

**A CRITICAL ANALYSIS  
OF THE INTERNATIONAL TERMS OF SHIPMENT  
IN DRY-BULK EXPORTS FROM THE PORT  
OF RICHARDS BAY**

**BY**

**Andrey Lushnikov**

**Student number 202523000**

**Supervisor: M. G. Chasomeris (University of Natal)**

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**University of Natal**

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## **DECLARATION**

**Except for material specifically indicated in the text, and such assistance as I have acknowledged, this dissertation is my own work and has not been submitted for a degree in any other University.**

**Andrey Lushnikov  
September 2003**

**CONFIDENTIALITY CLAUSE**

**September 1, 2003**

**TO WHOM IT MAY CONCERN**

**Re: CONFIDENTIALITY CLAUSE**

**Due to the strategic importance of this research, it would be appreciated if the information pertaining to names of companies and exact volumes of cargo shipped from the Port of Richards Bay remain confidential, and not be circulated for a period of three years.**

**Sincerely  
A. Lushnikov**

## **ACKNOWLEDGEMENTS**

No research can be the product of any individual, a truism especially apt in the present case. Therefore, it is with particular pleasure, on completing this dissertation, to be able to acknowledge numerous and substantial personal debts.

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## ABSTRACT

Approximately 98 % of South African exports are conveyed by sea. The volume of South Africa's sea trade represents approximately 3,5 percent of world seaborne trade in tonnage terms, a performance that placed the country on the map of international maritime nations.

The major portion of South Africa's dry-bulk exports is shipped from the port of Richards Bay. Richards Bay is the seventh largest world port in terms of cargo volumes, and handles in excess of 80 million tons per annum. This represents approximately 57 % of all South African seaborne trade by volume. The greater portion of South African seaborne trade, especially on the export side consists of shipments of primary (raw) products or beneficiated primary products, and accounts for approximately 140 million tons of all cargoes. The export of primary products or commodities is a vital part of the South African economy and generates a substantial amount of the country's foreign exchange.

This dissertation concludes that shipment on FOB terms continues to command the lion's share of all export consignments handled in the port. In fact from the more than 78 million tons of cargo covered in the survey, more than 64 million is shipped on FOB terms, which constitute in cargo volumes approximately 82% of all exported commodities from the Port of Richards Bay. The high incidence of shipments on FOB terms leaves the final arrangement of shipping in the hands of foreign buyers. This represents a substantial loss of revenue in invisible earnings for the country's service account of the balance of payments.

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## Chapter 1 INTRODUCTION AND CONTEXT

Global seaborne trade has given businesses broader access than ever before to markets all over the world. South Africa plays an increasingly important role in those trades, a role that is not always clearly understood. With port performance generally measured in terms of cargo volumes, an analysis on this basis shows that South African port traffic doubled from 40 million tons in 1969/70 to 80 million tons by 1977/78, and roughly doubled again to reach 160 million tons by the mid 1990s (Jones, 2001:144). With nearly 98% of South African exports conveyed by sea, a survey in 1991 placed South Africa in the 21<sup>st</sup> position – in trade volumes – out of the top100 maritime trading nations (Stopford, 1997:250-251).

“Some 190 million tons of cargo of all types handled in 2001 by the ports of South Africa represents approximately 3.5 percent of world sea trade in tonnage terms”(Jones in *Maritime Southern Africa*, May/June 2003:54). However the real measurement of seaborne transport activities will be misleading without taking into account average haul, which is used to measure sea transport demand in terms of ton-miles. Jones (in *Maritime Southern Africa*, May/June 2003:54) emphasized that in “real” terms, traffic passing through local ports generated approximately 1,310 billion ton-miles of sea freight annually, or about six per cent of global sea trade, a performance that places South Africa within the top twelve international maritime trading nations.

Despite such an outstanding performance, the South African situation does not look so bright in terms of a Merchant fleet. According to information available in *The World Factbook* (2002) – South Africa’s Merchant Marine has only eight cargo ships totaling 271,650 gross registered tons or 268,604 deadweight tons, with some foreign-owned ships registered in the country as flags of convenience. Three ships from Denmark, and one from the Netherlands [2002 est.] ([www.odci.gov/cia/publications/factbook](http://www.odci.gov/cia/publications/factbook)).

This information however does not reflect the real picture, where currently the only commercially- trading vessel on the South African Ship Register is Safmarine Oranje, which is registered in Cape Town (Maritime Southern Africa, May/June 2003:25).

On 31 March 2003 there were 967 ships totaling 197,159 gross tons on the SA Register, with only two conventional ships, one of them is Safmarine Oranje with a total registered tonnage equal to 33,226 tons (SAMSA, 2003). This situation bears a direct impact on the outcome of this research, and may be detrimental to the South African economy, a topic that will be discussed later in the paper.

In the past thirty to forty years, there have been dynamic economic conditions engendering the consolidation of the commodity trades, with technological change bringing about increased specialization of vessels and cargo handling methods. This process is sometimes referred to as “bulkerisation” (McConville, 1999:212). Bulk cargo is used to describe commodities such as crude oil, iron ore, coal, grain that are usually shipped in large volumes and are homogeneous. More commonly the term bulk cargo is used to refer to any consignment of cargo that is transported in shipload “lots” – effectively “one-cargo, one ship”. The greater part of South African seaborne trade, especially on the export side consists of the shipments of primary (raw) products or beneficiated primary products, and accounts for approximately 140 million tons of all cargoes (National Port Authority, 2003). The export of primary products or commodities is a vital part of the South African economy and generates substantial amounts of the country’s foreign exchange. All these commodities are normally shipped on board of bulk-carriers, which are specialized ships that transport their cargoes in shiploads, effectively “one-cargo, one ship”. Most of these products like coal, fertilizer and minerals are moved through the port of Richards Bay, which is the leading South African port in terms of cargo volumes, with an annual tonnage in excess of 80 million tons, representing approximately 57% of South Africa’s seaborne cargo (Ports of Southern Africa and Mauritius 2003:81).

According to the Antwerp Port Authority, this volume of seaborne trade makes Richards Bay the seventh largest port in the world and is reflected by the statistical data represented in the Table 1.1 below ([www.portofantwerp.be](http://www.portofantwerp.be)).

**Table 1.1**

**Richards Bay in the world – classification according to international maritime traffic in 2000, in metric tons.**

	Port	Country	Unit (1)	Total cargo turnover	International (metric tons)
<b>1</b>	Rotterdam	Netherlands	M	322.072.000	322.070.000
<b>2</b>	Singapore	Singapore	F	325.591.100	*244.193.325
<b>3</b>	Hong Kong	Hong Kong	M	174.642.000	174.642.000
<b>4</b>	Antwerp	Belgium	M	130.530.626	129.810.494
<b>5</b>	Houston	USA	S	191.419.264	116.847.480
<b>6</b>	Kaoshiung	Taiwan	M	115.286.857	104.272.520
<b>7</b>	<b>Richards Bay</b>	<b>South Africa</b>	<b>HT</b>	<b>91.096.904</b>	<b>92.987.955</b>
<b>8</b>	Marseille	France	M	94.096.700	90.380.900
<b>9</b>	Port of South Louisiana	USA	S	217.756.732	89.462.447
<b>10</b>	Hamburg	Germany	M	85.863.272	83.308.781

Source: Adapted from Antwerp Port Authority, 2003

(1) S: short tons, M: metric tones, HT: harbour tons, F: freight tons.

\* approximate conversion to metric tones

The constant increase in the volumes of seaborne trade, especially in the dry-bulk commodities sector and the increased variety and complexity of the various cargoes sold internationally creates possibilities for misunderstandings and costly disputes when sales contracts between seller and buyer are not properly drafted.

To overcome potential disputes and misinterpretation in international trade, the International Chamber of Commerce introduced guidelines for terms of trade. Whenever goods have to be moved by sea, somebody has to employ a suitable ship to carry them, and this employment must be achieved on appropriate terms, satisfactory to all concerned. Two of the thirteen available terms, namely Free on Board (FOB) and Cost Insurance and Freight (CIF) deserve particular discussion, as they are the most widely used terms in the dry-bulk commodities sea trade. Both terms are long established and ideal for seaborne transport in port-to-port shipments.

Goods can be sold FOB, where the seller loads goods safely on board of the vessel of the buyer's choice; thereafter all risks are transferred to the buyer. Alternatively they can be sold on CIF terms, where responsibilities of the seller include arrangement for fixing of the carrying vessel and insurance of cargo. As with FOB, on CIF terms all risks are transferred to the buyer, when the goods have been safely loaded on board of a ship.

The essential difference between the two terms is that buying FOB and selling CIF allows the trader to nominate the ship, and subsequently exercise a degree of control of the cost of the shipment. The use of these two terms or derivations of them have been an important influence on the development of international and essentially South African seaborne trade, as is argued in the paper below. While South African cargo interests are encouraged to sell their cargoes on CIF terms of trade, which can be very fruitful for the South African economy, most of the export cargoes are sold FOB, which leaves the shipping arrangements to foreign importers. Such terms of shipment have direct implications on the overall performance of the South African economy, as a large part of the country's freight bill is lost to foreign interests, who predominantly control much of the trade in dry-bulk commodities exported from South Africa. Therefore this substantial loss of foreign exchange has a negative influence on the country's services account of the Balance of payments (BOP).

This situation leads to a recognition of the terms of shipment as one of the major determinants of the fortunes of the shipping industry, mercantile achievements in the dry-bulk exports sector, and the prosperity of the South African economy as a whole. Therefore, there is an urgent need for studies in the field of commercial practices among South African dry-bulk exporters that will provide South African maritime policy makers with some food for thought on these important matters.

Against this background, in chapter three the study has the principal objectives of critically analyzing the international terms of shipment, particularly the decision between FOB and CIF in dry-bulk export from the Port of Richards Bay. In chapter four the study will show the importance and benefits to the South African economy from an increased proportion of CIF dry-bulk exports and investigate the bargaining power of the South African dry-bulk exporters to negotiate a higher proportion of shipment on CIF terms. Finally chapter five presents the conclusions, policy recommendations and areas for future research in the field of South Africa's dry-bulk exports.

## Chapter 2 THEORETICAL BACKGROUND

### 2.1 Overview of international maritime transport

*The economic significance of the producer-consumer gap does not lie in the physical distance separating consumer from producer, as measured in kilometers or minutes, but in the economic distance as measured in terms of cost of transport.*

(Milne in RAU, 2000:4)

Transportation is fundamental to the development and operation of any industrial society. It permits the specialization of work, which is necessary to achieve efficiency and productivity. Geographically distant resources become accessible with the assistance of transportation. The economic growth of any society in any part of the world is related to the availability of transportation. A society without an adequate transportation system remains primitive. Effective transportation systems are directly responsible for the creation of place and time utility of commodities, which are otherwise not available, and produce movement of raw materials, in-process inventory, and finished goods from the point of origin to the point of consumption at the right time.

From the list of all available modes of transport today, water transport, or shipping is the oldest mechanized mode in the transportation system, and plays a vital role in the domestic and international movement of freight worldwide.

