Technical Skills and Experience

- The level of technical skills required in fabrication activities is **low** as the process can be achieved through manual labour.
- However, the testing and calibration services require some level of technical skills including testing of quality standards to minimise product damage from hazards, such as shock, vibration and abrasion during the distribution cycle. This is critical as a faulty packaging could lead to the total rejection of the finished product. As such, technical skills and experience will pose some barrier to entry for new entrants.

### Track Record

- Track record is one of the critical factors for operators in the Polymer Based Protective Packaging Industry as a new entrant without any track record is unlikely to be competitive in this market.
- As protective packaging is a critical part of the total manufacturing process, the operator's track record, product quality and service are critical factors in securing contracts with the multinational corporations (MNC) who prefer operators who have track record in meeting customer requirements. It is not unusual for a new operator to undergo a gestation period of one to two years before regular firm orders are given by the MNC. As such, this would pose a barrier to entry for new entrants.

## 6. Supply and Supply Dependencies

### Supply - Production

- In 2002, the sales value of the local manufacture of Expanded Polystyrene (EPS) and Polystyrene (PS) foam (including those used for protective packaging) increased by 9.4% to reach RM163.9 million. *(Note: For local production, the Department of Statistics keep only records for EPS and PS foam and not other types of foams)* (Source: Department of Statistics Malaysia).
- Between 1998 and 2002, sales value of local production of EPS and PS foam grew by an average annual rate of 16.8% (Source: Department of Statistics Malaysia).

### Supply Dependencies

- The raw materials used in Protective Packaging Products, either in semi-finished or finished form, include various types of Polystyrene (PS), Polyethylene (PE), Polyurethane (PU) and Polypropylene (PP). These materials can either be sourced locally or through imports.
- In 2002, the import value of PS in primary forms increased by 13.2%, amounting RM884.9 million. Between 1998 and 2002, the average annual growth rate was 8.1% (Source: Monthly External Statistics December 1999 and 2002, Department of Statistics Malaysia).

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- In 2002, the sales value of PE increased by 3.3% amounting to RM1.6 billion, whilst production volume grew by 17.3%. Between 1999 and 2002, sales value of PE grew at an average annual rate of 18.8% (Source: Department of Statistics Malaysia).
- In 2002, the import value of PE in primary forms increased by 12.0%, amounting RM852.5 million. Between 1998 and 2002, the average annual growth rate was 11.0% (Source: Monthly External Statistics December 1999 and 2002, Department of Statistics Malaysia).
- In 2002, import value of plates and sheets of PU declined by 19.4% amounting to RM8.1 million. However, between 1998 and 2002, the import value of plates and sheets of PU grew at an average annual rate of 5.8% (Source: Department of Statistics Malaysia).
- Between 1998 and 2002, the sales value of PP grew at an average annual rate of 19.6%. In 2002, sales value increased by 0.8% amounting to RM815.1 million, whilst production increased by 11.6%. (Source: Department of Statistics Malaysia).
- Between 1998 and 2002, the import value of plates and sheets of PP grew at an average annual rate of 30.5%. In 2002, the import value increased by 69.5% amounting to RM2.1 million (Source: Department of Statistics Malaysia).
- Between 1998 and 2002, the import value of other plates and sheets of PP declined an average annual rate of 1.2%. However, in 2002, the import value of other plates and sheets of PP increased by 46.9% amounting to approximately RM1 million (Source: Department of Statistics Malaysia).

