

## 12. ACCOUNTANTS' REPORT

*(Prepared for inclusion in this Prospectus)*



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28 June 2005

Dear Sirs

### **IRM Group Berhad (“IRMGB”) and its subsidiaries (“IRMGB Group”) Accountants’ Report**

This report has been prepared by Messrs. KPMG, an approved company auditor, for inclusion in the Prospectus to be dated 30 June 2005 in connection with the listing of IRMGB on the Second Board of Bursa Malaysia Securities Berhad (“Bursa Securities”).

## **1 General information**

### **1.1 Background**

IRMGB was incorporated in Malaysia under the Companies Act, 1965 as a public limited company on 12 September 2003. The principal activity of IRMGB is that of investment holding.

### **1.2 Share capital**

At the date of the Prospectus, IRMGB’s authorised share capital was RM100,000,000 consisting of 200,000,000 ordinary shares of RM1.00 each. The present issued and paid up share capital is RM57,503,700 consisting 115,007,400 ordinary share of RM1.00 each.

**12. ACCOUNTANTS' REPORT (cont'd)**

The details of changes in the issued and fully paid up share capital of IRMGB since its incorporation and pursuant to the listing scheme as set out in Paragraph 1.3 are as follows:

<b>Number of ordinary shares</b>	<b>Issue price per ordinary share RM</b>	<b>Purpose</b>	<b>Issued and fully paid-up share capital (Cumulative) RM</b>
2	1.00	Existing shares	2
4	0.50	Share split	2
107,106,832	0.50	Acquisition of IRM	53,553,418
723,870	0.50	Acquisition of BNSB	53,915,353
2,801,694	0.50	Acquisition of BSSB	55,316,200
4,375,000	0.80	Acquisition of Dulon Business	57,503,700
14,992,600	0.80	Public Issue	65,000,000

Upon completion of the scheme as set out in paragraph 1.3 below, the issued and fully paid-up share capital of IRMGB will be increased to RM130,000,000 comprising 130,000,000 ordinary shares of RM0.50 each.

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**12. ACCOUNTANTS' REPORT (cont'd)**

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**1.3 Listing scheme**

In conjunction with the listing and quotation for the entire enlarged issued and paid up capital of IRMGB on the Second Board of Bursa Securities, IRMGB is proposing to undergo a listing scheme, which involves the following exercise:

**1.3.1 Share split**

Share split of two (2) ordinary share of RM1.00 each into four (4) ordinary shares of RM0.50 each held in IRMGB to be credited as fully paid up;

**1.3.2 Acquisitions**

- (i) Acquisition of 30,000,000 ordinary shares of RM1.00 each representing the entire issued and paid up capital of Industrial Resins (Malaysia) Sdn. Bhd. ("IRM") for a purchase consideration of RM53,553,416 to be satisfied by the issuance of 107,106,832 new ordinary shares of RM0.50 each in IRMGB at an issue price of RM0.50 per ordinary share ("Acquisition of IRM");
  - (ii) Acquisition of 2,163,356 ordinary shares of RM1.00 each representing 76.70% of the issued and paid up capital of Beta Network Sdn. Bhd. ("BNSB") from IRM for a purchase consideration of RM1,191,447 to be satisfied by cash;
  - (iii) Acquisition of 657,187 ordinary shares of RM1.00 each representing 23.30% of the issued and paid up capital of BNSB from the vendor other than IRM for a purchase consideration of RM361,935 to be satisfied the issuance of 723,870 new ordinary shares of RM0.50 each in IRMGB at an issue price of RM0.50 per ordinary share;
- ("items (ii) and (iii) shall hereinafter be referred to "Acquisition of BNSB")
- (iv) Acquisition of 1,446,000 ordinary shares of RM1.00 each representing the entire issued and paid-up share capital of Better Scope Sdn. Bhd. ("BSSB") for a purchase consideration of RM1,400,847 to be satisfied by the issuance of 2,801,694 new ordinary shares of RM0.50 each in IRMGB at an issue price of RM0.50 per ordinary share ("Acquisition of BSSB");
  - (v) Acquisition of Dulon Industries Sdn. Bhd. ("DISB") business for a purchase consideration of RM3,500,000 to be satisfied by the issuance of 4,375,000 new ordinary shares of RM0.50 each in IRMGB at an issue price of RM0.80 per ordinary share ("Acquisition of Dulon Business");

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## 12. ACCOUNTANTS' REPORT *(cont'd)*

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### 1.3.3 Offer for sale

Offer for sale by Dato' Abdul Karim Ahmad Tarmizi of 23,625,000 ordinary shares of IRMGB of RM0.50 each at an offer price of RM0.80 per ordinary shares payable in full on application by way of private placement; and

### 1.3.4 Public Issue

Public issue of 14,992,600 new ordinary shares of IRMGB of RM0.50 each at an issue price of RM0.80 per ordinary shares payable in full on application comprising 6,500,000 ordinary shares of RM0.50 each available for application by the Malaysian public, 2,492,600 ordinary shares of RM0.50 each available for application by way of private placement and 6,000,000 ordinary shares of RM0.50 each to eligible Directors and employees of the IRMGB Group;

### 1.3.5 Listing

Listing of and quotation for the entire issued and paid-up share capital of IRMGB comprising 130,000,000 ordinary shares of RM0.50 each on the Second Board of the Bursa Securities.

The above scheme was approved by:

- i) Securities Commission on 28 October 2004 and 28 June 2005 ;
- ii) Ministry of International Trade and Industry ("MITI") on 11 December 2004 and 3 May 2005; and
- iii) Shareholders of the Company at an Extraordinary General Meeting held on 16 April 2004.

**12. ACCOUNTANTS' REPORT (cont'd)****1.4 Information on proposed subsidiaries**

The subsidiaries of IRMGB under the proposed scheme as at the date of this report and their principal activities are as follows:

<b>Name of company</b>	<b>Date of incorporation</b>	<b>Authorised RM</b>	<b>Issued and fully paidup RM</b>	<b>Principal activities</b>
Industrial Resins (Malaysia) Sdn. Bhd.	31 March 1983	50,000,000	30,000,000	Manufacturing and sale of Polyvinyl Chloride ("PVC") resins and compound.
Beta Network Sdn. Bhd.	11 August 1998	5,000,000	2,820,543	Manufacturing of PVC and PE pipes.
Better Scope Sdn. Bhd.	24 November 2000	5,000,000	1,446,000	Manufacture and dealer in PVC sheeting.
Sepadu Impresif Engineering Sdn. Bhd.	28 May 2002	500,000	150,000	Provision of engineering services.
IRM Compounds Sdn. Bhd.	14 April 1995	100,000	2	Dormant.

The above subsidiaries were acquired on 1 January 2005.

12. ACCOUNTANTS' REPORT *(cont'd)*

## 1.5 Financial statements and auditors

The financial year end of IRMGB and its subsidiaries ("IRMGB Group") is 31 December.

KPMG acted as the auditors of the following subsidiaries for the following financial years as follows:

<i>Name of company</i>	<i>Financial year ("FY")</i>
IRM	FY ended 31 December 2002, FY ended 31 December 2003 and 2004
SIESB	FP ended 31 December 2002, FY ended 31 December 2003 and 2004
ICSB	FY ended 31 December 2002, 2003 and 2004
BNSB	FY ended 31 December 2003 and 2004
BSSB	FY ended 31 December 2003 and 2004

The financial statements of the rest of the subsidiaries in the proposed Group, for the financial years covered in this report, were audited by another firm of chartered accountants.

The auditors' reports of IRMGB Group for all the relevant financial years under review were not subject to any qualification except for the financial statements of BNSB for the financial year ended 31 December 2000, 2001 and 2002. The auditors were of the opinion that the continued operations of BNSB for the respective financial year as a going concern would depend on continuing support of its creditors and BNSB attaining sufficient profitable operations or obtaining additional finance to meet its liabilities as and when they fall due.

## 12. ACCOUNTANTS' REPORT (cont'd)



## 2 Financial performance

### 2.1 Proforma consolidated results

We set out below the summarised proforma consolidated results of IRMGB Group for the past five (5) financial years ended 31 December 2004 after making such adjustments as we considered necessary on the assumption that the IRMGB Group had been in existence throughout the years under review. The proforma group consolidated results are to be read in conjunction with the notes thereto:

	----- 31 December ----->				
	2000	2001	2002	2003	2004
	RM'000	RM'000	RM'000	RM'000	RM'000
Revenue	122,827	96,960	122,247	139,042	175,342
Earnings before interest expense, depreciation, taxation and amortisation ("EBIDTA")	8,664	4,982	7,565	8,029	9,597
Depreciation	(4,162)	(4,139)	(2,474)	(3,207)	(2,934)
Interest expense	(352)	(533)	(288)	(576)	(1,082)
Share of profit of associate	-	-	-	8	-
Profit before taxation	4,150	310	4,803	4,254	5,581
Taxation	(1,613)	(346)	134	(247)	(1,562)
Profit/(Loss) after taxation	2,537	(36)	4,937	4,007	4,019
Minority interest	-	-	105	(268)	23
Profit/(loss) attributable to shareholders	2,537	(36)	5,042	3,739	4,042

## 12. ACCOUNTANTS' REPORT *(cont'd)*



### *Notes:*

- i) The financial year end of IRMGB Group is 31 December.
- ii) There were no extraordinary items for the years under review.
- iii) The effective tax rate for 2000 and 2001 were higher than the statutory rate due to certain expenses not deductible for tax purposes.