Adam Smith, back in 1776 in his classic work *The Wealth of Nations* regarded shipping as one of the fundamentals for economic development. As he put it:

*As by means of water carriage a more extensive market is opened to every sort of industry than what land carriage alone can afford it, so it is upon the sea-cost, and along the banks of navigable rivers, that industry of every kind naturally begins to subdivide and improve itself, and it is frequently not until a long time after that those*

*improvements extend themselves to the inland parts of the country... a broad wheeled wagon attended by two men drawn by eight horses in about six weeks time carries and bring back between London and Edinburgh nearly 4 tons weight of goods. In about the same time a ship navigated by six or eight men, and sailing between the ports of London and Leith, frequently carries and bring back 200 ton weight of goods... since such, therefore, are the advantages of water carriage, it is natural that the first improvements of art and industry should be made where this conveniency opens the whole world to a market for the produce of every sort of labour (Stopford, 1988:3).*

With the ebb and flow of time, since Adam Smith wrote these words, the significance of maritime transport has dramatically increased and shipping has created a truly global market for both manufactured and raw materials. Two dramatic technological developments since the 1960's have shaped the modern shipping industry – containerisation of general cargo, and bulk shipping. Containerisation solves the problems of shipping valuable cargoes to a destination, safe from damage and pilferage with a minimum delay in handling. Bulk shipping through capitalizing on economies of scale and the development of integrated transport systems, has reduced transport costs to such an extent that it is often cheaper for industries to import raw materials by sea from a place of origin thousands of miles away than by land from a source only a few hundred kilometers away.

Nowadays, shipping conveys some 99% of world trade in volume terms and is a major contributor to the creation and development of global wealth (Branch, 1996:1). Furthermore it also exerts enormous power in trade and political terms. In addition, shipping is a very complex and highly competitive industry. Thus, to more effectively realize the significance of shipping in the world economy, it is necessary to look at the statistical data available.

In 2001, the volume of world exports declined by 1.5 percent (Review of Maritime Transport, 2002:3), due to a worldwide economic recession that was compounded by the events of September 11th terrorist attacks, and the bursting Information Technology bubble.

This negative growth was reflected in seaborne trade, which after having recorded increases for 15 consecutive years, contracted in 2001 to 5.83 billion tons of exported goods (Review of Maritime Transport, 2002:5). Table 2.1, below shows the breakdown of seaborne exported goods by major cargo types for selective years.

**Table 2.1**  
**Development of international seaborne trade, selected years**  
(goods loaded)

Year	Tanker cargo		Dry cargo				Total (all goods)	
			Total		Of which main bulk commodities			
	Million tons	% change	Million tons	% change	Million tons	% change	Million tons	% change
1970	1 442		1 124		448		2 566	
1980	1 871	29.7	1 833	63.1	796	77.7	3 704	44.3
1990	1 755	- 6.2	2 253	22.9	968	21.6	4 008	8.2
1998	2 072	18.1	3 526	56.5	1 170	20.9	5 598	39.7
1999	2 057	- 0.7	3 612	2.4	1 196	2.2	5 668	1.3
2000	2 115	2.8	3 775	4.5	1 288	7.7	5 890	3.9
2001	2 128	0.6	3 704	- 1.9	1 303	1.2	5 832	- 1.0

Source Adapted from UNCTAD Review of Maritime Transport, 2002

The more than double fold increase of seaborne exported commodities for the last 30 years has been accompanied by upward trends in ship size. This is most apparent in the development of the tanker and dry-bulk fleets.

During the year 2001 the world merchant fleet expanded to 825.6 million deadweight tons (dwt), a 2.1 per cent increase compared with the previous year.

The fleet of oil tankers and dry-bulk carriers together comprise 70.3% of the total world fleet. While the fleet of tankers was steady for 2001, the fleet of all bulk carriers increased by 4.6 per cent. At the same time, new arrivals to the world fleet from ship building wharfs decreased by 1.8 percent to 45.2 million deadweight tons (Review of Maritime Transport, 2002:11). A summary of the world fleet by principal types of vessels for years 2000-2002 can be observed in Table 2.2 below.

**Table 2.2**  
**World fleet by principal types of vessels, selected years**  
(beginning of the year figures, in thousand deadweight tons)

Principal type of vessel	2000	2001	2002	% change 2001/2002
<b>Oil tanker</b>	282 458 <i>35.4</i>	285 441 <i>35.3</i>	285 519 <i>34.6</i>	0.0
<b>Bulk carrier*</b>	276 091 <i>34.6</i>	281 654 <i>34.8</i>	294 588 <i>35.7</i>	4.6
<b>Ore/bulk/oil</b>	16 723 <i>2.1</i>	11 391 <i>1.4</i>	14 456 <i>1.8</i>	26.9
<b>Ore/bulk</b>	259 368 <i>32.5</i>	270 263 <i>33.4</i>	280 132 <i>33.9</i>	3.7
<b>General cargo ship</b>	101 481 <i>12.7</i>	102 653 <i>12.7</i>	99 872 <i>12.1</i>	- 2.7
<b>Container ship</b>	63 637 <i>8.0</i>	69 216 <i>8.6</i>	77 095 <i>9.3</i>	11.4
<b>Other types of ship</b>	75 328 <i>9.4</i>	69 412 <i>8.6</i>	68 576 <i>8.3</i>	- 2.1
<b>World total</b>	798 995 <i>100.0</i>	808 376 <i>100.0</i>	825 652 <i>100.0</i>	2.1

Source Adapted from UNCTAD Review of Maritime Transport, 2002

Percentage shares are shown in italics

\* Bulk carriers percentage share includes share of ore/bulk/oil and ore/bulk carriers

The demand for maritime transport as shown in Table 2.1, is primarily derived from spatial differences in the pattern of production and consumption of goods and raw materials around the world.

These differences lead to international trade between countries and represent the main justification for the existence of the international freight shipping industry. The demand for seaborne transport is therefore derived from the demand for imported commodities or determined by the demand of the final consumers of the product, and is, therefore, affected by the elasticity of demand for these commodities. The greater this demand, the greater will be the demand for shipping. This latter demand is in turn, a function of the marginal production cost differences between the importing country and exporting country. The very nature of the shipping industry manifests itself in the simultaneous production and consumption of their services, which are consumed as they are produced. This feature of shipping has definite economic consequences on the market, as it influences the size and type of the world merchant fleet (see Table 2.2), on the supply side of shipping, and must be maintained in order to satisfy the demand for shipment of goods by sea. As any other market activity, shipping is heavily dependant on the interplay between demand and supply functions. But the factors affecting both demand and supply in the shipping industry are perhaps more complicated than in the case of most other industries. Any imbalance between the latter bears a direct consequence on the level of the prices adjusted by fluctuations in freight rates. In effect the freight rate mechanism is the “switchbox” which controls the amount of money paid by shippers to shipowners for the transport they supply (Stopford, 1997:115). The impact of this significant transport cost is very important for South Africa, as the economy is primarily involved in the export of dry-bulk commodities, shipped by sea. It was established that international transport cost (shipping cost), is significantly higher in South Africa’s case than the world average (Chasomeris, 2003a).

Furthermore substantial distances lie between South Africa and her major trading partners, with average shipping haul for the trade as a whole well over 7,000 miles (Drewry, 1993:82). This further influences the maritime importance of South African exports.

The shipping market is enormously complex, and it has become increasingly difficult to identify all the factors that exert influence on the forces of supply and demand. This is not to suggest that details should be ignored, but rather to accept that too much detail can hinder a clear analysis. To ensure that the discriminating reader is better equipped to understand all intricacies of the South African dry-bulk shipping market, a simplified model of the key factors that bear particular importance in the interplay of the shipping market is shown in Appendix I.

## **2.2 Dry-bulk shipping**

*God must have been a shipowner. He placed the raw materials far from where they were needed and covered two thirds of the earth with water.*

(Erling Naess in Stopford, 1988:213)

Bulk shipping has been used for many years to reduce the cost of sea transport. Two thousand years ago, Rome imported more than 30 million bushels of grain a year from the grainlands of Northern Africa, Sicily and Egypt, and to carry this trade a fleet of special ships was built (Stopford 1988:213). Today, bulk cargo is used to describe commodities such as crude oil, iron ore, coal, and grain that are usually shipped in large volumes and are homogeneous. In its widest sense, the term “commodity” can be applied to a long list of products, but in dry-bulk shipping, it has come to have a rather narrower meaning. Demand for dry-bulk commodities is directly linked to economic growth, business cycles and the performance of key market sectors like steel, metals, fertilizers, farming and forestry.

More commonly the term bulk cargo is used to refer to any consignment of cargo that is transported in shipload “lots”, effectively “one-cargo, one ship”.

Bulk shipping is big business, and in 1993 Drewry Shipping Consultancy in United Kingdom estimated that the annual world freight bill was approaching US\$35 billion, (Drewry, 1993:1).

The five major dry-bulk commodities: **iron ore, grain, coal, bauxite/alumina and phosphate rocks** constitute a substantial portion of international seaborne trade. Over recent decades these commodities combined have accounted for between 40-50 per cent of the volume of seaborne trade movement, and between 50-60 per cent of the total demand for shipping space expressed in ton-miles (McConville, 1999:215).

The rest of the dry-bulk commodities are usually described as minor bulk commodities, and are grouped under seven main groupings (Drewry, 1993:13):

1. **Agribulks:** Including sugar, rice, oilseeds, oilseeds meals and tapioca;
2. **Forest products:** Including logs, lumber, packaged sawn wood, pulpwood, woodchips, panels, paperboards, paper and newsprint;
3. **Fertilizers:** Including the raw materials, sulphur, potash salts, as well as intermediate and finished fertilizers such as phosphates;
4. **Ores and minerals:** Including alloying ores like chrome, manganese, nickel, metal concentrates and leading industrial and chemical minerals;
5. **Iron and steel:** Pig iron, all iron and steel products, including slabs and scrap metal;
6. **Manufactured items:** Including cement and petroleum coke;
7. **Other trades:** Including quarry products, and various minor agricultural products and derivatives.

Due to problems in stowage on board of vessel and handling facilities in the ports all dry-bulk commodities are usually classified from the port operations point of view as bulk, break bulk and neo-bulk goods. Products like **steel, timber and granite**, while not true “dry-bulks”, are frequently shipped in single shipload in the holds of bulk-carriers.

In 2001, the overall world dry cargo shipment reached 3.7 billion tons. The five major dry-bulk trades were recorded at 1.3 billion tons. The share of dry cargo shipment in world seaborne trade was 58.5% of total goods loaded during the same year (Review of Maritime Transport, 2002:11). Indeed, dry-bulk demand continues to grow and, for 2002, volumes for most of the major cargoes are displaying positive growth (Fairplay, January 2, 2003:23). This growth is mainly because of the massive impact of Asian, and especially, Chinese industrialisation.

The most important single factor determining the level of transport cost is ship size, and generally speaking, the larger the vessel, the lower the shipping costs per cargo ton. Scale economies, which are most pronounced in bulk shipping stem mainly from differences in the trading costs of the vessel. The larger the bulk carrier, and the shorter the voyage, the lower the revenue typically required per ton of cargo to cover all the shipowner's costs.

According to Lloyd's Register (Review of Maritime Transport, 2002), and generally used shipping terminology, the sizes of dry-bulk carriers are usually described in market related sources as follows:

<b>Cape-size</b>	<b>80,000 dwt plus</b>
<b>Panamax</b>	<b>50,000 – 79,999 dwt</b>
<b>Handymax</b>	<b>35,000 – 49,999 dwt</b>
<b>Handy-size</b>	<b>20,000 – 34,999 dwt.</b>

The dry-bulk freight business, which employs a multinational, multi-million dollar shipping fleet, is largely transacted in the so-called “shipcharter” market or spot market – a market notorious for its volatility and the speed with which freight rates can rise or fall.

Indeed, freight rates, charged for the charter, or hire, of bulk shipping are rarely stable for any length of time, changing almost daily, and for those employed in the trading and shipment of bulk cargoes, operations in the shipcharter market are far from straightforward, or risk-free.