**7. Demand and Demand Dependencies**

- The demand for Polymer Based Protective Packaging is dependent on its user industries and their applications for such products.
- Due to the diversity of its user industries, the usage and applications are extensive and diverse. Some of the areas are illustrated below:
  - computers and peripherals such as personal computers, notebooks, laptops, keyboards, monitors and modems;
  - telecommunications equipment such as mobile phones, telephones, telecommunication devices and satellite receivers;
  - consumer electronics such as televisions, cameras, electronic organisers and calculators;
  - electrical appliances such as refrigerators, toasters, microwave ovens and washing machines;
  - office automation equipment such as key telephone systems, facsimile machines, photocopying machines, scanners and printers;
  - photonic products such as traffic lights, brake lights, light indicators, computer display boards and sign boards;





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- industrial equipment such as machine and process control, production test measurement, material handling, energy and safety equipment and weighing equipment;
- Government/military/aerospace such as radar, guidance and control systems, communications and navigation, sonar ordinance and satellite related systems.
- The diversity in user industries and applications will continue to provide diversity in customer base ensuring continuing demand and opportunities for operators within the Polymer Based Protective Packaging Industry.

### 8. Competitive Nature and Intensity of the Industry

#### Competitive Nature

- Operators in the Polymer Based Protective Packaging Industry face **normal** competitive conditions.
- As with most free enterprise environments, competition is based on a number of factors, including quality products and services, cost competitiveness, prompt delivery schedules, manufacturing capabilities and capacities, and customer convenience.
- Competition is mainly focused in the local market, as it is not practical to export Polymer Based Protective Packaging due to the bulky nature of the product. The cost of transportation is likely to make export or import of Polymer Based Protective Packaging uncompetitive.

#### Competitive Intensity

- Competition among operators in the Polymer Based Protective Packaging Industry within Malaysia is **intense** based on the following observations:
  - In 2002, there were approximately 50 to 55 operators in the Polymer Based Protective Packaging Industry focusing on foam manufacturing and fabrication (*Source: Primary Market Research undertaken by Vital Factor Consulting Sdn Bhd*). The numerous number of operators within the industry has created significant competitive intensity;
  - Barriers to entry are low to moderate. This is because at the most basic, operators may buy ready-made foams and value-add by fabricating them to the desired shape. Thus, at the most basic level, the low level of entry would place competitive pressure within the industry;
  - There are substitute products for Polymer Based Protective Packaging. The most common substitute is paper based protective packaging. At the most basic, paper based protective packaging can comprised shredded paper. More sophisticated protective paper based packaging can utilise specialised internal designs of corrugated carton boxes, separators and protective materials made from corrugated sheets, and use of paper moulded products.



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### 9. Key Players in the Industry

- There are many operators in the Polymer Based Protective Packaging Industry in Malaysia. Some of the larger operators include:
  - Ire-Tex (Malaysia) Sdn Bhd (a subsidiary of Ire-Tex Group);
  - Federal Packages Sdn Bhd;
  - Public Packages Sdn Bhd;
  - Denko-HLB Sdn Bhd;
  - Siong Bee Industries Sdn Bhd;
  - Far East Foam Industries Sdn Bhd;
  - Texchem-Pak (M) Sdn Bhd;
  - Logamas Packaging Sdn Bhd;
  - Jensen & Jessen Broadway (Johorc) Sdn Bhd (formerly known as Broadway Foam Sdn Bhd);
  - Foam Polystyrene Enterprise Sdn Bhd;
  - Associated Air-Pak Industries Sdn Bhd;
  - Attractive Venture Sdn Bhd;
  - San Yong Enterprise Sdn Bhd;
  - Jebson & Jessen Packaging (M) Sdn Bhd (formerly known as Styrotek Industries Sdn Bhd);
  - Recos Industries Sdn Bhd.
- Some of the above companies are also involved in the manufacture of moulded fibre protective packaging, corrugated carton boxes and cardboard boxes

*(Source: Primary Market Research undertaken by Vital Factor Consulting Sdn Bhd)*

### 10. Industry Outlook

- The outlook of the Polymer Based Protective Packaging Industry is dependent on the performance of local production, imports, user industries and exports.

#### Local Production

- In 2002, the sales value of the local manufacture of Expanded Polystyrene (EPS) and Polystyrene (PS) foam (including those used for protective packaging) increased by 9.4% to reach RM163.9 million *(Source: Department of Statistics Malaysia)* (Note: For local production, the Department of Statistics keep records only for EPS and PS foam and not other types of foams);
- Between 1998 and 2002, sales value of local production of EPS and PS foam grew by an average annual rate of 16.8%.