There was a reversal of deferred tax liability amounting to RM1.8 million in 2002 to the income statement, which resulted in an overall tax credit in the income statement.

The effective tax rate for 2003 were higher than the statutory rate mainly due to certain expenses not deductible for tax purposes.

The effective tax rate for 2004 was lower than the statutory rate mainly due to utilisation of reinvestment allowances.

- iv) There were no dividends declared by IRMGB during the years under review.

## **2.2 Notes to the summarised proforma consolidated results**

### **2.2.1 Basis of accounting**

The proforma consolidated results of the IRMGB Group for the past five (5) years ended 31 December 2000 to 31 December 2004 have been prepared in compliance with applicable approved accounting standards in Malaysia except as disclosed in Note 2.3.2 below.

### **2.2.2 Basis of consolidation**

The proforma consolidated results of the IRMGB Group are based on the audited financial statements of all the subsidiaries for the financial years under review. The proforma consolidated financial statements incorporate the financial statements of IRMGB and all its subsidiaries made up to the end of the financial year on the assumption that the proforma IRMGB Group has been in existence throughout the years under review.

Under the acquisition method of accounting, the results of subsidiaries acquired or disposed of during the year are included from the date of acquisition or up to the date of disposal. At the date of acquisition, the fair values of the subsidiaries' net assets are determined and these values are reflected in the Group financial statements. The difference between the acquisition cost and the fair values of the subsidiaries' net assets is reflected as goodwill or negative goodwill as appropriate.

Intragroup transactions and balances and the resulting unrealised profits are eliminated on consolidation. Unrealised losses resulting from intragroup transactions are also eliminated unless cannot be recovered.



**12. ACCOUNTANTS' REPORT (cont'd)**

In preparing the proforma consolidated results, adjustments were made to the financial statements of IRMGB to reflect them on a consistent basis. The details and effects of the changes are as follows:

- (a) Adjustments were made to the minority interest in the consolidated financial statements for years ended 31 December 2000 to 2004 on the assumption that the IRMGB had been in existence throughout the period under review. The effect of changes is as follows:

	< ----- 31 December ----- >				
	2000	2001	2002	2003	2004
	RM'000	RM'000	RM'000	RM'000	RM'000
Minority interest	-	-	105	(268)	23

**2.2.3 Earnings per share**

Gross earnings per share has been calculated based on profit before taxation and minority interest and net earnings per share has been calculated based on profit after taxation and minority interest of the IRMGB over the weighted average number of ordinary shares outstanding during the end of the financial year.

**2.2.4 Change in accounting policies**

The adoption of MASB 25 - Income Tax had resulted in the recognition in full of all taxable temporary differences. Previously, deferred tax liabilities were not provided if no liability was expected to arise in the foreseeable future and there were no indications the timing differences would reverse thereafter. Deferred tax assets are now recognised when it is probable that taxable profits will be available against which the deferred tax asset can be utilised (previously only recognised where there was a reasonable expectation of realisation in the near future). The change in accounting policies due to the adoption of MASB 25 had been accounted for by restating comparatives and adjusting the opening balance of revaluation reserve by RM721,550 at 1 January 2003 in the financial statements of IRM.

## 12. ACCOUNTANTS' REPORT (cont'd)



### 3 Industrial Resins (Malaysia) Group Sdn. Bhd. ("IRMGB")

#### Historical performance

The following financial information of IRMGB was extracted from the audited financial statements of IRMGB for the financial period ended 31 December 2004.

#### 3.1 Summary of results

The Company has not commenced operations.

#### 3.2 Summarised balance sheet

	At 31 December 2004 RM'000
Current assets	*
Less: Current liabilities	-
Net current assets	*
	*
Financed by:	
Share capital	*
Shareholders' funds	*

\* Represents RM2

## 12. ACCOUNTANTS' REPORT (cont'd)



#### 4. Industrial Resins (Malaysia) Sdn. Bhd. and its subsidiaries ("IRM Group")

##### Historical performance

The following financial information of IRM Group was extracted from the audited financial statements of IRM Group for the financial years ended 31 December 2000 to 2004.

##### 4.1 Summary of results

	<----- 31 December ----->				
	2000	2001	2002	2003	2004
	RM'000	RM'000	RM'000	RM'000	RM'000
Revenue	122,360	95,024	109,605	128,844	158,285
Earnings before interest expense, depreciation, taxation and amortisation ("EBIDTA")	8,743	5,497	7,113	7,625	9,033
Depreciation	(4,161)	(4,110)	(2,128)	(2,779)	(2,445)
Interest expense	(352)	(533)	(277)	(545)	(977)
Share of (loss)/profit of associate	-	-	(60)	8	-
Profit before taxation	4,230	854	4,648	4,309	5,611
Taxation	(1,613)	(346)	147	(220)	(1,524)
Profit after taxation	2,617	508	4,795	4,089	4,087
Minority interest	-	-	-	(65)	245
Pre-acquisition losses	-	-	-	336	24
Profit attributable to shareholders	2,617	508	4,795	4,360	4,356
Number of ordinary shares of RM1.00 each in issue ('000)	15,000	15,000	30,000	30,000	30,000
Earnings per share (RM)					
- Gross	0.28	0.06	0.15	0.14	0.19
- Net	0.17	0.03	0.16	0.15	0.15

## 12. ACCOUNTANTS' REPORT (cont'd)



## 4.2 Summarised balance sheet

	<-----Year ended 31 December----->				
	2000	2001	2002	2003	2004
	RM'000	RM'000	RM'000	RM'000	RM'000
Property, plant and equipment	33,250	31,161	32,705	39,091	57,789
Investment in associates	-	-	62	-	-
Other investments	-	-	-	50	50
Goodwill on consolidation	-	-	-	623	395
Deferred tax assets	-	-	-	4	107
Trade and other receivables	-	-	-	-	5,000
Current assets	60,843	57,564	35,723	44,099	62,878
Less: Current liabilities	(23,058)	(17,214)	(18,926)	(30,085)	(59,931)
Net current assets	37,785	40,350	16,797	14,014	2,947
	71,035	71,511	49,564	53,782	66,289
Financed by:					
Share capital	15,000	15,000	30,000	30,000	30,000
Retained profits	53,243	53,752	18,686	20,825	25,181
Shareholders' funds	68,243	68,752	48,686	50,825	55,181
Minority shareholders' interest	-	-	-	705	170
Hire purchase liabilities	-	264	217	227	150
Provision for retirement benefits	161	5	11	-	-
Borrowings	-	-	-	-	8,858
Deferred taxation	2,631	2,490	650	2,025	1,930
	71,035	71,511	49,564	53,782	66,289
Number of ordinary shares of RM1.00 each in issue ('000)	15,000	15,000	30,000	30,000	30,000
Net tangible assets ("NTA") per ordinary share (RM)	4.55	4.58	1.62	1.69	1.84

## 12. ACCOUNTANTS' REPORT (cont'd)



## 5. Better Scope Sdn. Bhd. ("BSSB")

## Historical performance

The following financial information of BSSB was extracted from the audited financial statements of BSSB for the financial period ended 31 December 2001 to financial years ended 31 December 2002 to 2004.

## 5.1 Summary of results

	Period from 24.11.2000 to 31.12.2001 RM'000	<-----31 December-----> 2002 RM'000	2003 RM'000	2004 RM'000
Revenue	1,181	10,832	10,198	20,716
Earnings before interest expense, depreciation, taxation and amortisation ("EBIDTA")	486	863	514	699
Depreciation	(27)	(339)	(428)	(488)
Interest expense	-	(7)	(31)	(105)
(Loss)/Profit before taxation	(459)	517	(55)	106
Taxation	-	-	(27)	(38)
(Loss)/ Profit attributable to shareholders	(459)	517	(82)	68
Number of ordinary shares of RM1.00 each in issue ('000)	*	1,446	1,446	1,446
(Loss)/Earnings per share (RM)				
- Gross	(153,000)	0.36	(0.04)	0.07
- Net	(153,000)	0.36	(0.06)	0.05

\* Represents RM3

## 12. ACCOUNTANTS' REPORT (cont'd)



## 5.2 Summarised balance sheet

	←----- 31 December ----->			
	2001 RM'000	2002 RM'000	2003 RM'000	2004 RM'000
Property, plant and equipment	1,113	3,646	3,798	3,678
Current assets	524	1,695	2,804	8,379
Less: Current liabilities	(2,096)	(3,747)	(5,108)	(5,497)
Net current assets	(1,572)	(2,052)	(2,304)	2,882
	(459)	1,594	1,494	6,560
Financed by:				
Share capital	*	1,446	1,446	1,446
Retained profits/ (Accumulated losses)	(459)	58	(23)	45
Shareholders' funds	(459)	1,504	1,423	1,491
Trade and other payables	-	-	-	5,000
Hire purchase liabilities	-	90	-	-
Borrowings	-	-	44	12
Deferred taxation	-	-	27	57
	(459)	1,594	1,494	6,560
Number of ordinary shares of RM1.00 each in issue ('000)	**	1,446	1,446	1,446
Net tangible assets ("NTA") per ordinary share (RM)	(153,000)	1.04	0.98	1.03

\* Represents RM3

\*\* Represents number of ordinary share in issue 3

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**12. ACCOUNTANTS' REPORT (cont'd)**

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**6 Statement of assets and liabilities**

There were no statement of assets and liabilities and cash flow prepared as the IRMGB Group was not in existence as at 31 December 2004.