Traditionally in the literature this volatile market is defined as tramp shipping. The classic example of this form of definition is postulated by Gripaious (in McConville, 1999:212), “a deep-sea tramp ship is prepared to carry any cargo between any port at any time, always providing the venture is both legal and safe”.

Ocean freight costs account for a significant proportion of the delivered price of bulk cargoes. It is not uncommon for shipping and handling charges on consignments of bulk ores and fuels to account for anywhere between 20% and 50% of the cost to the consumer (Drewry, 1993:1).

It goes without saying that trends in the bulk shipping market can strongly influence competitive relationships in individual commodity markets, where the pricing structure is such that a saving of only a few US cents on the ocean freight can enable one supplier to outsell another. The fact that trading “margins” on many commodities shipped in bulk, in today’s competitive international market place, are slim, heightens the inherent risks involved. Even modest falls in ocean freights can sharply reduce the anticipated profit on delivered price and may even result in a revenue loss. These fluctuations of the ocean freight rates are directly connected to the market cycles, which are best described by Hampton (in Stopford, 1988:52):

*Starting with a growing economy and a depressed shipping market, freight rates rise with an increase in transport demand. Rising freight rates increase the earnings of shipowners who respond to a more favorable investment climate by bidding up the price of second hand ships and by ordering new ships. The orderbook builds until rates crest. At the peak there is a slowing of economic growth and freight rates decline. The delivery of vessels into a falling market helps to depress rates further. Low freight rates discourage ordering and encourage lay-up and demolition of ships. Eventually, the excess supply is reduced until it approaches a balance with demand. Then the cycle is ready to begin again. An entire cycle of this type might take about three to four years from trough to trough.*

Furthermore the market's mood – which can range from acute pessimism to over-optimism in good times – has been a potential force in shaping the long-term cycles which bedevil the bulk shipping industry (Drewry, 1993:38).

To better illustrate the magnitude in amounts of money involved in volatile shipcharter markets let us look at a study conducted in 2000 by WEFA Energy – a multi fuel consultancy encompassing specialist coal market analysis and forecasting.

WEFA makes a detailed analysis of the costs of operating new and old Capsize bulk carriers on four major coal routes (Richards Bay/ARA, Australia/ARA, Columbia/ARA and Australia/South Korea), where ARA is a range of ports in the Amsterdam-Rotterdam-Antwerp area. For calculations, new vessel size was set at 150-170,000 deadweight tons, at an estimated price of US\$37.5 millions, and key to the trend in cost was the movement in bunker prices. WEFA estimated that total operating cost would be US\$15,091 for a new ship, and US\$7,000 for a 20-year old vessel, per day from major coal ports to delivery ports. With port costs for Richards Bay at US\$30,000, Rotterdam US\$100,000, Puerto Bolivar US\$60,000, Newcastle (Australia) US\$78,000 and Pusan US\$70,000, the final calculation came up to an operating cost per ton in the range of US\$6.0-6.9 (US\$6.5 in 2000/1) until year 2010 (Fairplay, December 14, 2000:45). It will cost the shipowner a hefty US\$975,000, to operate 150,000 dwt capsize on the route from Richards Bay to ARA.

No mention has been made of shipper or consignee, who is the party to the contract responsible for the settlement of the freight bill. With a randomly taken fixture of US\$9.50 per ton for December 2000, it would now cost them US\$1,425,000 to ship 150,000 tons of coal, on the same route! The study is crystal clear in demonstrating the financial magnitude of the decisions facing executives in the South African maritime industry, and particularly exporters or importers, who are directly involved in the trade of bulk commodities by sea.

Finally, as it was mentioned above, supply of the bulk carrier's fleet plays a significant role in determination of ocean freight rates. Here the availability of bulk carriers will depend more on the demolition of over-aged tonnage and scrapping rates than new buildings.

Recent attention has been given by international policy makers, particularly the International Maritime Organisation (IMO) to the stark fact “that over 500 ship casualties resulting in the loss of 2,000 lives have occurred since 1978” (Fairplay, January 2, 2003c:53).

The average age of bulk carriers has been steadily rising and now stands at 20,5 years, according to a report prepared by Intercargo (The International Association of Dry Cargo Shipowners). Structural failure, says the report, has remained a significant cause of annual loss at around 70-73 per cent (IMO News, 2002:9). The new tight regulatory regime adopted by the IMO on the safety of bulk carriers, will thus further impact on the supply of available vessels, with direct consequences on transportation cost through changes in the ocean freight rates.

### **2.3 International Terms of Shipment**

*In 1936, the Paris-based International Chamber of Commerce (ICC) – which was founded 16 years earlier – issued the International Trade Terms (Incoterms) for the first time. During the course of time, Incoterms developed into a widely acknowledged tool for the interpretation of the most commonly used trade terms in foreign trade.*

(Fairplay, March 30, 2000:22)

Incoterms are a set of uniform rules codifying the interpretation of trade terms defining the rights and obligations of both Buyers and Sellers in an international transaction, thereby enabling an otherwise complex basis for Sales Contracts to be accomplished in three letters.

Incoterms underwent several revisions, in 1953, 1967, 1980 and 1990. The 13 Incoterms in essence refer to the reciprocal obligations of parties bound under international sale contracts relating to the delivery of goods. The pattern of pertinent shipping contracts is fundamentally affected by the relevant term agreed by both parties. The glossary in Appendix IX summarises the distribution of main obligations between parties to a contract under Incoterms of 2000.

From 1990, Incoterms were grouped into four different categories in terms of costs for the seller: namely Group E departure, Group F main carriage unpaid, Group C main carriage paid and finally Group D arrival. Furthermore it is important to note that terms like FAS, FOB, CFR, CIF, DES and DEQ can be used only for maritime and inland waterway transport, while the rest are appropriate for any mode of transport.

The Incoterms 2000 came into force from January 1<sup>st</sup> 2000, and contain moderate and reasonable changes to Incoterms 1990. The changes included (Fairplay, March 30, 2000:22):

- ❖ The obligation to perform import clearance under FAS has been shifted from the buyer to the seller.
- ❖ The obligation to perform import clearance under DEQ has been shifted from the seller to the buyer.
- ❖ The seven optional stipulations concerning the seller's delivery obligation relating to various modes of transport under Incoterms 1990 FCA has been replaced by two uniform definitions.
- ❖ There is explicit clarification of the obligation to load and/or unload the cargoes onto or from the means of transport under EXW, FCA, DAF, DDU and DDP.
- ❖ To adapt Incoterms for movement of goods within free-trade zones like the European Union, the words "where applicable" have been added into those sections dealing with the parties' obligation to clear goods for export, import and transit and for payment of relevant duties.
- ❖ The terminology of new Incoterms has been brought into line with that of the 1980 UN Convention on Contracts for the International Sale of Goods (CISG).

One of the issues during the revision process was whether to eradicate the FOB term. This might sound astonishing, as FOB is one of the most well-established trade terms and probably the oldest of all, its first proven reference being in an English court case in 1812.

The crux of FOB – and its inherent problem – concerns the transfer of risk and division of costs on the one hand, and the stipulated point of delivery on the other. Under FOB – as with CFR and CIF – the risk of loss or damage is transferred from the seller to the buyer at the point when goods have passed the ship’s rail at the port of shipment. The ship’s rail is also determined as the decisive border for the division of cost between the parties to a contract, although delivery is only accomplished after the goods have been delivered “on board vessel”. This inherent provision, probably stems from the times when goods were manually carried on board, or when barrels were rolled on board over a wooden plank, and is obviously neither suited to modern cargo handling techniques nor to the prevailing patterns of shipping contracts.

The problems with FOB were encapsulated perfectly by Lord Devlin – in the court case of *Pyrene Co. Ltd versus Scindia Steam Navigation Co. Ltd* in 1954: “Only the most enthusiastic lawyer could watch with satisfaction the spectacle of liabilities shifting uneasily as the cargo sways at the end of a derrick across a notional perpendicular projecting from the ship’s rail” (Fairplay, March 30, 2000:22).

International Chamber of Commerce’s Professor Jan Ramberg in 1999 remarked: “Through the centuries, the ship’s rail has assumed an inordinate importance as an imaginary border between the seller’s and the buyer’s territory. But using the ship’s rail as a point for the division of functions, costs and risks between the parties is not, and never has been, quite appropriate” (Fairplay, March 30, 2000:22).

In a strict sense, FOB seems suitable only for dry or liquid bulk cargoes, for which passing the ship’s rail – on conveyor belts or through pipes – is basically equivalent with on board delivery and subsequently delivery to the carrier.

Sellers and buyers could easily overcome the dilemma by applying FCA instead of FOB or CPT/CIP instead of CFR/CIF. This is not the case in the maritime industry, where old habits die hard, and it would take enormous effort, or some creativity combined with common sense to eliminate the FOB term from the list of Incoterms. At the end of the day, the choice is between seller and buyer, but in the case of FOB, CFR and CIF, the advice from ICC should be in use: *If the parties do not intend to deliver the goods across the ship's rail, the FCA/CPT/CIP terms should be used* (See Appendix II, for a visual aid in understanding the essential difference between FOB and CIF terms).

The revisions of Incoterms 2000 created quite a stir among role players in South Africa's freight industry. The author has found an interesting debate in the local transport publication *Freight & Trading Weekly* (FTW, September, 2000), between one of the industry's training providers *Freight Training* and an annoyed reader, who was bemused by a claim of *Freight Training* that FOB has little or no application in the modern freight industry. *Freight Training* replied and stated that firstly, they "fully support the use of Incoterms", however they "support the use of the right term for the right environment. This is to say that for the terms to work as intended the underlying event must correlate to the physical demand of the definition. The term FOB is an excellent example". Further they stated that FOB "has no application in air, road or rail movement – so that three quarters of our options are out of the way". They then claimed, "in sea freight, it could only safely be used in an environment that physically equals the demands of the definition". So what quantity of South African exports move out of the country on FOB terms? Amusingly, according to *Freight Training* "certainly a very, very small percentage of all moves. Thus, the term applies to only a portion of trade (sea) and only a small portion of that – what one might easily refer to as being of 'little or no application'. Certainly something happens every day, every moment at all the ports in SA, but it isn't FOB and that's the point" (FTW, September 1, 2000:18).

This debate clearly demonstrates the level of general knowledge on the part of some of the role players in the South African freight industry and was decisive in focusing an objective of this study to assess the terms of shipment knowledge of exporters in South Africa.

## 2.4 Trade in the dry-bulk commodities

The pricing of commodities in world trade is a rather complex subject. The price of some commodities, such as iron ore and, in particular, those with the lowest FOB values – are relatively stable, and are likely to change only slowly. In part, this reflects the market system, as they are mostly sold under supply contracts, subject to periodic price reviews.

Certain other commodity markets, however, are highly volatile and unstable, with the result that export prices fluctuate quite widely. These conditions represent the two extremes, but such differences basically stem from the organization of international trading and the structure of the market. Generally speaking, the price for commodities shipped in bulk; belong to one or other of the following categories (Drewry, 1993:16):

- ❖ A term contract price established through negotiation between buyers and sellers, but which is market-orientated. Iron ore prices are of this type, and are subject to annual negotiation.
- ❖ A daily price originating from transactions on a futures market or which is established in less formalized, day-to-day trading. Prices of grain are mostly established in this way.
- ❖ An indicative price-value-established by either the trade press or other independent organizations after consultation with the industry. Quoted prices of alumina fall into this category.
- ❖ A price which is a value, derived from declared FOB or CIF customs' manifests. This is a commonly used method for establishing trends in international coal prices.
- ❖ A producer price, or one quoted by a dominant seller in the market. For example, the reference price in the sulphur market is the price at which Canadian bulk sulphur is sold by the producer organization.