#### Imports

- In 2002, the import value of plates and sheets of Polyurethane (PU), of which includes PU foam, decreased by 19.4% to reach RM8.1 million compared with RM10.0 million in 2001;
- However, between 1998 and 2002, import value of plates and sheets of PU grew at an average annual rate of 5.8%;

**10. INDEPENDENT MARKET RESEARCH REPORT (Cont'd)****VITAL FACTOR CONSULTING**

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- Between 1998 and 2002, import value of Polyethylene (PE), having specific gravity of more than 0.94 in primary form including PE foam, increased at an average annual rate of 11.4%. In 2002, import value under this category increased by 6.5% amounting to RM318.5 million;
- In 2002, the import value of plates and sheets of Polypropylene (PP), including PP foam used for protective packaging increased by 69.5%;
- Between 1998 and 2002, the import value of plates and sheets of PP grew at an average annual rate of 30.5%.

*(Source: Department of Statistics Malaysia);*

**User Industries**

- Between 1998 and 2002, the Production Index of the Electronics Industry grew at an average annual growth rate of 12.3%;
- Between 1998 and 2002, the gross exports of the Electronics Industry grew at an average annual rate of 7.8%;

*(Source: Monthly Statistical Bulletin, May 2003, Bank Negara Malaysia)*

- The ex-factory sales value of the manufacture of office, computing and accounting machinery grew at an average annual rate of 1.6% between 1998 and 2002 *(Source: Monthly Manufacturing Statistics March 2003, Department of Statistics Malaysia);*
- In 2002, production volume of personal computers declined by 47.2%, totalling approximately 778,000 units. However, between 1998 and 2002, production volume of personal computers grew at an average annual rate of 1.2% *(Source: Department of Statistics Malaysia).*

**Exports**

- Between 1998 and 2002, gross exports of semiconductors grew at an average annual rate of 7.4%;
- Between 1998 and 2002, gross exports of electronic equipment and parts increased at an average annual rate of 8.2%;

*(Source: Monthly Statistical Bulletin may 2003, Bank Negara Malaysia)*

- In 2002, the export value of automatic data processing machines increased significantly by 31.0% to reach approximately RM33.0 billion compared with RM25.2 billion for 2001;
- Between 1998 and 2002, the export of automatic data processing machines increased at an average annual rate of 12.5%.

*(Source: Monthly External Trade Statistics December 1999 and 2002, Department of Statistics Malaysia)*



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### 11. Threats and Risks Analysis

#### Increased Competition from Lower-Cost Producing Countries

- Lower cost Polymer Based Protective Packaging producers such as China and India present intense competition, domestically and internationally for manufacturers of protective packaging products.
- These lower-cost producing countries, operating on abundant and cheaper labour, are able to manufacture and export their protective packaging products at relatively lower prices at comparable quality.
- As a result, Malaysia may lose its comparative advantage to the lower-cost producing countries.

#### Mitigating Factors

- In the intensely competitive Polymer Based Protective Packaging environment, manufacturers operating within the industry are encouraged to move up the value-chain, and to deliver innovative products in terms of better barrier and strength properties
- This would require manufacturers to focus on research and development, higher value-added protective packaging production and the creation of more competitive products, which can cater to both the domestic and international markets.
- Manufacturers who are ready for such a shift are in a good position to command better selling prices and to counter competition from low-cost producers.

#### Waste Disposal

- While recycling and reuse continue to grow in popularity, most of the polymer based packaging waste is disposed through landfills. There is a general assumption that the waste inside a landfill biodegrades, thus degradation of packaging waste creates harmful liquid and gaseous by-products that could contaminate groundwater supplies and air, and threaten the ecological system.
- There is also a general assumption that the volume of polymer based packaging waste created is great in comparison with other waste materials, thus emitting more greenhouse gases and causing greater environmental impacts.
- In Australia, State Governments are increasingly pressurising the packaging industry to manufacture products of materials that meet recycling and waste minimisation standards due to dissipating landfills.