**7 Note to the statement of assets and liabilities**

The following accounting policies will be adopted by the IRMGB Group and by the IRMGB and are consistent with those adopted by IRM Group in previous years.

**7.1.1 Basis of accounting**

The financial statements of the IRMGB Group and of the IRMGB are prepared on the historical cost basis and the financial statements are in compliance with the provisions of the Companies Act, 1965 and applicable approved accounting standards in Malaysia.

**7.1.2 Basis of consolidation**

Subsidiaries are those enterprises controlled by the Company. Control exists when the Company has the power, directly or indirectly, to govern the financial and operating policies of an enterprise so as to obtain benefits from its activities. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control effectively commences until the date that control effectively ceases. The subsidiaries are consolidated using the acquisition method of accounting.

A subsidiary is excluded from consolidation when either control is intended to be temporary if the subsidiary is acquired and held exclusively with a view of its subsequent disposal in the near future and it has not previously been consolidated or it operates under severe long term restrictions which significantly impair its ability to transfer funds to the Company. Subsidiaries excluded on these grounds are accounted for as investments.

Under the acquisition method of accounting, the results of subsidiaries acquired or disposed of during the year are included from the date of acquisition or up to the date of disposal. At the date of acquisition, the fair values of the subsidiaries' net assets are determined and these values are reflected in the Group financial statements. The difference between the acquisition cost and the fair values of the subsidiaries' net assets is reflected as goodwill or negative goodwill as appropriate.

Intragroup transactions and balances and the resulting unrealised profits are eliminated on consolidation. Unrealised losses resulting from intragroup transactions are also eliminated unless cost cannot be recovered.

## 12. ACCOUNTANTS' REPORT *(cont'd)*



### 7.1.3 Property, plant and equipment

Property, plant and equipment except for freehold land are stated at cost less accumulated depreciation and accumulated impairment losses.

The IRMGB Group revalues its property comprising land every five (5) years and at shorter intervals whenever the fair value of the revalued assets is expected to differ materially from their carrying value.

Surpluses arising from revaluation are dealt with in the property revaluation reserve account. Any deficit arising is offset against the revaluation reserve to the extent of a previous increase for the same property. In all other cases, a decrease in carrying amount is charged to the income statement.

Property, plant and equipment retired from active use and held for disposal are stated at their carrying amount at the date when the asset is retired from active use, less impairment losses, if any.

#### *Depreciation*

Freehold land is not amortised. The straight-line method is used to write off the cost of the other assets over the term of their estimated useful lives at the following principal annual rates:

Buildings and structures	5 - 7%
Plant and machinery	6.67%
Motor vehicles and forklifts	20%
Equipment and fixtures	7 - 10%

### 7.1.4 Intangible asset

#### *Goodwill*

Goodwill represents the excess of the cost of acquisition over the fair values of the net identifiable assets acquired and is stated at cost less accumulated impairment losses.

### 7.1.5 Inventories

Raw materials, work-in-progress and finished goods are stated at the lower of cost and net realisable value with first-in, first-out being the main basis for cost. For work-in-progress and finished goods, cost consists of materials, direct labour and an appropriate proportion of fixed and variable production overheads.

### 7.1.6 Trade and other receivables

Trade and other receivables are stated at cost less allowance for doubtful debts.

### 7.1.7 Cash and cash equivalents

Cash and cash equivalents consists of cash on hand and bank balances, and deposits with a licensed bank. For the purpose of cash flow statement, cash and cash equivalents are presented net of bank overdrafts and pledged deposits.



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**12. ACCOUNTANTS' REPORT (cont'd)**

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**7.1.8 Impairment**

The carrying amount of assets, other than inventories and financial assets (other than investments in subsidiaries), are reviewed at each balance sheet date to determine whether there is any indication of impairment. If any such indication exists, the asset's recoverable amount is estimated. An impairment loss is recognised whenever the carrying amount of an asset or the cash-generating unit to which it belongs exceeds its recoverable amount. Impairment losses are recognised in the income statement.

The recoverable amount is the greater of the asset's net selling price and its value in use. In assessing value in use, estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate largely independent cash inflows, the recoverable amount is determined for the cash-generating unit to which the asset belongs.

An impairment loss in respect of goodwill is not reversed unless the loss was caused by a specific external event of an exceptional nature that is not expected to recur and subsequent external events have occurred that reverse the effect of that event.

In respect of other assets, an impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount.

An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised. The reversal is recognised in the income statement unless it reverses an impairment loss on a revalued asset, in which case it is taken to equity.

**7.1.9 Employee benefits****(i) Short term employee benefits**

Wages, salaries and bonuses are recognised as expenses in the period in which the associated services are rendered by employees of the IRMGB Group. Short term accumulating compensated absences such as paid annual leave are recognised when services are rendered by employees that increase their entitlement to future compensated absences, and short term non-accumulating compensated absences such as sick leave are recognised when absences occur.

**(ii) Defined contribution plans**

Obligation for contributions to defined contribution plans are recognised as an expense in the income statement as incurred.

**7.1.10 Liabilities**

Borrowings and trade and other payables are stated at cost.

**12. ACCOUNTANTS' REPORT (cont'd)****7.1.11 Hire purchase**

Assets acquired under hire purchase arrangements are capitalised at their purchase cost and are depreciated on the same basis as owned assets. The total amount payable under hire purchase agreements is shown under hire purchase liabilities.

**7.1.12 Income tax**

Tax on the profit or loss for the year comprises current and deferred tax. Income tax is recognised in the income statement except to the extent that it relates to items recognised directly in equity, in which case it is recognised in equity.

Current tax expense is the expected tax payable on the taxable income for the year, using tax rates enacted or substantially enacted at the balance sheet date, and any adjustment to tax payable in respect of previous years.

Deferred tax is provided, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements. Temporary differences are not recognised for negative goodwill not taxable for tax purposes and the initial recognition of assets and liabilities that at the time of the transaction affects neither accounting nor taxable profit. The amount of deferred tax provided is based on the expected manner of realisation or settlement of the carrying amount of assets and liabilities, using tax rates enacted or substantially enacted at the balance sheet date.

A deferred tax asset is recognised only to the extent that it is probable that future taxable profits will be available against which the asset can be utilised.

**7.1.13 Foreign currency*****Foreign currency transactions***

Transactions in foreign currencies are translated to Ringgit Malaysia at rates of exchange ruling at the date of the transactions. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are translated to Ringgit Malaysia at the foreign exchange rates ruling at that date. Foreign exchange differences arising on translation are recognised in the income statement.

Non-monetary assets and liabilities denominated in foreign currencies, which are stated at historical cost, are translated to Ringgit Malaysia at the foreign exchange rates ruling at the date of the transactions.

The closing rates used in the translation of foreign currency monetary assets and liabilities are as follows:

1USD	RM3.80	(2003:	1USD	RM3.80)
1SGD	RM2.23	(2003:	1SGD	RM2.23)

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12. ACCOUNTANTS' REPORT *(cont'd)*

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Yours faithfully

A handwritten signature in black ink, appearing to read 'Johan Idris'.

**KPMG**  
Firm Number: AF 0758  
Chartered Accountants

A handwritten signature in black ink, appearing to read 'Johan Idris'.

**Johan Idris**  
Partner  
Approval Number : 2585/10/06(J)

13. VALUATION REPORT

(Prepared for inclusion in this Prospectus)



PROPERTY CONSULTANTS • PROPERTY RESEARCHERS • PROPERTY MANAGERS  
REGISTERED VALUERS & ESTATE AGENTS • MACHINERY & BUSINESS ASSETS APPRAISERS

17 June 2005

Board of Directors  
IRM Group Berhad  
Level 7, Menara Milenium  
Jalan Damanlela  
Pusat Bandar Damansara  
Damansara Heights  
50490 Kuala Lumpur

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9-G, Jalan Tanjung SD 13/2, Bandar Sri Damansara  
52200 Kuala Lumpur, Malaysia.

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Email: iccs@top.net.my

Board Reg. No: VE(2)0103

Dear Sir,

**IRM GROUP BERHAD (IRMGB)  
PROPOSED LISTING ON THE SECOND BOARD OF BURSA MALAYSIA  
SECURITIES BERHAD**

This valuation report certificate has been prepared for inclusion in the prospectus dated 30 June 2005 in relation to proposed listing of IRMGB on the Second Board of Bursa Malaysia Securities Berhad in accordance with the Prospectus Guidelines (Chapter 15) issued by the Securities Commission.