Furthermore the increasing pace of Asia's industrialisation is expected to inject new impetus into demand for the dry-bulk commodities market. However, several key bulk cargoes are under threat from technological changes and substitute materials. For example, all aspects of the steel industry are under attack, from substitution by lighter-weight plastics and aluminium. The result is less steel consumed and less iron ore and coal used per ton of steel produced. Forward integration is another factor eroding dry-bulk commodities demand, particularly in the minor bulks. Commodity producers seek to increase the value added and to reduce the CIF cost of their exports. From fertilizers to crops and minerals, trade in raw materials is being supplanted by trade in semi-processed materials (Fairplay, January 2, 2003b:24). For better or for worse, this will have direct implication on the demand for South African dry-bulk exports.

International trade in the leading bulk commodities such as various ores, agribulk, fuels and fertilizer materials, are generally conducted on FOB terms, rather than on the alternative CIF basis that places the responsibility for the transport arrangement with the seller. Drewry (1993:16) states that FOB terms, common in longer term contracts, allow the buyer to control the shipping of the commodity from the port of origin to the point of consumption, which is a distinct advantage if import schedules are to be coordinated effectively and inventories are to be controlled. Apart from those considerations, there is the question of import costs and most commodity buyers believe that FOB purchases of their feedstock are only one way to minimize these costs.

Naturally, some producers and exporters – especially those supplying raw materials like ores and coal, directly to consumers, would prefer in some industries to sell their products CIF, but in general, this is not what the buyers want. CIF terms are, in fact, only acceptable in bulk trading when, due to long voyage or some other logistical factors, freight rates are high, and there are risks attached to shipping, or in certain markets where it is in the buyer's interest to allow the seller to participate to some degree in the shipping of the commodity, or if the producer possesses the necessary marketing expertise and worldwide connections with importers and consumers.

Generally, terms of shipment are important because they spell out the legal and cost responsibilities of the buyer and seller. Sellers favour terms that give them the least liability and responsibility, such as EXW, which means the exporter's liability finishes when the goods are loaded on the buyer's carrier at the seller's warehouse. Buyers, on the other hand, would prefer either DDP, where responsibility is borne by the shipper all the way to the customer's door, or CIP, which means that the buyer's responsibility, begins only when the goods are in its own country.

Furthermore the sales of commodity on FOB terms are totally acceptable from the strategic point of view of any business, where customer satisfaction is regarded as the most valuable competitive advantage, which a business could possess. However, the more market orientated pricing policies are based on CIF terms, which indicates a strong commitment to the market.

By pricing on the FOB terms, an exporter is not taking any steps to build relations with the market and so may be indicating only short-term commitment (Hollensen, 2001:468). Table 2.3 shows the point of delivery and transfer of risk for some terms of shipment.

**Table 2.3**  
**Point of delivery and transfer the risk for some terms of shipment**

	<b>EXW</b>	<b>FAS</b>	<b>FOB</b>	<b>CFR</b>	<b>CIF</b>	<b>DEQ</b>	<b>DDP</b>
Shipper's factory	<b>X</b>						
Export port		<b>X</b>					
Board of vessel			<b>X</b>	<b>X</b>	<b>X</b>		
Import port						<b>X</b>	
Buyer's warehouse							<b>X</b>
Transfer of risk	buyer	buyer	buyer	buyer	seller	seller	seller

Source: Adapted from Hollensen, 2001:467

The problem of the choice in terms of shipment is compounded by the fact that trading margins on many dry-bulk commodities, especially the lower value ones, are often very slim, with freight cost forming a large element of the CIF or delivered price. In some commodity sales, the transport, handling and storage costs can account for fifty per cent or more of the price, underlining the importance of freight cost in international commodity trading (Drewry, 1993:23).

The charterer can be either the buyer or the seller of the commodity being shipped out, but in some cases, a trading intermediary will be responsible for the transportation arrangement. Under a CFR, or CIF terms, it will usually be the exporter of a dry-bulk commodity, who enters the charter market to secure the shipping space required. On the other hand, if the contract is negotiated on FOB terms, it is the buyer who takes on this task, and this can be quite complex and often risky.

From this point of view there is a very interesting situation that exists among South African exporters, especially as approximately 98% of the country's exports are conveyed by sea. South Africa's trade volumes represent approximately 3,5 percent of world seaborne trade in tonnage terms (Jones, 2001 in Chasomeris, 2003a), a performance that placed the country on the map of international maritime nations.

Table 2.4 shows the diversification of South Africa's exports, and it can clearly be seen that primary and beneficiated primary products accounted for almost 50% of the country's exports. The performance of South Africa's seaborne trade and the global destination of exports are shown in Appendix III and IV.

**Table 2.4**

<b>Diversification of South Africa's Export Basket</b>				
% of Total Exports				
	<b>1988</b>	<b>1991</b>	<b>1994</b>	<b>2001</b>
<b>Gold</b>	44%	34%	30%	15%
<b>Primary products</b>	21%	23%	22%	20%
<b>Beneficiated primary products</b>	25%	27%	27%	29%
<b>Material – intensive products</b>	5%	6%	6%	8%
<b>Manufactured goods</b>	5%	10%	15%	28%

Source: FNB Corporate Trade Services Analysis

The major part of South Africa's exports are shipped from the port of Richards Bay, which is presently South African leading port in terms of cargo volumes, and handles in excess of 80 million tons per annum, representing approximately 57% of all seaborne trade. Cargo volume of the bulk and breakbulk goods in the port accounted for 79,1 and 5,0 million tons respectively, with a total export of 77,8 million tons (NPA, 2002).

Given such a background this paper tries to critically analyze the choice of trade terms, particularly between FOB and CIF options, accustomed by major exporters of dry-bulk commodities from the port of Richards Bay.

## **2.5 CIF versus FOB dilemma and the Balance of Payments**

*Whosoever commands the sea commands the trade; whosoever commands the trade of the world commands the riches of the world and consequently the world itself.*

(Sir Walter Raleigh, upon the First Invention of Shipping, London, H. Moseley, 1650, in Stopford 1988:138)

The dilemma of the choice between FOB and CIF has attracted considerable attention in the maritime and academic fraternity of South Africa in past years, and at the same time is still a gray area of research. Jones (1987) stated “there are no hard and fast rules that apply in deciding whether a contract will be FOB or CIF and this is generally decided on a case-by-case basis according to the respective strengths of the seller and buyer at the time of negotiation...” and further, “traders are rational, profit maximizing operators, who seek the cheapest and most efficient means of transportation”.

In 1991, Jones returned to this theme, and his survey revealed a minority of staunch CIF supporters in parcel bulk and the mass bulk export sectors, while the majority of players still favored the FOB path.

Floor et al (1993:80) in the Report of the Committee of Inquiry into a National Maritime Policy for the Republic of South Africa confirmed that “most of the export cargo is sold FOB while imported cargo is purchased CIF which leaves the shipping arrangements to foreign importers and exporters”. The stake of South African business in the transportation of bulk cargo by sea to and from the country was consequently small. Nonetheless, all the parties agreed “for the state that is striving to strengthen the participation of national carriers in its import-export trade, it is clearly advantageous to export as many commodities as possible on a CIF basis, and to import on FOB terms wherever possible” (Jones, 1987).

This stance is generally in compliance with the line adopted by Government, which is presently holding a position of noninterference in statutory stipulation of terms of trade, and recognized that “terms of trade exercise considerable influence over the benefits the country receives from the maritime industry” (White Paper, 1996:36).

The Government has stated their commitment to “promoting an initiative to educate exporters of South African goods on the advantages of shipping their cargoes on South African vessels or on CIF terms” (White Paper, 1996:36). Furthermore consensus was reached on the influence that the choice of trade terms can exert on the overall performance of the country, in particular on the service account of balance of payments (BOP).

The relation between terms of trade and BOP has received considerable attention from Goss (1970), Chrzanowski (1985), Jones (1991), and more recently in the White Paper on National Transport Policy (1996), McConville (1999) and Chasomeris (2003). The point here is clear: “an increase on CIF or CFR export sales is likely to exert a significantly positive influence on the balance of payments” Jones (1991), and also that “shipping is clearly an important element of the balance of payments (McConville, 1999:207).

Interestingly enough, it is often argued that the existence of a national Merchant fleet is beneficial to the country’s balance of payments and the author agreed with this, and (Chrzanowski, 1985:104) states, ”A national Merchant Marine enables a country to reduce the outflow of foreign exchange for imported shipping services and earns foreign exchange by selling its services to foreign residents”. Thus the employment of South African flag vessels on the export side will have a direct positive influence on the country’s balance of payments, especially in two situations where:

1. Goods are exported on FOB terms on home-flag vessels, and
2. Goods are exported on CIF terms on home-flag vessels.

Unfortunately, this is not the case in the South African scenario, where an absence of a home-flag fleet, implies losses in important foreign exchange. The presence of companies like Island View Shipping (IVS), which is the largest bulk shipping operator in South Africa, does not make much difference, as it uses “ships controlled (but not always fully owned) by domestic shipowners” (Jones, 1991).

Perhaps this peculiar situation will change with promulgation of the new Registration of Ships Regulations, which came into force at the end of April 2003. Regulations, for the first time in history, have allowed for ships chartered to South African nationals to be registered in the country's Ship Register. South African Maritime Safety Authority (SAMSA) estimated that around 60 ships currently plying the high seas, involve South African interests (Conway, July 2003).

According to the Registrar of South African Ships Ms. Howard (July, 2003), Government is presently looking for possibilities of easing fiscal tax regimes for the country's shipowners. (See Chasomeris, 2003b for further discussion on the potential benefits of a tonnage-based corporate tax to South Africa and the South African Shipping industry).

After such a vigorous background on the matters of the worldwide shipping business and particularly shipping in South Africa, the author, in chapter three of this dissertation presents a critical analysis of the international terms of shipment in dry-bulk commodity exports from the port of Richards Bay.

## **Chapter 3 A SURVEY OF DRY-BULK COMMODITY EXPORTERS IN THE PORT OF RICHARDS BAY**

### **3.1 The Port of Richards Bay**

The Port of Richards Bay is a commercial cargo handling port located approximately 160 kilometers northeast of Durban and 465 kilometers south of Maputo on the eastern seaboard of South Africa (Ports of Southern Africa and Mauritius, 2003:67). The Port of Richards Bay, although a young port by international standards and initially built for bulk exports, has rapidly developed and diversified into other cargo handling forms. What makes the Port of Richards Bay arguably the most exciting port project in the world today is its capacity to develop into one of the largest ports in the world, in all aspects.

Richards Bay serves as a gateway to both domestic and international markets, and most of South Africa's coal and steel exports are routed through this port. The rapid development of the port has been a catalyst for the growth of Richards Bay. The port was responsible for attracting the establishment of large industries to the area including Mondi Kraft, two BHP Billiton aluminium smelters, Richards Bay Minerals, Foskor, Ticor South Africa and three woodchip plants with TATA Steel ferrochrome smelter currently undergoing a feasibility study.

The phenomenal expansion of the port since 1976 has seen the establishment of on average one new berth every 18 month, and around 1,700 commercial vessels per year now call at the Port of Richards Bay (Southern Africa Shipping news, July 2002:20).