#### Mitigating Factors

- Packaging materials such as paper and plastic do not fully degrade and have only caused minimal contamination on groundwater supplies, and these materials pose minimal health and environmental threats.

**10. INDEPENDENT MARKET RESEARCH REPORT (Cont'd)****VITAL FACTOR CONSULTING**

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- A study undertaken in the United States claimed that Expanded Polystyrene (EPS) and foam-based packaging waste constitute a small part of the total landfills, representing 0.4% of the total weight and only 1.9% of the total volume (*Source: Polyfoam Packers Corporation*).
- A Melbourne University study in 1996 confirmed that globally, the environmental impact of EPS produce boxes is less than for fibreboard boxes performing the same task. Fibreboard packaging over its lifecycle emits 2.8 times more greenhouse gas than EPS produce boxes.
- Polymer-based materials used in packaging products are not banned anywhere in the world. However, governments of various countries may have imposed levies in preference for specific packaging materials that comply with the individual country's health and environmental standards. In Germany, a levy is imposed on manufacturers for the usage of packaging regardless of the type of packaging materials.

**Exchange Rate Fluctuations**

- The Industry is subjected to fluctuations in foreign exchange in terms of import of raw materials.

**Mitigating Factor**

- The pegging of the Ringgit to the US Dollar has successfully stabilised the exchange rate. However this situation may change in the future.

**Global Economic Slowdown**

- A slowdown in the global economy will have a negative impact on the Polymer Based Protective Packaging Industry as consumers trim their spending and thus reducing demand for packaging of consumer goods such as electronics, electrical appliances, food and beverages and others.
- Similarly a slowdown in the Electronics industry, similar to the events that occurred in 2001, will also impact negatively on operators of Polymer Based Protective Packaging that focuses on servicing this market.

**Mitigating Factors**

- The Malaysian government has responded to the slowdown in the United States economy by adopting aggressive monetary and fiscal measures to stimulate domestic demand. Malaysia's trading partners have also adopted aggressive measures to stimulate demand. This will have a positive impact on the overall demand for Polymer Based Protective Packaging as the economic conditions and income levels improve.
- Polymer Based Protective Packaging manufacturers with strong financial stability, extensive and established distribution network and a wide and diverse range of products would be better able to survive the impact of the slowdown.

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**Use of Alternative Packaging Materials**

- Increasingly, moulded fibre has become the packaging medium of choice for innovative new products and services. The major advantage of moulded fibre is its ease of packout and most designs are nestable, thus moulded fibre requires less warehouse space than expanded polymer based protective packaging.
- Moulded fibre products have been widely used to package computer peripherals and light electronics. The pervasive use of moulded fibre in packaging presents a direct substitute threat to operators within the Polymer Based Protective Packaging Industry.

**Mitigating Factors**

- Moulded fibre can be a feasible protective packaging material in terms of its compact designs. However, the strength of polymer-based foam packaging is many fold stronger than those of moulded fibre.
- Polymer-based foam packaging is lightweight and economical. It is ideal for hydro-cooling, possess shock absorption abilities and provides strength to prevent pallet sag. The moulded polymer foam packaging is an ideal and cost-effective solution when packaging fragile electrical and electronic goods for shipment.
- In addition to its extensive properties and strength, polymer based foam packaging has many applications and serves various end-user industries such as automotive, building products, food and beverages, appliances, consumer electronics and retailing industries.
- In fact, plastic is highly used within the packaging industry constituting 30% of the total plastic market segments. This is followed by electrical and electronic, household appliances and the automotive segments (*Source: Overview of the Chemical Industry in Malaysia, Industry Brief February 2001, Malaysian Industrial Development Authority*).
- As such, polymer-based protective foam packaging will remain as a key component within the packaging industry in terms of cost-efficiency, insulation and weight factors.