We were instructed to assess the "Market Value" of the properties as listed in the following pages. The basis of valuation is the "Market Value" of the subject property which is defined as the estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller at arm's length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion.

The valuation has been prepared based on the "Guidelines on Asset Valuation for Submission on the Securities Commission" and Malaysia Valuation Standards prescribed by the Board of Valuers, Appraisers and Estate Agents Malaysia.

Your faithfully,

**IRHAMY & CO CHARTERED SURVEYORS**

**Irhamy Ahmad BSc MRICS MISM APEPS IRRV MBIFM (UK)**  
Chartered Valuation Surveyor & Registered Valuer – V457  
Managing Partner



**RICS**

*Kajang Branch:*

No.26B Jalan Raja Haroun, 43000 Kajang, Selangor Darul Ehsan.

Tel : 603 - 8733 5388, 603 - 8736 9388 Fax : 603 - 8737 0388 Email : iccskj@tm.net.my Board Reg. No. : VE (2)0103/1

*Johor Bahru Branch:*

No. 7-01, Jalan Titiwangsa 3/3, Taman Tampoi Indah, 81200 Johor Bahru, Johor.

Tel 607-241 6290 Fax: 607-241 6304 Email : irhamyjb@tm.net.my Board Reg. No. : VE (2)0103/2

*Local Authority Rating Unit :*

3rd Floor, No. 37 Jalan Selat, Taman Selat, 12000 Butterworth, Pulau Pinang. Tel / Fax : 604 - 332 3882

13. VALUATION REPORT (cont'd)

Valuation Report Reference & Date of Valuation	Property Identification / Location	General Description	Market Value	Valuation Method
V18058/03/IR MB/TA/AJH/Z HA & 15 April 2004	<p>Title : GRN 37838 LOT 2064 GRN 29462 LOT 2065 Mukim Tebrau, District of Johor Bahru, State of Johor</p> <p>Category of Land: Industry</p> <p>Tenure: Freehold</p> <p>Land Area: Lot 2064 : 2.7139 ha Lot 2065 : 2.7746 ha Total : 5.4885 ha</p> <p>Registered Proprietor : Industrial Resin (Malaysia) Sdn Bhd</p> <p>Property Address: No. 78, Jalan Hasil Off Jalan Tampoi 81200 Johor Bahru, Johor.</p>	<p>Site: The site comprises two (2) contiguous industrial lands, which each is rectangular in shape, flat in terrain and lies slightly below the level of the road frontage. The site boundaries are demarcated with chain link fencing.</p> <p>Building: Erected on the subject site are the following buildings:- Lot 2064 : Administrative Office, Process Building (Store), Multipurpose Building, PVC Compound, Laboratory, Master Batch, Guard House No.1, Guard House No. 2 and TNB Sub Station. Lot 2065 : Warehouse, Workshop, Generator-Set Room, PVC Drying Plant, Canteen, Boiler House, TNB Sub-station No. 1, TNB Substation No. 2 and Store.</p> <p>An administrative office building on Lot 2064 was renovated and extended. As at 17 June 2005 (being the latest practicable date prior to the printing of this Prospectus), the structural and architect drawings are in progress and an application to the local authorities for approval will be submitted within the third quarter of 2005.</p> <p>An extension to a Process Building/Store on Lot 2064 had been done to provide a bigger storage area measuring 658.98 square metre. As at 17 June 2005 (being the latest practicable date prior to the printing of this Prospectus), the structural and architect drawings have been completed and an application to the local authorities for approval will be submitted within the third quarter of 2005.</p> <p>Total built-up area of the subject property: 9,749 sq.m.</p> <p>Town Planning and Zoning: The subject property is sited in a designated industrial area.</p> <p>Source of information relied upon in the valuation: Registry of Land and Mines Johor Bahru and Majlis Bandaraya Johor Bahru.</p>	RM25,000,000.00 as at 15 April 2004	Comparison and Cost Methods.

*Irhamy Ahmad BSc MRICS MISM APEPS IRRV MBIEM (UK)*  
 Chartered Valuation Surveyor & Registered Valuer - V457



13. VALUATION REPORT (cont'd)

Valuation Report Reference & Date of Valuation	Property Identification / Location	General Description	Market Value	Valuation Method
VKL010/04/ IRM/IA/SB & 15 April 2004	Title : GRN 2926 LOT 936 GRN 2927 LOT 937 Bandar Kuala Lumpur, District of Kuala Lumpur  Category of Land: Building  Tenure: Freehold  Land Area: Lot 936 : 146.5 sq.m. Lot 937 : 155.2 sq.m. Total : 301.7 sq.m.  Registered Proprietor : Petlis Consolidated Sdn Bhd  Property Address: No. 1, Jalan Baiduri Off Jalan San Peng 55200 Kuala Lumpur	Site: The site comprises two (2) contiguous pieces of flat land level with the frontage road  Building: The sites are improved with a large 4-storey shop/office building with a gross floor area of 1,033.8 sq.m.  Town Planning and Zoning: The subject property is designated for commercial land use.  Source of information relied upon in the valuation: Registry of Land and Mines Kuala Lumpur and Dewan Bandaraya Kuala Lumpur.	RM2,650,000.00 as at 15 April 2004	Comparison and Cost Methods.

*IRHAMY & CO*

Irhamy Ahmad BSc MRICS MISM APEPS IRRV MBIFM (UK)  
 Chartered Valuation Surveyor & Registered Valuer – V457

Company No.: 628000-T

13. VALUATION REPORT (cont'd)

Valuation Report Reference & Date of Valuation	Property Identification / Location	General Description	Market Value	Valuation Method
YKLO11/04/ IRM/ATS & 15 April 2004	Machinery and Associated Equipment At Dulon Industries Sdn. Bhd.	The machinery and associated equipment are as follows:- 1) Seven (7) complete extrusion line for PVC pipe Production 2) Crushing & Pulverizing Machinerites 3) Tooling & Die Sets	RM3,500,000.00	Replacement Cost Approach



Irhamy Ahmad BSc MRICS MISM APEPS JRRV MBIFM (UK)  
Chartered Valuation Surveyor & Registered Valuer - V457

## 14. DIRECTORS' REPORT

*(Prepared for inclusion in this Prospectus)*



### **IRM GROUP BERHAD**

(Company No. 628000-T)

**Registered Office:**

Level 7, Menara Milenium  
Jalan Damanlela  
Pusat Bandar Damansara  
Damansara Heights  
50490 Kuala Lumpur

17 June 2005

#### **The Shareholders of IRM Group Berhad**

Dear Sir/Madam,

On behalf of the Board of Directors of IRM Group Berhad, I report after due inquiry that during the period from 31 December 2004, being a date to which the last audited accounts of the Company and its subsidiaries have been made up, to the date hereof, being a date not earlier than fourteen (14) days before the issue of this Prospectus, that:

- (a) the business of the Company and its subsidiaries has, in the opinion of the Directors, been satisfactorily maintained;
- (b) in the opinion of the Directors, no circumstances has arisen since the last audited financial statements of the Company and its subsidiaries which has adversely affected the trading or the value of the assets of the Company or its subsidiaries;
- (c) the current assets of the Company and its subsidiaries appear in the books at values which are believed to be realisable in the ordinary course of business;
- (d) no contingent liabilities have arisen by reason of any guarantees or indemnities given by the Company or its subsidiaries;
- (e) since the last audited accounts of its subsidiaries, there has been no default or any known event that could give rise to a default situation in respect of payments of either interest and/or principal sums in relation to any borrowings of which they are aware; and
- (f) since the last audited accounts of the Company and its subsidiaries, save as disclosed in the Accountants' Report as set out in Section 10 of this Prospectus, there has been no material change in published reserves nor any unusual factor affecting the profits of the Company and its subsidiaries.

Yours faithfully

For and on behalf of the Board of Directors  
**IRM GROUP BERHAD**

  
**DATUK ABDUL KARIM AHMAD TARMIZI**  
Chairman/Chief Executive Officer



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**15. SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT**

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*(Prepared for inclusion in this Prospectus)*



**VITAL FACTOR CONSULTING**  
Creating Winning Business Solutions

17 June 2005

The Board of Directors  
IRM Group Berhad  
Level 7, Menara Milenium  
Jalan Damanela, Pusat Bandar Damansara  
Damansara Heights  
50490 Kuala Lumpur

**Vital Factor Consulting Sdn Bhd**  
(Company No.: 266797-T)  
75C & 77C Jalan SS22/19  
Damansara Jaya  
47400 Petaling Jaya  
Selangor Darul Ehsan, Malaysia  
Tel: (603) 7728-0248  
Fax: (603) 7728-7248  
Email: info@vitalfactor.com  
Website: www.vitalfactor.com

Dear Sirs/Madam

**Assessment of the PVC Resin Industry**

The following is a summary of the Assessment of the PVC Resin Industry in Malaysia prepared by Vital Factor Consulting Sdn Bhd for inclusion in the Prospectus of IRM Group Berhad ("IRMGB") (herein together with all its subsidiaries will be referred to as IRMGB Group) in relation to its listing on the Second Board of Bursa Malaysia Securities Berhad.