Over and above being South Africa's largest bulk export and import harbour, the port has developed and diversified into other forms of cargo handling over the years. High speed, volume cargo handling and a fast turnaround of vessels are possible with the ample storage facilities and the port's six cargo-handling terminals that include:

- ❖ Richards Bay Coal Terminal, the world's largest single steam coal exporting company, with the capacity to export 72 million tones per annum;
- ❖ The Dry Bulk Terminal that imports and exports a wide variety of ores, minerals and woodchips. A conveyor belt network of 43 kilometers is linked to six harbour-bound industries;
- ❖ The Multi Purpose Terminal handles various cargoes, such as ferro alloys, pig iron, steel, forest products, granite, aluminium, bagged cargo, pitch coke, containers, heavy lifts, scrap steel and abnormal loads;
- ❖ Island View Storage handles a wide range of bulk liquids and liquefied gases such as propylene, ammonia, octane, acetone and butadiene;
- ❖ Richards Bay Bunker Terminal imports bunker fuel oils from Durban and Cape Town;
- ❖ The Sasol Agribulk Terminal exports phosphoric acid direct from the manufacturer through a pipeline to the tankers.

Cargo volumes passing through the six high-tech cargo-handling terminals in the Port of Richard Bay are presented in Table 3.1.

**Table 3.1**  
**Richards Bay cargo volumes**  
(million tons per annum)

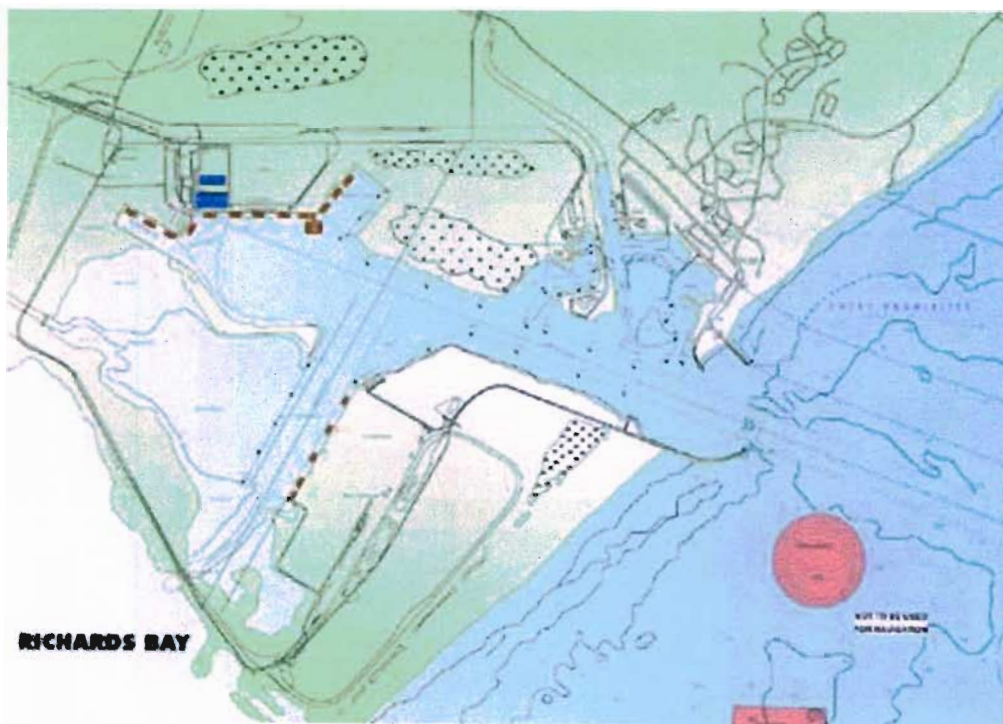
	1997	1998	1999	2000	2001	2002
<b>Imports</b>	4,5	4,9	4,9	4,6	5,0	5,1
<b>Exports</b>	68,5	74,3	74,3	76,5	78,0	77,8
<b>Total</b>	75,1	79,2	79,8	81,1	83,0	82,9
<b>Bulk</b>	71,1	75,2	76,1	77,2	79,2	79,1
<b>Breakbulk</b>	4,6	4,7	4,7	4,8	4,8	5,0

Adapted from: Ports of Southern Africa and Mauritius, 2003:81

Appendices V, VI and VII graphically present the performance of the Port of Richards Bay in comparison with other South African ports.

Figure 3.1 below shows the layout of the Port of Richards Bay harbour. To date only 40% of available land area is developed, however, this does not include the future development potential with areas lying outside the port limits. There are major developments in the port area coming from commodity producers, who continue to invest substantial funds into expansion projects of their facilities in Richards Bay.

**Figure 3.1 The Port of Richards Bay harbour layout map**



Source: South African Port Authority (2003)

During the 1960s and early 1970s, according to a Project of the Department of Transport called 'Moving South Africa' (1998), "feasibility studies showed that a dedicated coal export harbour at Richards Bay would not be a viable option, the Government nevertheless decided to proceed with the project". Almost three decades later since the inception, the Port of Richards Bay has grown into a self-sufficient, fully integrated cargo handling complex, ensuring the global competitiveness of the South African economy. "Although the dominant symbol of Richards Bay remains coal, the port's facilities and traffic base have subsequently diversified markedly, most notably so in the broad category of neo-bulk commodities such as steel, forest products and ferro alloys" (Jones, 1997:16).

### **3.2 The Survey**

The survey in the Port of Richards Bay took place between May and July 2003, and was quite exhaustive in terms of covering nearly a hundred per cent of exporters operating from the port. During the survey, thirty-six role players were questioned, some of them by means of a personal interview, and some of them telephonically. The list of role players, who participated in the survey, is presented in the Bibliography of this dissertation.

As it was expected, the survey had its own limitations, due to the fact that some of the surveyed exporters refused to share sensitive information, or participated unwillingly, especially over the telephone. Sometimes only incomplete information could be obtained due to the location of key decision-makers somewhere in outlandish destinations. But most of the maritime fraternity participated in the survey quite willingly with an understanding of the research importance. Also some role players were prepared to go the extra mile to help collect the requested information.

Nevertheless, the information collected during this survey in the Port of Richards Bay can be considered complete, and may be used for further analysis, and as a basis for policy-makers to help them make wise decisions in the field of South African maritime policies.

The intention of this survey was to test the following three hypotheses:

**First hypothesis:**

*The South African economy will benefit from an increased proportion of CIF dry-bulk exports from the Port of Richards Bay.*

**Second hypothesis:**

*Dry-bulk commodity exports from the Port of Richards Bay show a higher incidence of FOB sales.*

**Third hypothesis:**

*South African dry-bulk exporters from the Port of Richards Bay have enough bargaining power to negotiate a higher proportion of shipment on CIF terms.*

These are the three hypotheses that the dissertation endeavoured to investigate through the survey of key policy makers in the dry-bulk commodity exports from the Port of Richards Bay. The results of the survey are discussed below.

### 3.2.1 The survey of Richards Bay coal exports

In mineral exports, coal ranks third behind platinum and gold as the major source of foreign exchange for South Africa. Last year, the country exported 69 million tons of coal worth about US\$ 1,6 billion at an average price of US\$23 per ton (Financial Mail, May 23, 2003:34). Of that, 66 million tons went out through Richards Bay Coal Terminal (RBCT). According to research from Australia's Macquarie Bank, South Africa is the world's second-largest supplier of coal after Australia. South Africa's position as second is possible due to the volatility of Chinese exports that can switch at short notice between export and domestic markets.

RBCT is the world's largest export coal terminal, with the capacity to export 72 million tons of coal annually. With the intended extension of the new berth at the terminal, this capacity will be increased to 84 million tons. All the coal that has been exported from RBCT has had to be transported by COALink along the 560 kilometers of railway line from Mpumalanga. In November of 2000, the Terminal exported its first billion tons. This was moved by using 59,524 railway trains. Stretched end to end, those trains had an overall length of 148,810 kilometers – equivalent to 3,7 times round the world (Fairplay, November 23, 2000:28).

Table 3.2 below, presents the terms of shipment of coal and tonnage exported, together with a list of the seven major exporters, and shows that 85% of Richards Bay's coal is exported on FOB terms, while 15% is exported on CIF terms.

These seven major exporters together own RBCT, but ship all their cargoes separately, with the Terminal playing the role of a handling and loading facility on behalf of exporters.

The coal export industry is characterized by a lack of cooperation among exporters. With three producers namely Ingwe (BHP Billiton), Anglo-American Corporation and Xstrata playing the leading roles.

Unfortunately, only an aggregate picture of the terms of shipment is available, except for Eyesizwe, which exports all its coal on a FOB base. Recent years however have shown an increasing share of CIF terms with occasional shipment on DES terms (Harrison, May 2003).

**Table 3.2**  
**Terms of shipment of coal export**

Commodity	Exporter	Tonnage shipped, year 2002/2003	Terms of shipment	
			CIF	FOB
<b>Coal</b>	Ingwe (BHP)	25,455.000	<b>15%*</b>	<b>85%</b>
	Anglo-American	18,684.000		
	Xstrata	14,216.000		
	Tesa	3,864.000		
	Sasol	3,401.000		
	Kangra	1,561.000		
	Eyesizwe*	818.000		
	<b>Total tonnage:</b>	<b>68,000.000</b>		

\* Eyesizwe exported all cargoes only on FOB terms;

\*15% of CIF includes accidental shipping on DES terms.

[Source: Data provided by Harrison (May, 2003)]

Shipment on FOB terms is a norm in coal export, however bigger exporters like Ingwe and Anglo American accounted for a higher incidence of shipment on CIF or CFR terms due to an increasing involvement into vertical integration of the value chain.

### 3.2.2 The export survey of metals and minerals

The Port of the Richards Bay plays an important role in the export of South African metals and minerals. The port was responsible for attracting the establishment of large industries to the area including two BHP Billiton aluminium smelters, Richards Bay Minerals (RBM), and Ticom South Africa. The port is also involved in the export of other minerals delivered to the port by rail from the mines in the north of South Africa.

Table 3.3 below presents the terms of shipment of leading commodities from the port, and the tonnage shipped together with information about leading exporters in the industry.

**Table 3.3**  
**Terms of shipment of metals and minerals from the Port of Richards Bay**

Commodity	Exporter	Tonnage shipped, year 2002/2003	Terms of shipment			
			CIF	CFR	FOB	DES
<b>Aluminium</b>	BHPBilliton	490.000	<b>100%</b>			
<b>Andalusite</b>	Samrec	90.000	<b>87%</b>		<b>6%</b>	<b>7%</b>
<b>Vermiculite</b>	PMC*	148.000	<b>100%</b>			
<b>Titanium slag</b>	RBM	n/a*	<b>40%</b>		<b>60%</b>	
<b>Pig iron</b>		367.468	<b>30%</b>	<b>30%</b>	<b>40%</b>	
<b>Rutile</b>		80.000	<b>10%</b>	<b>10%</b>	<b>80%</b>	
<b>Zircon</b>		225.000	<b>40%</b>	<b>40%</b>	<b>20%</b>	
<b>Chloride</b>		769.215			<b>100%</b>	
<b>Sulphate</b>		37.000			<b>100%</b>	
<b>Ilmenite</b>		Ticor	61.000	<b>25%</b>	<b>25%</b>	<b>55%</b>
<b>Rutile</b>	16.000					
<b>Zircon</b>	17.000					
		<b>Total tonnage: 2,300.683</b>				

\* PMC is Phalaborwa Mining Company;

\* Tonnage of Titanium slag unavailable, however terms of shipment differ from others.

[Table created from various sources which include: Molver (May, 2003), Preyser (May, 2003), Lamberg (May, 2003), Spence (May, 2003), Thomas (May, 2003), Schaffler (May, 2003)]

This export sector is characterised by a high concentration of multinationals, namely BHP Billiton, RBM which is jointly owned by BHP Billiton and Rio Tinto plc, Ticor South Africa is a subsidiary of Australian Ticor Ltd and Samrec is part of the French Emery Group. While all aluminium is shipped in port through privately operated Strand Metal Terminal, all other products are handled by the Dry-bulk Terminal owned by Port Operations division of South Africa (Portnet).