**Implementation of Asean Free Trade Area**

- The reduction of import duties to 0% or 5% with the implementation of Asean Free Trade Area (AFTA) may make imports competitive against locally manufactured products.

**Mitigating Factors**

- Most polymer-based foam packaging products are 95% air and contain only 5% polymer. As such they occupy significant amount of space. In such a situation, imports of polymer-based foam packaging products may not be cost effective due to the relatively high transportation cost.

**10. INDEPENDENT MARKET RESEARCH REPORT (Cont'd)****VITAL FACTOR CONSULTING**

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- New players resulting from the implementation of AFTA would need to invest significant effort and time to develop and market their products to gain acceptance from local consumers. This would provide some advantages to existing local players at least in the short to medium term. During this period, local players can learn to adapt to the new competitive environment to sustain business growth and success.
- Local players with good track record, established integrated distribution, logistics network and wide range of products would be in a better position to face the increase competitive pressure from the potential new players in the market.

**12. Areas of Growth and Opportunities****Product Innovation**

- Product innovation has the capability to offer significant growth and profit opportunities for operators.
- Such product innovation can come in many forms including the following:
  - use of a combination of materials that provides different levels of efficacies compared to the average product;
  - use of recyclable polymer packaging to appeal to those who prefer environmentally friendly products;
  - development of new applications;
  - development of additional benefits for existing products.
- The exploration of new materials and investments of advanced technologies that are viable for the production of innovative protective packaging can add value to existing designs and functionality and indirectly broaden the spectrum of the packaging business.
- It is through the development of higher value-added packaging solutions that will enable local manufacturers to gain new competitive advantages through an expanded product offering and to create product differentiation to compete against the lower-cost producers.

**Export Growth of Major Manufacturing Based Industries**

- There are significant opportunities for fabricators of Polymer Based Protective Packaging to export their products. Opportunities for growth in packaging are more likely to arise from packaging embodied in exports of electronic and electrical components and products.
- Between 1998 and 2002, gross exports of electronic and electrical products grew at an average annual rate of 6.6%. They were the largest components of manufacturing exports accounting for approximately 70% of total gross exports in 2002 (*Source: Monthly Statistical Bulletin May 2003, Bank Negara Malaysia*).
- Other major components of manufacturing exports such as chemical and chemical products, as well as beverage and tobacco also provide growth for Polymer Based Protective Packaging Industry with an average annual rate of 12.9% and 8.5% respectively between 1998 and 2002 (*Source: Monthly Statistical Bulletin May 2003, Bank Negara Malaysia*).

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10. INDEPENDENT MARKET RESEARCH REPORT (Cont'd)

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- Manufacturers that can serve such export markets and in diversified user-industries will have increased areas of opportunities for growth as well as the ability to diversify business risks and to reduce any over dependency on a single or a small group of economies.

13. **Market Ranking**

- In 2002, there were approximately 50 to 55 manufacturers of Polymer Based Protective Packaging in Malaysia. *(Source: Primary Market Research undertaken by Vital Factor Consulting Sdn Bhd).*
- In 2002, the **Ire-Tex Group (Malaysian operations only)** ranked **fifth** among manufacturers within the Polymer Based Protective Packaging Industry based on company total turnover in Malaysia. *(Source: Primary Market Research undertaken by Vital Factor Consulting Sdn Bhd)*

Vital Factor Consulting Sdn Bhd has prepared this report in an independent and objective manner and has taken all reasonable consideration and care to ensure the accuracy and completeness of the report. It is our opinion that the report represents a true and fair assessment of the industry within the limitations of, among others, secondary statistics and information, and primary market research. Our assessment is for the overall industry and may not necessarily reflect the individual performance of any company. We do not take any responsibilities for the decisions or actions of readers of this document. This report should not be taken as a recommendation to buy or not to buy the shares of any company.

Yours sincerely

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