**1. Background**

- IRMGB Group operates within the PVC Resin Industry and is principally involved in the manufacturing of PVC Resins and Compounds, and PVC products. Other secondary business activity includes the provision of engineering services.
- To date, IRMGB Group's operations have expanded to incorporate local and export markets including Singapore, Korea, Pakistan, Africa, Sri Lanka, Belize, Middle East, Philippines, China, Indonesia, India, Fiji, Australia, Brunei and others.
- For the financial year ended 31 December 2004, the revenue of IRMGB Group amounted to RM175.3 million.

**2. Overview of the Industry**

- According to the Malaysian Industrial Development Authority, the manufacturing of PVC Resins and Compounds is a sub-sector of petrochemical products under the total umbrella of the Petrochemical Industry.
- As part of the Petrochemical Products sector, PVC Resin Industry plays an important role as the main raw material used in the manufacturing of PVC based products in Malaysia. This is reflected by the fact that local production of PVC Resin amounted to RM1.6 billion with a production quantity of 428,959 tonnes in 2004 (*Source: Department of Statistics*).
- Although most of the PVC Resins produced are for local consumption, PVC Resin Industry also contributes to the nation's foreign exchange earnings through the following:

15. SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT (cont'd)



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- In 2004, export value of PVC, not mixed with any other substances (also sometimes referred to as PVC resins) grew by 1.6% to reach approximately RM90.0 million;
- In 2004, export value of Other PVC, plasticised, not in the form of dispersion (also sometimes referred to as Rigid PVC Compounds), declined by 8.9% to reach RM8.6 million;
- In 2004, export value of Other PVC, not mixed with any other substances, not plasticised, in primary forms (also sometimes referred to as Flexible PVC Compounds) declined by 93.9% to reach approximately RM370,000.  
*Source: Department of Statistics)*

3. Structure of the PVC Industry

- Generally, PVC can be segmented into the different types of products and this is as follows:

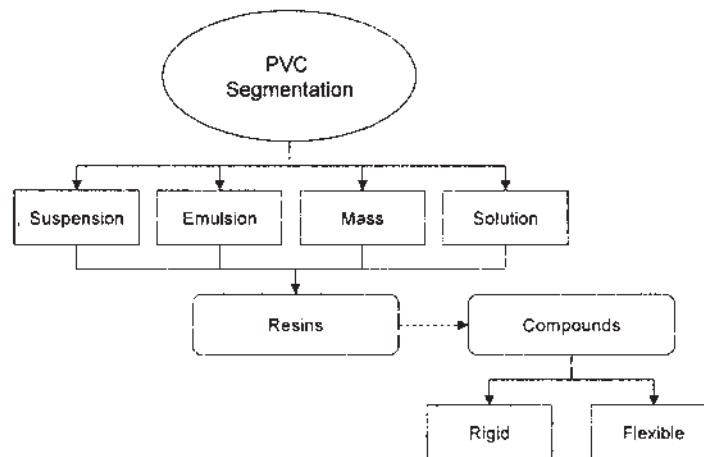


Figure 1 Structure of the Manufacture of PVC Resins and Compounds

**PVC Resins**

- PVC Resins are segmented into different types by polymerisation processes as follows:
  - suspension;
  - emulsion;
  - mass;
  - solutions.

**Suspension PVC Production Process**

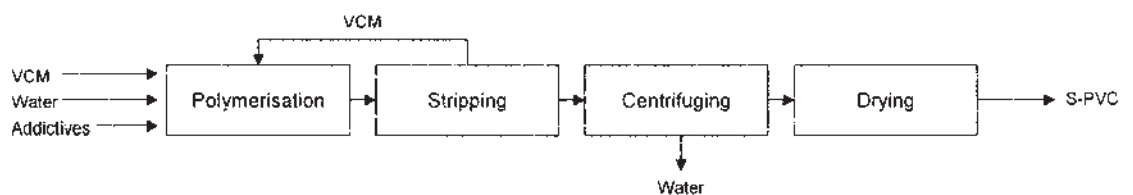


Figure 2 Suspension PVC Production Process

## 15. SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT (cont'd)



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- Suspension PVC (S-PVC) is produced using water, VCM and an initiator that is soluble in the monomer. The most common method used for the production of PVC is the suspension process. VCM droplets containing free radical catalyst are agitated with additives such as suspending agents (to control the polymerisation particle size) in water and a peroxide inhibitor (to initiate the reaction) for a given time and temperature to achieve the desired molecular weight (or K-value).
- The reaction of VCM and additives with water is allowed to run until about 90% of the VCM has been polymerised. The remaining monomer is then removed and recycled. The water is eliminated via centrifuging, and the remaining PVC resin is passed through a dryer. The final product, vinyl resin, is a free-flowing powder with a consistency somewhere between flour and sugar.
- S-PVC is used for virtually all extrusion, injection moulding and film making processes. Individual grades are characterised by their melt flow properties and their suitability for rigid (unplasticised) or flexible (plasticised) applications.

#### Emulsion PVC Production Process

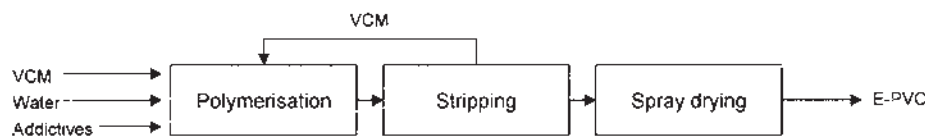


Figure 3 Emulsion PVC Production Process

- Emulsion PVC (E-PVC) polymerisation involves emulsifying very small VCM droplets in water, with a water soluble free radical catalyst. Depending on the type of soap or emulsifying agent, agitation and temperature, E-PVC resins are also called 'Dispersion resins' and 'Paste resins'. When the reaction process is completed, the E-PVC resins are steamed-stripped and dried in order to remove any residual VCM.
- E-PVC is mostly used for moulding, dipping and coating applications such as calendaring, profiles, flooring, wall covering, coated fabrics and sealants.

#### Mass PVC Production Process

- Mass PVC (M-PVC) or Bulk PVC polymerisation entails a VCM containing catalyst in a two-stage reactor. The first stage reactor, with reflux condenser, agitates the VCM to about 10% conversion to polymer. This slurry is then transferred to a horizontal reactor, with a ribbon blending type agitator, where polymerisation is finished as dry powder.
- The M-PVC resins are similar in particle size and shape to S-PVC resins and are used in the same mostly rigid processes as S-PVC. The main difference between M-PVC and S-PVC of the same K-value, is the higher bulk density of M-PVC.

#### Solution PVC Production Process

- Solution PVC polymerisation process is where the VCM and the polymerisation initiators are dissolved in a non-monomeric liquid solvent at the beginning of the polymerisation reaction. The liquid also acts as a solvent for the resulting polymer.

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15. SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT (cont'd)

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**PVC Compounds**

- PVC compounds are prepared by blending PVC Resins with additives to give the required properties in the final product. Depending on the usage and application of the final product, some of the additives to be blended with PVC Resin include plasticisers, stabilisers, lubricants, fillers, impact modifiers and pigments.
- There are two types of PVC Compounds, namely rigid and flexible. The applications of flexible and rigid PVC compounds are diverse, some of which includes the following:

Rigid PVC Compounds

- pipe;
- rolling-shutter;
- bottle and window profile;
- integrated circuits;
- tubes.

Flexible PVC Compounds

- cables;
- profiles;
- medical;
- footwear.

- PVC compounds are produced in two physical forms as follows:
  - *granules*: the PVC resin blend is fed into the melt procession or extrusion equipment. The molten composition is pelletised and cooled, producing PVC compounds in granular form;
  - *dry blends*: the PVC resin is blended with the appropriate additives, screened, and packed as dry powder.

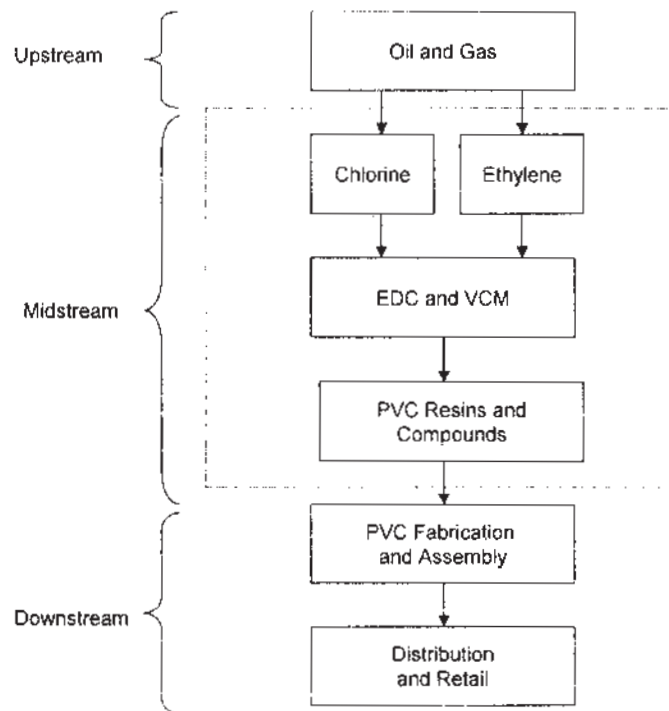
## 15. SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT (cont'd)



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### 4. Vertical Structure of PVC Resin Industry

- The manufacturing of PVC Resins and Compounds can also be vertically extended to include upstream, midstream and downstream activities as follows:



*EDC = Ethylene Dichloride*  
*VCM = Vinylchloride Monomer*

**Figure 4 Vertical Structure of PVC Resin and Compound Manufacturing**

- IRMGB Group's business activities are mainly midstream, in the manufacturing of PVC Resins and Compounds.