The rest of the aluminium, which produced by two smelters in Richards Bay, approximately 120,000 tons is shipped into containers from the Port of Durban.

While three of the first exporters in Table 3.3 enjoy a relative monopoly on export, the two last RBM and Ticor compete fiercely for market share, without any possible cooperation in consolidation of tonnage.

Furthermore this sector shows a variety of the terms of shipment according to established practices in the market place and relative bargaining power of the sellers.

### **3.2.3 Survey results from exporters of fertilizer and wood chips**

In South Africa rock phosphate is mined in Phalaborwa mines and after is manufactured into fertilizer in the Richards Bay plant, ready for export. It is important to mention that nearly 90% of the world rock phosphate supply is destined for agricultural use, mainly in the form of manufactured fertilizer. Industrial and feed phosphates account for the other 10% (Drewry, 1993:139).

Rock phosphate is one of the five major dry-bulk commodities; however, the lack of available information limits research into this area of exports. After several attempts at obtaining relevant information, the author managed to acquire data that most correctly reflects the terms of shipment in the export of phosrock and fertilizers. This data is presented in the Table 3.4 below. As we can see from Table 3.4, Foscor exported 80% of commodities on CFR terms, with the remainder of 20% on FOB terms.

**Table 3.4**  
**Export of fertilizer and rock phosphate**

Commodity	Exporter	Tonnage shipped, year 2002/2003	Terms of shipment	
			CFR	FOB
<b>Fertilizer</b>	Foscor	90.816	<b>80%</b>	<b>20%</b>
<b>Rock phosphate</b>		316.573		
Total tonnage:		<b>407.389</b>		

[Source: Data provided by Spence (May, 2003) and Muller (July, 2003)]

The three woodchip mills in the Port of Richards Bay are responsible for creating stock for this lucrative export, with Silvacel mill belonging to Mondi Kraft, a wholly owned subsidiary of Anglo American plc. Two other mills include Shincel and Central Timber Coop (CTC) mills. The terms of shipment and tonnage shipped from the port by three exporters are presented in the Table 3.5 below. It is clear from the table that 100% of woodchips are exported from Richards Bay on FOB terms.

**Table 3.5**  
**Export of woodchips**

Commodity	Exporter	Tonnage shipped, Year 2002/2003	Terms of shipment
			FOB
<b>Woodchips</b>	CTC	1,859.694	<b>100%</b>
	Silvacel	1,797.620	
	Shincel	465.213	
Total tonnage:		<b>4,122.527</b>	

[Sources: Data provided by Shange (May, 2003), Naidoo (May, 2003), Swart (May, 2003), and Nun (May, 2003)]

The export of woodchips is characterised by a lack of cooperation among the exporters and the buyers, mostly Japanese paper producers, who exclusively regulate terms of shipment due to shipping protectionism and dedicated specialized ship's tonnage. The shipment of woodchips requires specially constructed woodchip carriers with a high internal cubic capacity to accommodate the low-density commodity.

The export of woodchips is known for establishment of long running contracts of sale, with some contracts running for a period of 25 years.

### **3.2.4 Survey of ferrochrome exporters**

South Africa is not only the largest world producer of chromite, the name given to the ore, but also accounts for almost one half of the Western Worlds chrome alloy output. Because it has several end-users, chrome ore, is more correctly known as chromite and it is produced in a range of grades for sale on the world market. Normally, in the marketplace, distinction is made between hard lumpy chrome ore and fines or concentrate.

Seven producers export chrome ore and chrome alloys from the Port of Richards Bay. Two of them, the major mining houses like Xstrata plc and Samancor (joint venture between BHP Billiton and Anglo American plc), control more than three quarters of chrome ore mining capacity in the country. Furthermore, according to smaller producers in this highly competitive industry, Xstrata and Samancor are responsible for determination of the price for chromite products on the world market. The chrome trade is characterized by fierce rivalry between producers, and therefore no attempts among them for any consolidation of shipped tonnage.

Additionally, the chrome ore trade from South Africa is characterized by above average, well over 7,000 nautical miles shipping distance from major destinations. This would require consolidation of the small parcels size consignments into bigger consignments up to approximately 40,000 tone shipments.

This problem leads to a situation where usually, parcels from various producers are shipped in the holds of one bulk carrier, sometimes on completely different terms of shipment.

The ferrochrome terms of shipment together with information about the seven exporters and their shipped tonnage is summarised in the Table 3.6.

**Table 3.6**  
**Export of ferrochrome**

Commodity	Exporter	Tonnage shipped, year 2002/2003	Terms of shipment					
			CIF	CFR	FOB	DDU	DES	EXW
<b>Chrome ore</b>	Bayer	120.000	5%	5%	90%			
	ASA Metal	80.000	30%		70%			
	SA Chrome	80.000	100%					
<b>Ferro alloys</b>	Xstrata	905.000	85%			15%		
	Samancor	500.000	25%	5%	65%		4%	1%
	ASA Metal	45.000	80%		20%			
	Hernic	250.000	90%		10%			
	Ore and Metals	250.000	90%		10%			
	SA Chrome	n/a			100%*			
		<b>Total tonnage: 2,230.000</b>						

*\*SA Chrome shipped their entire Ferro alloy on FOB terms.*

[Table created from various sources, which include: Klue (May, 2003), Roodtman (May, 2003), Loynes (June, 2003), Ives (June, 2003), de Beer (June, 2003), Jordaan (June, 2003), Cloete (July, 2003)]

As can be observed from the table, the exporters of ferrochrome shipped their cargoes on six different terms of shipment, almost half of the available thirteen in Incoterms 2000. Interesting enough, all consignments shipped on DDU, DES and EXW terms where destined for Europe.

### **3.2.5 Export of neo-bulk**

The export of neo-bulk from the Port of Richards Bay includes commodities like paper, pulp, steel including scrap metal, and granite.

Mondi Kraft as a wholly owned subsidiary of Anglo American plc is responsible for all exports of paper and pulp from the port. All bulk paper and pulp are exported to countries in Europe on DDU terms, where Mondi owns warehouses. The rest of Mondi's exports, approximately 200,000 tons, are shipped in containers around the world on CIF or CFR terms.

Two producers, namely Iscor and Highveld, ship steel including scrap metal from the port, with the other two exporters – Oreport and Columbus available. The two latter use port facilities irregularly. Minimum information is available about steel exports, except that all consignments leave the port on FOB terms. Iscor are known for their policy of "Free on board or nothing"(Lamberg, May 2003).

Export of granite from the port features two prominent exporters, Kelgran and Kudu/Marlin, which together make up approximately 78% of the South African granite industry. Kelgran is currently rated among the top two granite exporters in the world according to tonnage exported, with 5,7 per cent of the total world export granite market, and close to 40% of the local market share (Cant et al, 1999:355).

Granite is normally shipped in customer sized blocks and slabs which are now amendable to containerisation. It is estimated that South African granite producers exported around one million tons of highly sought after dimension stones a year (van Rooyen, 2003).

The terms of shipment of neo-bulk commodities from the Port of Richards Bay together with tonnage and the prominent exporters is presented in Table 3.7 below.

**Table 3.7**  
**Export of neo-bulk commodities**

Commodity	Exporter	Tonnage shipped, year 2002/2003	Term of shipment			
			CIF	CFR	FOB	DDU
<b>Pulp and paper</b>	Mondi Kraft	225.000				<b>100%</b>
<b>Granite</b>	Kelgran	325.000	<b>100%</b>			
	Kudu/Marlin	175.000		<b>100%</b>		
<b>Steel including scrap metal</b>	Highveld	205.000			<b>100%</b>	
	Iscor	157.400			<b>100%</b>	
		<b>Total tonnage: 1,087.400</b>				

[Table created from various sources, which include: Naidoo (May, 2003), Loynes (June, 2003), Taylor (June, 2003), van Rooyen (June, 2003), van Biljon (July, 2003), Vorster (July, 2003)]

Because of the large volumes being handled, Kelgran and Kudu/Marlin are able to command competitive freight rates – an important end-cost element, through consolidation of tonnage together with other smaller exporters. As can be seen from Table 3.7 all granite is exported on CIF or CFR terms.

Sadly though due to reluctance on the part of the South African Port Authority to provide exporters with an area for an export depot, this lucrative export in the future could be lost to the Mozambique Port of Maputo, where land has already been set aside for a new granite export terminal.

Furthermore, the author observed that granite export seem to be the only sector of exports where cooperation among producers is highly appreciated and perceived as an important factor in negotiation of favorable freight rates.

Thus, this section has recorded the results of the survey into the terms of shipment in dry-bulk commodities from the Port of Richards Bay. The next chapter will further analyse the findings of the survey together with an evaluation of the data results.

## **Chapter 4 RESULTS OF THE DATA EVALUATION AND FINDINGS**

### **4.1 Combined analysis of the Survey results**

The survey results into the terms of shipment of dry-bulk commodities from the Port of Richards Bay help to create a complete and impressive picture of contract terms that currently govern the trade. Responses received from exporters, on whether goods were shipped on an FOB or a CIF base involved a wider range of terms, which in certain commodities go beyond, these two most often used shipping terms. Furthermore, the response received varies by industry sectors, commodities and their respective market values, marketing approach of conducting business, and pure logistical considerations.

After combining all the data available for the list of nineteen commodities exported from the port, it can be finally presented as Table 4.1. It is important to mention however that in reality, more than nineteen commodities are shipped from the port and commodities like ferro manganese, ferro silicon, logs, pitch coke and copper concentrate were excluded from the survey, due to the unavailability of information at the time of collecting data.

Nevertheless, information provided in Table 4.1, in the author's opinion, is more than enough to create a coherent commodity-by-commodity impressive picture of the overall trends and patterns governing the dry-bulk commodity exports. Table 4.1 below offers an overview of the terms of shipment in respect of commodities covered in the survey, and serves as unequivocal evidence of the contemporary commercial practices adopted by exporters in South Africa.

According to this evidence, an intriguing situation emerges. If one calculates simple average, then only 45% of commodities are shipped from the port on FOB terms. Thus leaves, the shipping arrangement in the hands of foreign buyers, while the nearly 55% is shipped on terms, which allows South African exporters to fix the shipping space. From 55%, 33% is shipped on CIF, 16% on CFR and five per cent on DDU terms. The rest of terms used in port are DES and EXW that accounted together for less than one per cent.

**Table 4.1**

**Terms of shipment of dry-bulk commodities from the Port of Richards Bay**

Commodity	Tonnage shipped, year 2002/2003	Terms of shipment					
		CIF	CFR	FOB	DDU	DES	EXW
Coal	68,000.000	15%		85%			
Woodchips	4,122.527			100%			
Fertilizer	90.186		80%	20%			
Phosrock	316.573		80%	20%			
Steel*	362.400			100%			
Aluminium	490.000	100%					
Pulp & paper	225.000				100%		
Andalusite	90.000	87%		6%		7%	
Vermiculite	148.000	100%					
Titanium slag	n/a	40%		60%			
Pig iron	367.468	30%	30%	40%			
Ilmenite	61.000	25%	20%	55%			
Zircon	242.000	40%	38%	22%			
Rutile	96.000	13%	12%	75%			
Chloride	769.215			100%			
Sulphate	37.000			100%			
Chrome ore	280.000	40%	2%	58%			
Ferro alloys	1,950.000	71%	1%	20%	7%	< 1%	.01%
Granite	500.000	65%	35%				
Totals	78,147.369	33%*	16%	45%	5%	Less than 1%	

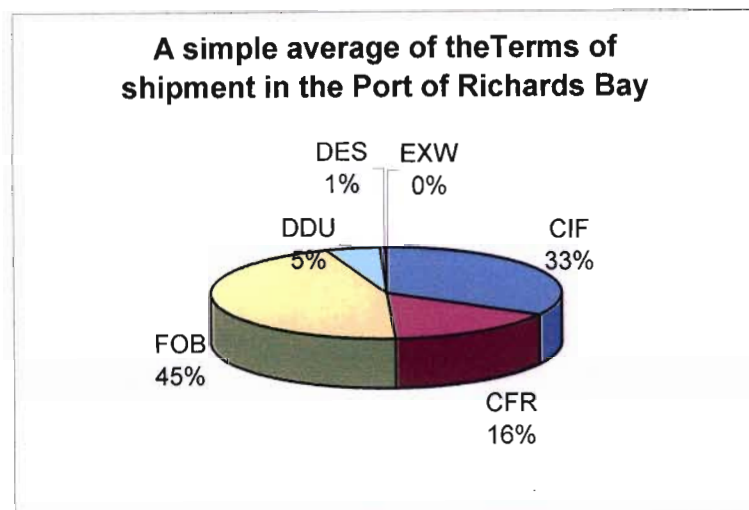
\*Export of steel includes scrap metal

\* Simple average percentage of different terms of shipment in the Port of Richards Bay.

[Source: Table created by author with tonnage information provided by Shange (May, 2003)]

Diagram 4.1 below visually represents a simple average of the frequency distribution of the terms of shipment among exporters of the dry-bulk commodities shipped from the Port of Richards Bay.

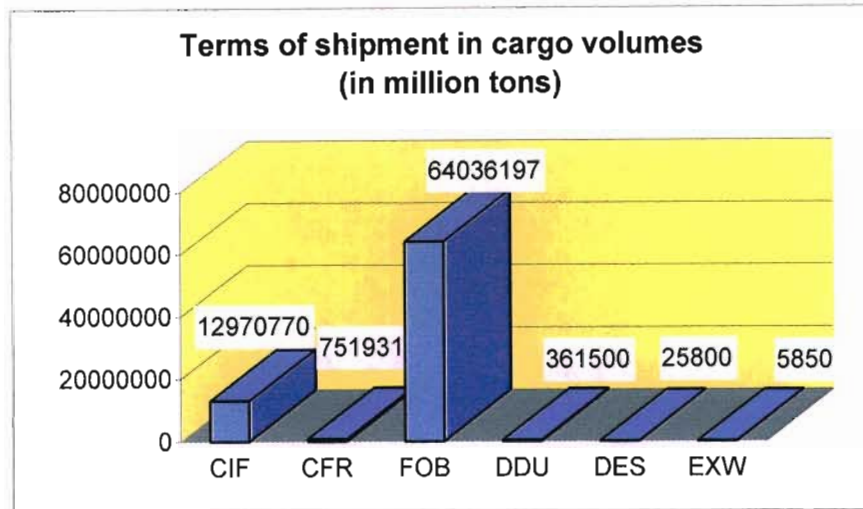
**Diagram 4.1**



This promising situation as shown in Diagram 4.1 is deceiving due to the fact that in real tonnage terms, FOB shipment still commands the lions share of all export consignments handled in the port. In terms of cargo volumes, the more than 78 million tons of cargo covered in the survey, more than 64 million is shipped on FOB terms, which constitute approximately 82% of all exported commodities from the Port of Richards Bay. Even without taking account of other commodities, the fact that 85% or (57,8 million tons) of South African coal is shipped on an FOB base hugely overweighs the balance of control in the shipping arrangement in favour of foreign importers.

Thus Diagram 4.2 below presents a clearer perspective on the international terms of shipment in analyzing cargo volumes in dry-bulk exports from the Port of Richards Bay.

**Diagram 4.2**



A very interesting picture emerges when the author decided to compare the results of this survey with the results obtained in a similar survey conducted by Jones and Kennedy in 1988. Perhaps a comparison like this would not be absolutely correct from the data collection point of view, but can still help identify historical terms of shipment trends occurring in the last 15 years in the field of South African dry-bulk commodity exports. This comparison reveals the following:

1. No relative changes occur in the export of coal, and to a certain extent in the export of ferroalloys and rock phosphate. These three commodities show relatively the most consistency in the terms of shipment for last 15 years.
2. Improvement can be observed in chrome ore exports, where today 40% of cargoes are shipped on CIF terms as compared with only 10% in 1988.
3. Export of vermiculite shows a dramatic change from 100% FOB in 1988 to 100% CIF in 2003.

4. The absolute champion of comparison is paper and pulp export. Due to the increasing involvement in vertical integration, exporter have moved from 100% CIF shipment in 1988 to 100% DDU terms in 2003.

The results of the above-mentioned comparisons are presented in the Table 4.2 below. Unfortunately, due to the limited data in the 1988 survey, the comparison cannot be projected on all nineteen commodities surveyed in 2003.

**Table 4.2**

**Comparison in terms of shipment, 1988 and 2003 surveys**

Year	1988*		2003			
	Terms of shipment		Terms of shipment			
Commodity	CIF	FOB	CIF/CFR	FOB	DDU	DES
<b>Coal</b>	<b>15%</b>	<b>85%</b>	<b>15%</b>	<b>85%</b>		
<b>Chrome ore</b>	<b>10%</b>	<b>90%</b>	<b>42%</b>	<b>58%</b>		
<b>Ferroalloys</b>	<b>80%</b>	<b>20%</b>	<b>72%</b>	<b>20%</b>	<b>7%</b>	<b>1%</b>
<b>Phosrock</b>	<b>85%</b>	<b>15%</b>	<b>80%</b>	<b>20%</b>		
<b>Paper&amp;pulp</b>	<b>100%</b>				<b>100%</b>	
<b>Vermiculite</b>		<b>100%</b>	<b>100%</b>			

\* 1988 data adapted from Jones and Kennedy (1988).

Some of the shifting in the terms of shipment in Table 4.2 can be attributable to dramatic changes, which have occurred in South Africa in the last decade. The situation has changed from one where the country was a pariah on the world markets, but has now become fully-fledged and integrated into the global economy.

On the one hand these changes have led to an admission of South Africa into the world market, but on the other it exposed the country's commodity based exports to fierce competition from other prominent commodity export countries.

Additionally, the advent of major multinational commodity mining and producing houses on the South African arena plays a vital role in shaping of the current trends in dry-bulk exports. The presence, or rather integrated involvement of the multinational corporations like BHP Billiton, Anglo American plc, Xstrata plc, Rio Tinto and Mitsubishi, definitely have a major influence on the choice of terms of shipment that govern dry-bulk commodity exports nowadays.

Global multinational companies are not only responsible for a greater variety of terms of shipment in the exports from the Port of Richards Bay, but have also accounted for the higher incidence of CIF and more advanced arrival contract terms in conducting their export operations. Without any doubt global players are able to flex their muscles in more favourable negotiations of the contracts of sales, and are quite often better positioned globally to do so. Not to mention transfer pricing, which is still a preferred way of conducting business among multinationals, and puts them in a better positions compared with their domestic counterparts, who's performance depends on the volatility of the exchange rates and local taxation laws. The transfer pricing strategy is most obvious in the exports of paper products, metals, minerals and ferro alloys.

#### **4.2 Factors influencing the terms of shipment**

One of the objectives of this study was to identify the reasons for the particular choice in the terms of shipment, and to create a comprehensive list of variables that influenced that choice in terms, their present importance, and compliance with the best commercial practices available on the market.

As with terms of shipment, reasons for a particular choice of terms vary from commodity to commodity, and from exporter to exporter, and sometimes can differ within the various commodity divisions in the same organization.

Such a dispersion of opinions however, certainly do not lessen the importance of this analysis which bears greater implications on the state of exporter's shipping expertise, and subsequently control of the costs of shipment. The analysis rather reveals a disturbing fact, that the majority of exporters, irrespective of the terms of shipment, blatantly defend their respective position as the most appropriate choice under the prevailing circumstances and conditions. This somewhat ethnocentric approach was most obviously expressed in the export of certain minerals, chromites and steel.

#### **4.2.1 Factors in favour of FOB terms**

The following factors were expressed most often in the defense of shipment on Free on Board terms:

- 1. The choice in terms of shipment depends on customer requirements;**
- 2. Customized practices in the trade of certain commodities;**
- 3. Buyers have stronger market power;**
- 4. Buyers can negotiate better freight rates, compared with abilities of the sellers;**
- 5. FOB terms are dictated by exporter's commercial decisions and provide shorter terms of payments as opposed to CIF terms;**
- 6. Extensive knowledge of the market conditions, or necessary, involvement in shipping is not a value added activity, and firms favour a concentration on the core mining activities of the businesses.**

Once again, most responses did not question the expertise of the exporters in the shipping business per se, but rather indicates wisdom behind choices made by experienced sellers and businessmen. With all respect to the “business acumen” of the exporters, it has become clear that some of them possess little expertise in shipping, nor a familiarisation with the complexities of Incoterms. Blunders like “FOB terms provide shorter terms of payments as opposed to CIF terms” undoubtedly indicate that according to certain exporters CIF terms are mistakenly believed to be arrival contracts, in which the seller would bear all risks and costs until the goods have actually arrived at the agreed point. However, it must be stressed that CIF terms are of the same nature as the FOB terms in that the seller fulfils the contract in the country of shipment. Thus, the CIF terms, like FOB terms, fall within the category of shipment contracts.

Without any bias towards FOB terms, it must be admitted that customer requirements create a fundamental shift in contemporary commercial practices, where the term of “supply chain” was replaced by the term of “demand chain”. The critical difference is that demand-chain thinking starts with customer and works backwards. This practice breaks out of parochial approaches that focus solely on reducing transport cost. It supports a “mass customisation” viewpoint, in which goods and services are offered in ways that support customer’s individual objectives. This explains why the customer requirements approach is having such wide implications on the choice in terms of shipment, independently of FOB or CIF terms.

The 2003 survey has revealed that as compare with the Jones and Kennedy survey in 1988, two arguments in favour of FOB shipment terms were excluded. These arguments are firstly restrictive maritime practices on the part of foreign buying nations, and secondly, the threat of political actions against vessels carrying South African cargoes. Perhaps the first one is still applicable in certain trades, the second has definitely disappeared due to the new democratic dispensation of South Africa after the elections in 1994 (for a further discussion of arguments in favour of FOB or CIF terms see Jones and Kennedy 1991, “The terms of shipment of South African seaborne export”).



Furthermore the argument of South African exporters about dominated position of importers in the market place is questionable, especially in the exports of coal and chromite where South Africa commands the leading position. This peculiar attitude so far is most certainly attributable to the inability of South African exporters to create a single coherent industrial body. A body powerful enough to protect their mutual interests in the global economic arena.

Australian coal suppliers were able to form such an industrial body, and successfully created a deadlock over FOB/CIF price negotiations. Thus, there is already a precedent created between Australia coal exporters and Japan's electric power companies (Fairplay, April 18, 2002:55).

In South Africa, among the surveyed exporters in the Port of Richards Bay, this kind of a cooperation was only observed in the granite export industry, where five exporters through their collective buying power were able to negotiate better freight rates and achieve economies of scale through the consolidation of the shipped tonnage.