#### Upstream

- Upstream activities primarily involve exploration and production of crude oil and gas.
- As at January 2004, Malaysia has about 4.84 billion barrels of crude oil reserves and about 87.0 trillion standard cubic feet of gas reserves (*Source: Petronas*).

#### Midstream

- Midstream activities comprised the following:
  - refining of petrochemicals including plastic resins, methanol, acetic acid, acrylic acid, oxo-alcohols, aromatics, purified terephthalic acid, fatty acids and fatty alcohols;
  - recycling of polymer waste.
- Ethylene and chlorine are the two major feedstock for the production of PVC Resin.

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**15. SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT (cont'd)**


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- Ethylene is created through a cracking process involving either petroleum derivatives or natural-gas hydrocarbons such as ethane, propane or butane. In this process, the feedstock is put through a catalyst bed at high temperatures and pressures to produce ethylene and a number of other co-products, such as Polypropylene and butadiene.
- Chlorine is produced from electrolytic disassociation of salt into chlorine and other by-products such as caustic soda.
- When the ethylene and chlorine are combined, the end-result is Ethylene Dichloride (EDC), which is further cracked to produce VCM. VCM is the building block for PVC Resin.
- There are only three local producers of PVC Resin in Malaysia and this includes:
  - Vinyl Chloride (Malaysia) Sdn Bhd
  - Malaysian Electro-Chemical Industry Co. Sdn Bhd (MECI)
  - IRM Group Berhad
 (Note: There is one other PVC manufacturer, Kaneka (Malaysia) Sdn Bhd that manufactures PVC paste. However, PVC paste has different applications and serves different market segments from those that manufactures PVC resins.)
- Of these, MECI and IRM Group Berhad are also producers of PVC Compounds. There are also other smaller producers of PVC Compounds in Malaysia.

**Downstream**

- Downstream activities will include the following:
  - Manufacturing of PVC products;
  - Distribution and retail of PVC products.
- In 2004, there were more than 1,400 companies involved in the manufacturing of plastic products (includes all types of plastics). This includes companies, which are exempted from manufacturing licences (*Source: Malaysian Industrial Development Authority*).

**5. Government Legislation, Policies and Incentives**
**Government Legislation**

- Apart from the normal manufacturing licence, there are no material government laws, regulations and policies that may impede on operators' performance and growth within a free enterprise environment.
- Application of a manufacturing licence under the Industrial Coordination Act, 1975 is mandatory for companies with shareholders' funds of RM2.5 million or above or engaging 75 or more full-time employees (*Source: Malaysian Industrial Development Authority*).
- IRMGB Group has manufacturing licences for the production of the PVC resins and PVC Compounds.
- Beta Network Sdn Bhd, a wholly owned subsidiary of IRMGB, is presently a licensed Bumputera pipe manufacturer. The company is in the process of applying for a manufacturing licence for the production of PVC/PE pipes as the operation only recently reached the threshold where it requires a manufacturing licence.

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**15. SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT (cont'd)**


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- Better Scope Sdn Bhd, a wholly owned subsidiary of IRMGB has a manufacturing licence for the production of the following of products:
  - PVC flooring
  - Calcium Carbonate
  - Rigid sheet
  - Translucent sheet
  - PVC sheet
  - PVC furniture edge
  - Car mat.

**Government Incentives**

- As part of the Malaysian Government's intention to nurture the growth and development of the Manufacture of PVC Resins Industry, there are incentives provided for companies specifically in the manufacture of Petrochemical Products including PVC Resins and Compounds.
- The manufacture of Petrochemical Products is regarded as a promoted activity which is entitled to the following incentives including:
  - Pioneer Status;
  - Investment Tax Allowance;
  - Reinvestment Allowance.
 (Source: *Malaysian Industrial Development Authority*)
- Eligibility for either the Pioneer Status or Investment Tax Allowance will be determined according to the priorities termed as "promoted activities" or "promoted products". In addition, the level of value-added, technology and industrial linkages will also be taken into consideration.
- Other incentives to the PVC Resin Industry, which is tariff related include Drawback of Import Duty and Sales Tax on Parts, Ingredients or Packaging Materials Used.
- Under the Customs Act 1967, Sales Tax Act 1972 and Excise Act 1976, a drawback of import duty and sales tax that have been paid may be claimed by a manufacturer if such parts, raw materials are used in the manufacture of goods for export within a year (Source: *Malaysian Industrial Development Authority*).
- The movement of goods from the Principal Customs Area to a Free Zone or the islands of Labuan or Langkawi is regarded as export. Therefore, such goods, if manufactured in the Principal Customs Area, will be eligible for drawback of duty.

**6. Environmental Regulations**

- During manufacturing, wastes containing chemicals discharged from the manufacturers' premises to inland waters must comply with the standards as specified in the Third Schedule of the Environmental Quality (Sewage and Industrial Effluents) Regulations 1979 (Source: *Environmental Quality Act and Regulations, all amendments up to November 2001*).
- However, the discharge of any of the following substances into any inland waters is prohibitive:
  - any flammable solvent;
  - any tar or other liquids immiscible with water;
  - refuse, garbage, sawdust, timber, human or animal waste or solid matters.

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**15. SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT (cont'd)**


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- Inland waters include any reservoir, pond, lake, river, stream, canal, drain, spring or well, any part of the sea abutting on the foreshore, and any other body of the natural or artificial surface of subsurface water (*Source: Environmental Quality Act and Regulations, all amendments up to November 2001*).
- The discharge of wastewater or effluents in or on any soils or surface of any land must have prior written permission from the Director-General of Environmental Quality.
- As for the disposal of wastes resulting from the manufacture of PVC resins, this will fall under the Environmental Quality (Scheduled Wastes) Regulations 1989 (*Source: Environmental Quality Act and Regulations, all amendments up to November 2001*).

**7. Supply and Supply Dependencies**
**7.1 Supply**

- Between 2000 and 2004, sales value of Polyvinyl Chloride (PVC) Resins grew at an average annual rate of 15.4%. In 2004, sales value increased by 65.6% to RM1.6 billion.
- Between 2000 and 2004, production quantity of PVC Resins grew at an average annual rate of 13.0%. The production quantity grew by 33.4% to reach 428,959 tonnes in 2004.
- Between 2000 and 2004, sales value of PVC Compounds decreased at an average annual rate of 0.1%. In 2004, sales value of PVC Compounds grew by 12.1%.
- Between 2000 and 2004, production quantity of PVC Compounds decreased at an average annual rate of 2.3%. In 2004, the production quantity decreased by 4.6% to reach 27,179 tonnes.

*(Source: Department of Statistics)*

**7.2 Supply Dependencies**

- The major raw materials required for the manufacturing of PVC Resins and Compounds include:
  - Vinyl Chloride Monomer (VCM);
  - Plasticisers such as Diisononyl Phthalate (DINP) and Dioctyl Phthalate (DOP);
  - Impact Modifiers.
- VCM is locally produced in Malaysia. According to the Malaysian Industrial Development Authority, approval has been given for the production capacity of 500,000 tonnes of VCM per annum in Malaysia (*Source: Malaysian Industrial Development Authority*).
- In addition to local production, VCM is also available from overseas countries, therefore any shortages in this type of material is minimised.
- Between 2000 and 2004, import value of VCM (chloroethylene) decreased at an average annual rate of 0.2%. In 2004, import value decreased by 17.6% to RM135.6 million. In 2004, the major sources of import of VCM (chloroethylene) include Japan and Taiwan (*Source: Department of Statistics*).



## 15. SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT (cont'd)



### VITAL FACTOR CONSULTING

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- Plasticisers such as DINP and DOP are used in the manufacturing of PVC Resin and Compounds. These plasticisers act as softening agents and are added into the PVC resins to manufacture flexible vinyl products. As DINP and DOP are by-products of petrochemicals, there are local producers of these materials in Malaysia.
- In addition to local sources, DINP and DOP are also available from overseas. In 2004, import value of Dinonyl or Didecyl Orthophthalates reached approximately RM2.0 million after a growth of 227.0% over the previous year. Overall, the import value of Dinonyl or Didecyl Orthophthalates grew at an average annual rate of 31.0% between 2000 and 2004. Taiwan was one of Malaysia's major import countries for Dinonyl or Didecyl Orthophthalates contributing approximately 93% of the total imports under this category in 2004 (Source: Department of Statistics).
- Impact modifiers are used in the manufacturing of PVC Resin to provide impact resistant properties. In addition to local sources of supply, impact modifiers are also available from overseas.
- Import value of Other Polymers of Styrene (including impact modifiers), in primary forms decreased at an average annual rate of 5.9% between 2000 and 2004. In 2004, the import value of Other Polymers of Styrene, in primary forms increased by 113.0% to approximately RM86.0 million (Source: Department of Statistics).

## 8. Demand and Demand Dependencies

### 8.1 Demand

- Demand for PVC Resins and Compounds will primarily come from local markets. About 60% of plastic resins consumed were sourced locally in 2004 (Source: Malaysian Plastics Manufacturers Association).
- However, exports of PVC Resins and Compounds are included in this section to provide an indication of export growth for the manufacturing of PVC Resins and Compounds, which will further reflect demand for locally produced PVC Resins and Compounds.
- Export value of PVC, not mixed with any other substances grew at an average annual rate of 22.3% between 2000 and 2004. In 2004, export value grew by 1.6% to RM90.0 million.
- Export value of Other PVC, plasticised, not in the form of dispersion decreased at an average annual rate of 8.9% between 2000 and 2004. In 2004, export value decreased by 51.5% to RM8.6 million.
- Export value of Other PVC, not mixed with any other substances, not plasticised, in primary forms decreased at an average annual rate of 38.7% between 2000 and 2004. In 2004, the export value of Other PVC, not mixed with any other substances, not plasticised, in primary forms declined by 93.9% to approximately RM370,00.

### 8.2 Demand Dependencies

- As PVC Resins and Compounds are universal products, these products are virtually used in almost all industries. Its applications are extensive and diverse. Some of the major usage and applications of PVC Resins and Compound include the following:

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**15. SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT (cont'd)**


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**VITAL FACTOR CONSULTING**

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- **medical industry** including blood bags, tubing, catheters, surgical gloves, sheeting, prosthetics, single dose medication packaging;
- **packaging industry** including film for the packaging of meat and other produce, clear blister pack sheet, clear and opaque bottles;
- **building and construction industry** such as PVC pipes, hoses, tubes and fittings (portable water, sewer, irrigation, teleduct, fibreoptic cable duct, drain/waste/vent, spiral wound large diameter culvert, chemical and food processing piping, fire sprinkler piping), laminated plastic sheets, siding, gutters, downspouts, window profiles, fencing; decking/docking, flooring and cove base, wall covering, wire and cable, single-ply roofing membrane, landfill liners;
- **automotive industry** such as plastic parts and accessories of motor vehicles including instrument panels, dashboards, auto, mass transit and aircraft interiors and seating, under wood wiring, under car abrasion coating, floor mats, arm rests, foam gaskets, window trim, body side moulding, convertible rear windows;
- **electrical and electronics industry** such as, plastic components, casing and parts for radio and television., keyboards, component housings, electrical cord jacketing, fibre optic sheathing, floppy disk jackets, various components in phone systems, power tools, refrigerators, washers, air conditioners, computers.
- **household products industry** such as garden hose, toys, dolls, inflatables, shoe soles, fishing lures, vinyl coated metal racks and shelving, boat and dock pads, tarpaulins, credit cards, patio furniture, fabric, strapping, shower curtains, swimming pool liners.

**9. Competitive Nature and Intensity**

- Operators in the Manufacture of PVC Resins Industry face **normal** competitive conditions.
- Generally, competition among operators in the Manufacture of PVC Resins Industry within Malaysia is **moderate to high**. However there are different levels of competitive intensity depending on the sectors of the markets served. This is based on the following observations:

**Factors that increase competition**

- PVC Resins are commodities. It is easily available locally as well as globally. The commodity nature of PVC resins makes it highly price competitive, as there are low product differentiations.
- Competition also comes from imports of PVC Resins and Compounds. In 2004, the import value of PVC Resins amounted to approximately RM69.9 million. Japan was the largest source of imports of PVC resin, having accounted for 56.5% of total imports under this category in 2004 (*Source: Department of Statistics*).

## 15. SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT (cont'd)



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In 2004, the import value of PVC Compounds (rigid) amounted to RM47.6 million. Japan was the largest source of imports of PVC Compounds (rigid) representing 49.9% of total imports under this category. The import value of PVC Compounds (flexible) was RM5.7 million in 2004. France was the largest source of imports of PVC Compounds (flexible), having accounted for 35.1% of total imports under this category (Source: Department of Statistics).

#### Factors that moderate competition

- Within PVC Resins, there are three local operators in the market. The relatively low number of manufacturers reduces competition to a certain extent.

(Note: There is one other PVC manufacturer, Kaneka (Malaysia) Sdn Bhd that manufactures PVC paste. However, PVC paste has different applications and serves different market segments from those that manufactures PVC resins)

- Barriers to entry for the manufacture of PVC Resins are high, primarily due to the high cost of capital investment and the high level of technology required.
- Operators that have in-house product development capabilities are able to value-add by producing customised PVC Compounds to meet the specifications and requirements of customers. These operators are in an advantageous position compared to pure PVC Resin manufacturers.

#### 10. Key Players in the Industry

- Some of the major players in the PVC Industry include the following:
  - Operators Producing PVC Resins
    - . Vinyl Chloride (Malaysia) Sdn Bhd
    - . Malaysian Electro-Chemical Industry Co Sdn Bhd.
    - . IRM Group Berhad
  - Operators Producing PVC Paste
    - . Kaneka (Malaysia) Sdn Bhd
  - Operators Producing PVC Compounds
    - . IRM Group Berhad
    - . Malayan Electro-Chemical Industry Co Sdn Bhd
    - . Giantmate Industries Sdn Bhd
    - . Highway Plastic (M) Sdn Bhd
    - . Iplex Industries Sdn Bhd
    - . Masterbatch (M) Sdn Bhd
    - . Sama Kabel Corporation Sdn Bhd
    - . Polymer Resources Sdn Bhd
    - . Hsing Lung Sdn Bhd
    - . Mediacompounds Sdn Bhd
    - . Syarikat Nam Ah Sdn Bhd.

#### 11. Barriers to Entry

- Generally, barriers to entry into the PVC Resin Industry are **high**. This is substantiated by the fact that there are only three local producers of PVC Resin in Malaysia (Source: Malaysian Industrial Development Authority and Malaysian Plastics Manufacturers' Association).

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**15. SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT (cont'd)**


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(Note: There is one other PVC manufacturer, Kaneka (Malaysia) Sdn Bhd that manufactures PVC paste. However, PVC paste has different applications and serves different market segments from those that manufactures PVC resins)

- The main barrier to entry into the PVC Resin Industry is in the **high** capital set-up cost required in the manufacturing of PVC Resins.
- Other barriers of entry include:
  - Government policies;
  - technical skills;
  - track record and quality assurance programmes.

**Capital and Set-up Costs**

- The capital set-up cost for the manufacturing of PVC Resin is **high**.
- The capital investment required to start up a small sized manufacturing plant would cost approximately RM110 million (excluding land and building) (*Source: IRMGB Group*).
- However smaller sized operators will face difficulties in competing with larger operators that have the advantage of economies of scale. As with any commodity, it is important to maximise on the volume of production to ensure profitability.
- Therefore capital set-up cost poses a major barrier to entry for new entrants into the manufacturing of PVC Resin.

**Technical Skills**

- There is also a certain level of technical expertise and experience required in the manufacturing of PVC Resin and Compounds. This is in relation to the expertise and experience required in the formulation and blending PVC Resin with other additives to provide the desired characteristic or properties of final products.
- Experienced and trained workers are also required in the operation of machinery and equipment to optimise the level of productivity and to minimise on the wastage of raw materials used for the production of PVC Resins and Compounds.
- The other areas that require a certain degree of technical skills and experience is the ability to research and develop new formulations that meet with customer specifications, for example insulation resistance, oil resistance, tensile strength testing and others.
- Experiences and expertise required are a combination of polymer science and engineering, as well as chemical engineering knowledge, which would be essential in undertaking product testing and product formulations for certain usage and applications.
- The ability to develop new PVC Resins and Compounds would enable manufacturers to maintain their competitive edge by keeping abreast with changing consumer preferences and trends, and needs of industrial users.

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**15. SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT (cont'd)**


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 Track Record and Quality Assurance Programmes

- Track record also forms one of the barriers to entry for new entrants. As PVC Resins and Compounds are essential raw materials for the production of PVC based products, quality assurance is an important factor. As such, manufacturers that have stringent quality assurance programmes in place including ISO accreditation and compliance to standards are important factors in securing sales.
- In addition, operators that have a strong track record would have a significant advantage in winning sales compared to new entrants.

**12. Industry Outlook and Growth Forecast**

- The outlook for the Manufacture of PVC Resins Industry is **favourable**.
- The Manufacture of PVC Resins Industry is forecasted to grow at approximately **5%** per annum for the next five years.
- The following factors and observations in local production and export, and end-user industry performances provide support for the growth forecast:

**Supporting Factors for Positive Growth**
**Local Production**

- Between 2000 and 2004, sales value of Polyvinyl Chloride (PVC) Resins grew at an average annual rate of 15.4%. In 2004, sales value increased by 65.6% to RM1.6 billion;
- Between 2000 and 2004, production quantity of PVC Resins grew at an average annual rate of 13.0%. The production quantity grew by 33.4% to reach 428,959 tonnes in 2004;
- Between 2000 and 2004, sales value of PVC Compounds decreased at an average annual rate of 0.1%. In 2004, sales value of PVC Compounds grew by 12.1% to RM103.1 million;
- Between 2000 and 2004, production quantity of PVC Compounds decreased at an average annual rate of 2.3%. In 2004, the production quantity decreased by 4.6% to reach 27,179 tonnes.

*(Source: Department of Statistics Malaysia)*

**Exports**

- Export value of PVC, not mixed with any other substances (also sometimes referred to as PVC resins) grew at an average annual rate of 22.3% between 2000 and 2004. In 2004, export value grew by 1.6% to reach approximately RM90.0 million;
- Export value of Other PVC, plasticised, not in the form of dispersion (also sometimes referred to as Rigid PVC Compounds) decreased at an average annual rate of 8.9% between 2000 and 2004. In 2004, export value decreased by 51.5% to RM8.6 million;

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**15. SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT (cont'd)**


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- In 2004, export value of Other PVC, not mixed with any other substances, not plasticised, in primary forms (also sometimes referred to as Flexible PVC Compounds) decreased by 93.9% to approximately RM370,000. The export value declined at an average annual rate of 38.7% between 2000 and 2004.

*(Source: Department of Statistics Malaysia)*

**End-User Industry Sectors**

- Between 2000 and 2004, the sales value of the manufacture of Plastic Products, not elsewhere classified grew at an average annual rate of 9.3% *(Source: Department of Statistics);*
- Between 2000 and 2004, the Construction Industry grew at an average annual rate of 1.1% *(Source: Bank Negara Malaysia);*
- Between 2000 and 2004, the sales value of the manufacture of Plastic PVC Pipes grew at an average annual rate of 18.6%;
- Between 2000 and 2004, the sales value of the manufacture of PVC Hoses and Tubes grew at an average annual rate of 48.8%;
- Between 2000 and 2004, the sales value of the manufacture of PVC Fittings grew at an average annual rate of 34.7%;
- Between 2000 and 2004, the sales value of the manufacture of Laminated Plastic Sheets grew at an average annual rate of 16.5%;
- Between 2000 and 2004, the sales value of the manufacture and assembly of Motor Vehicles increased at an average annual rate of 4.9%;
- Between 2000 and 2004, the sales value of the manufacture of Motor Vehicles Plastic Parts and Accessories increased at an average annual rate of 14.6%;

*(Source: Department of Statistics)*

- Between 2000 and 2004, the production index of the Electronics and Electrical Industry experienced an average growth of 4.1% per annum *(Source: Bank Negara Malaysia);*

**13. Areas of Growth and Opportunities**
**Degradable PVC Resins and Compounds**

- With the increasing pressure from lobby groups and Governments in some countries, degradable PVC Resins and Compounds provide a viable alternative to resolve some of these concerns.
- The introduction of degradable plastics technology has enabled the degradation of various plastic products by promoting and controlling the oxidative degradation of plastic raw materials.

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**15. SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT (cont'd)**


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- Degradable PVC Resins would find many applications in consumer-based products, for example packaging and containers, where their useful life-span is short.
- Operators who are able to manufacture degradable PVC Resins and Compounds will be able to address opportunities in markets that are promoting the use of degradable plastic materials.

**Product Innovations**

- Product innovation has the ability to create new usage and applications to address new markets. As PVC Resins and Compounds are considered low cost materials, further innovations can provide added value to the functional aspects as well as physical properties of the materials.
- Some of the more recent product innovations to plastic raw materials including:
  - the incorporation of innovative additives and initiator technology on existing PVC to significantly reduce variable chemical costs and increase productivity benefits;
  - the use of additives that enable the materials to achieve enhanced properties such as heat-resistance, corrosion-resistance, current-insulation and moisture-resistance.
- Under this situation, research and development activities are significant for continuous product innovation. Operators that have in-house research and development are in a stronger position to provide value-added and innovative products that meet the requirements of customers and consumers.

**14. Threats and Risk Analysis**
**14.1 Implementation of Asean Free Trade Area (AFTA)**

- The reduction of import duties to 0% and 5% with the implementation of AFTA through Common Effective Preferential Tariff (CEPT) would make imports very competitive against locally manufactured products.
- CEPT is the mechanism by which tariffs on goods traded within the Asean region, which meet a 40% Asean content requirement, will be subjected to a reduction of the above-mentioned range of tariff by 2003 (2006 for Vietnam, 2008 for Laos and Myanmar).
- AFTA will have an impact on manufacturers of PVC Resins and Compounds as imports compete at the same level with zero or minimal import duties.

**Mitigating Factors**

- The following mitigating factors apply to manufacturers that focus primarily on the local market.
- New entrants into the Malaysian market upon the implementation of AFTA need to invest significant effort and time to develop and market their products to gain acceptance from local consumers. This provides some advantages to existing local players at least in the short to medium term.

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**15. SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT (cont'd)**


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- Local players with a strong market reputation, established track record, product development capabilities, large and diverse customer base and high product quality are in a better position to face the increased competitive pressure from the potential new players in the market.

**14.2 Fluctuations in Global Oil Prices**

- The fluctuations in global oil prices would have impact on the petrochemical based products including the manufacture of PVC resin. As at 5 May 2005, Brent crude oil prices reached USD48.8 per barrel registering a growth of 31.5% compared to USD37.1 for the same period in 2004. (Source: Energy Information Administration, United States)
- As PVC resins and compounds are made from petrochemicals, the price of raw materials in the form of Vinyl Chloride Monomers (VCM) may fluctuate according to world prices of oil and gas.
- In some situations, increases in the price of raw materials are not easily passed onto users. This could impact on the margin or alternatively, if the increase in cost is passed onto users, the manufacturer may not be price competitive.

**Mitigating Factors**

- Manufacturers with strong financial stability are able to hold stocks of raw materials to provide some cushion against fluctuations in prices.
- As these raw materials are commodities and therefore subjected to world prices, all manufacturers that use these materials are equally affected. It follows that, in most situation, increases in the price of raw materials are usually passed onto the users resulting to minimal impact on manufacturers.
- The fact that there is continuing demand for PVC resins suggests that increases of raw materials are normally passed onto users in one form or another.

**14.3 Fluctuations in the Prices of PVC Resin**

- PVC Resin is a commodity and as such, it is subjected to fluctuations in world prices. Such price fluctuations may have a material impact on the financial performance of manufacturers of PVC Resin.

**Mitigating Factors**

- Manufacturers that have long term relationships with customers are somewhat insulated from short term price fluctuations. This is because most customers would want to ensure uninterrupted supply of PVC Resins from their manufacturers. As such, short-term price fluctuations would not normally have any major impact on PVC Resin manufacturers.
- In the longer term, PVC Resin price fluctuations will need to commensurate with costs of raw materials to ensure that the whole industry is viable. Under such a situation, although PVC Resin price may fluctuate, the differential between cost price of raw materials (VCM) and selling price of PVC Resin may be relatively stable.



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**15. SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT (cont'd)**


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- In addition, manufacturers that are also producing PVC Compounds, which is a value-added product, are in a stronger position to minimise their exposure to fluctuations in prices of commodity items such as PVC Resin.

**14.4 Dependency on Supply of Vinyl Chloride Monomer (VCM)**

- VCM is the main raw material used in the manufacturing of PVC Resin. As such any interruptions in the supply of VCM will impact directly on the production of PVC Resin.

**Mitigating Factors**

- As VCM is a commodity, it is available through local and imported sources of supply. VCM is locally produced by manufacturers such as Vinyl Chloride (Malaysia) Sdn Bhd. According to the Malaysian Industrial Development Authority, approval has been given for the production capacity of 500,000 tonnes of VCM per annum in Malaysia.
- With the availability of VCM from local and imported sources, disruptions in the supply of this raw material are minimised.

**14.5 Foreign Exchange Risk**

- Fluctuations in foreign exchange rates will have an impact on the prices of imported raw materials as well as export earnings.

**Mitigating Factor**

- With the current Ringgit pegged to the USD, manufacturers can plan with a higher degree of certainty.

**15. Market Size and Market Share**

- In 2004, the market size of PVC Resin in Malaysia based on production was estimated at **200,000 tonnes** (Source: *Malaysian Plastic Manufacturers Association*).
- IRMGB Group's **market share** of PVC Resin in Malaysia was approximately **13%** in 2004. This is based on IRMGB Group's production of approximately 26,000 tonnes of PVC Resin in 2004.

**16. Market Ranking**

- Based on turnover, IRMGB Group ranked **second** among manufacturers of PVC Resin. For the financial year ended 31 December 2004, IRMGB Group's turnover amounted to RM175.3 million.
- Based on production, IRMGB Group ranked **third** among manufacturers of PVC Resin in Malaysia in 2004. IRMGB Group's production of PVC Resins amounted to approximately 26,000 tonnes in 2004.

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15. **SUMMARY INDEPENDENT BUSINESS AND MARKET RESEARCH CONSULTANTS' REPORT** *(cont'd)*

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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

A handwritten signature in black ink, appearing to be 'Wooi Tan', written in a cursive style.

Wooi Tan  
Managing Director  
Vital Factor Consulting Sdn Bhd