However, the dominant power of buyers is most evident in the export of woodchips, and steam coal. With woodchips it is importers who control a fleet of specialized bulk carriers. While in steam coal exports, buyers are not only predominantly big state owned energy supplier companies, but also through marketing intelligence gather information about stock piling in the Richards Bay terminal and used it to their advantage to negotiate a better spot deal, that is, the Richards Bay Coal Terminal was forced to drop FOB prices due to high level of stock. Indeed supply chain capacity, sales on FOB terms and vessel booking systems are overwhelming determinants of harmonized logistics in coal exports.

#### **4.2.2 Factors in favour of CIF terms**

The following factors were the most common responses in favour of CIF and arrival terms like DES and DDU that allowed sellers to nominate the vessel:

- 1. The choice in terms of shipment depends on customer requirements;**
- 2. Control by exporters over the value chain and logistics of the operations;**
- 3. Shipment on CIF terms allowed buyer to secure the vessel most suitable for trade;**
- 4. Ability of the seller to negotiate better freight rates, than buyer;**
- 5. CIF terms provide exporters with additional revenue.**

The proponents of CIF terms agreed that shipments on FOB terms are easier, but limited compared with C-terms, or more extended arrival contracts. Furthermore CIF/CFR terms allowed shippers to create added value, control inventory levels, and are considered more market orientated compared with FOB terms. Three of these factors were mentioned in the 1988 survey while the customer's requirement factor was explained in section 4.2.1.

An additional factor is that CIF allowed buyer to secure the vessel most suitable for trade, and is usually very appropriate for shipment from Richards Bay, where the small size of parcel consignments normally requires laborious consolidation of break bulk tonnage from different exporters in the holds of one bulk carrier. This situation is so typical to Richards Bay that it deserved the term of "grocery ship", and most notable in the exports of metals, minerals and chromite.

Nothing was said about more extensive arrival terms like DDU and DES that are presented in the list of terms of shipment from the Port of Richards Bay. These terms not only required the seller to nominate the carrying vessel, which is similar to CIF terms, but also keep exporters responsible for the arrival of the goods at the agreed place or point of destination within the country of import.

The seller must bear all risks and costs in bringing the goods thereto. Thus these terms are more advanced in the exporters responsibilities, as compared with CIF terms, which are departure contracts. Nevertheless, they are included in the same group with CIF terms in this study because of the conditions where seller fixes the vessel.

“Delivered ex ship”(DES) terms used by exporter of andalusite - minerals that compete in their properties with bauxite and exporters of ferro fines allow sellers to better coordinate logistics of export operations.

An interesting picture emerges with “Delivered duty unpaid” (DDU) terms, which is extensively used by Mondi Kraft in the pulp and paper exports, and by Xstrata plc in the export of ferro alloys. It must be noted, that DDU terms may be used irrespective of the mode of transport “but when delivery is to take place in the port of destination on board the vessel or on the quay, the DES or DEQ terms should be used” (Incoterms 2000:113).

So why in this case, do exporters continue to use terms that are not appropriate to the prevailing conditions? The answer is simple. With the explanations of Incoterms 2000, “Delivered ex quay”(DEQ) terms can be used only when the goods are to be delivered by sea on discharging from a vessel onto the quay in the port of destination.

However if the parties wish to include in the seller’s obligations the risks and costs of the handling of the goods from the quay to another place (warehouse) in or outside the port, the Delivered duty unpaid (DDU) or Delivered duty paid (DDP) terms should be used (Incoterms 2000:105).

Thus by using DDU terms South African exporters utilized the warehousing facilities available for them in countries of destination. A 6th factor in favour of CIF terms, or more precisely in favour of arrival contracts can be added to our list:

- 6. The terms of shipment where sellers nominated the carrying vessel allowed exporters to make use of warehouse facilities in the countries of destination.**

In fact Mondi International owns big distribution centers in Italy, England, Spain and Belgium, and Xstrata shipped their export on DDU terms into a warehouse in Rotterdam (Cloete, July 2003).

Most notably, with the exception of Spain, all these warehouses are situated in the most favourable locations for any distribution center, all these warehouses lie in the banana shaped area representing the economic heart of Europe (Europe's "golden banana area"), and is ideal for the purposes of serving the European market. This allows these multinational companies to achieve a competitive advantage and improve distribution of their exports towards the final customers. See Appendix VIII for visual presentation of Europe's most favourable locations for any distribution centers.

#### **4.3 Terms of shipment and South African ship operators**

As was mentioned in the introduction and context, an absence of a South African Merchant Marine plays a critical role in the overall performance of this country's economy. Currently the South African Merchant Marine simply does not exist, and this is detrimental not only to South Africa's foreign exchange, but also in terms of invisible earnings, creating job opportunities, and expanding the skills base in the dry-bulk business.

Demise in the South African bulk shipping commenced in 1999, when Safmarine Container Lines sold their bulk operations division to the Greek Restis family through its Capital Finance. This decision brought to an end what has been regarded as South Africa's principal shipping line. Furthermore the decision of Island View Shipping (IVS) in 2001 to combine their fleet in one single pool with Lauritzen Bulkers (LB) further deepened the troubles of the South African Merchant Marine. Nowadays, despite being the largest bulk shipping operator in South Africa, Island View Shipping, usually controls its ships rather than owns them. Currently, from more than fifty vessels in the LB/IVS pool, fourteen ships are allowed to fly IVS colours but only partially belong to them.

The rest of the ships are normally chartered on long terms contract. This leads to a situation where most of the dry-bulk commodities from the Port of Richards Bay are forced to leave South African shores on board foreign owned vessels.

From a most optimistic view, if we hypothetically assumed that IVS plays a prominent role in South African seaborne export, of the 1,566 vessel calls in Richards Bay in 2002 (Ports of Southern Africa and Mauritius 2003:81) that includes imports as well, only 55 calls belong to the LB/IVS pool (Camminga, June 2003) this constitute only 3.5 per cent of all vessel calls in port. Thus virtually close to one hundred per cent of dry-bulk export from the Port of Richards Bay is shipped in holds of foreign controlled vessels.

This fact in no way diminishes the Island View Shipping ability and expertise in providing reliable and professional cargo transportation services, but rather proves that despite even the most favourable terms of shipment used by exporters, many of the potential advantages will be lost for the South African economy. If exports are shipped on non-home flagged vessels.

However it also becomes clear from the survey, that IVS ships are quite often deployed by exporters in Richards Bay, and some of them used contracts of affreightment (COA) as proof of long standing, profitable and trustful relationships between exporters and South African ship operators.

The situation as described does not only happen in South Africa, but is typical for countries like Brazil and Australia as well. These countries have experienced a startling free-fall in a dwindling home flag fleet. In Brazil, the world's fifth largest country, something like 98% of all Brazil's exports leave on ships owned or operated by foreign-controlled companies (Fairplay, November 14, 2002:31). As with South Africa, governments in these countries have failed to come to grips with shipping policy, despite its dependence on exports for economic propulsion and the vital importance of so much needed foreign exchange. The lessons have already been learned elsewhere in the world, and the South African maritime industry is going through similar problems found in other countries. If the South African Government wants a shipping industry that provides economic benefits to society, it must create conditions that are most favourable for the existence of a home based Merchant Marine.

The author believes that blatant reliance on market forces to resolve underlying issues will not be able to improve the country's balance of payments, even if under the most unimaginable conditions, all South African exports were shipped on CIF terms of shipment.

#### **4.4 The terms of shipment and the balance of payments**

Finally, it is necessary, in the context of this paper, to make a statement that emphasizes the importance of the terms of shipment for a country's balance of payments. It will be a very daunting task however to make any estimation of the amount of money lost in payments on FOB terms for transport services to foreign shipowners.

Hence we can only approximately indicate, that if 57,8 million tons of South African coal was shipped from the Port of Richards Bay in 2002 on an FOB basis, with an average freight rate of US\$6.31 per ton (Spalding, November 2002a), the country's service account of the balance of payments "lost" around US\$364,7 million in foreign exchange, or over R3,7 billion in rand terms (based on an exchange rate of approximately R10,30 to US\$1,00 for November 2002). In 2003 with the increase in freight rates, which stood for June at an average of US\$11.83 per ton (Spalding, May 2003b) the magnitude of losses will be even greater.

But rather than to continue to engage in a number crunching exercise in the balance of payments, chapter five of this study draws conclusions, policy recommendations, and identifies areas for future research in the field of South Africa's dry-bulk exports.

## **Chapter 5 CONCLUSIONS, POLICY RECOMMENDATIONS AND AREAS FOR FUTURE RESEARCH IN THE FIELD OF SOUTH AFRICA'S DRY-BULK EXPORTS**

### **5.1 Conclusions**

Approximately 98% of South African exports are conveyed by sea. The volume of South Africa's sea trade represents approximately 3,5 percent of world seaborne trade in tonnage terms, a performance that placed the country on the map of international maritime nations.

The major parts of South Africa's dry-bulk exports are shipped from the port of Richards Bay. Richards Bay is the seventh world largest port in terms of cargo volumes, and handles in excess of 80 million tons per annum. This represents approximately 57% of all South African seaborne trade. The greater part of South African seaborne trade, especially on the export side consists of shipments of primary (raw) products or beneficiated primary products, and accounts for approximately 140 million tons of all cargoes. The export of primary products or commodities is a vital part of the South African economy and generates a substantial amount of the country's foreign exchange.

This dissertation concludes that shipment on FOB terms continues to command the lion's share of all export consignments handled in the port. In fact from the more than 78 million tons of cargo covered in the survey, more than 64 million is shipped on FOB terms, which constitute approximately 82% of all exported commodities from the Port of Richards Bay in cargo volumes. A high incidence of shipments on FOB terms leads the final arrangement of shipping in the hands of foreign buyers. This represents a substantial loss of revenue in invisible earnings for the country's service account of the balance of payments.

The conclusion of the critical analysis into the terms of shipment in dry-bulk exports from the Port of Richards Bay has led to conclusions in the testing of the three hypotheses identified in the dissertation.

**First hypothesis:**

*The South African economy will benefit from an increased proportion of CIF dry-bulk exports from the Port of Richards Bay.*

As stated elsewhere in this dissertation, the choice of CIF as opposed to FOB terms of shipment give the dry-bulk exporters the option to nominate carrying vessels. These arrangements are not only consistent with the best commercial practices of conducting international business and a market related approach to the value chain activities, but most importantly, they allow sellers to control the cost of the shipment. Thus compared with FOB, sales on CIF terms can be associated with possible macro and micro-economic advantages for the wider society. These include:

- 1) Improved competitiveness of the South African economy on the international market and an increase in the country's global integration;**
- 2) Wider benefits for society as a whole through positive externalities, which lead to greater employment of South African factors of production;**
- 3) Improvements in the services account of the South Africa's balance of payments;**
- 4) Increased industry value added activities and establishment of long terms linkages with export markets;**
- 5) Development of competitive in-house levels of shipping expertise.**

These advantages however, can only be achieved in the event of a positive outcome of certain underlying issues, these issues are:

- 1) A realization by exporters, that shipment on FOB terms can only offer short-terms solution in the marketing approach;**
- 2) A vertical integration of domestic companies into the value chain activities and willing participation in shipping;**
- 3) The availability of the home flagged shipping tonnage;**
- 4) An acknowledgement by all role players of the strategic importance of the shipping industry in the South African economy;**
- 5) The creation of conditions most favourable for attracting additional shipping tonnage onto the South African Ship Register.**

Some of these issues depend on expertise and the promotion of a dedicated shipping mentality on the part of South African exporters fraternity. Other issues may require direct intervention by Government, whose role as policy maker cannot be overstressed. This study comes back to these issues in the section on policy recommendations.

#### **Second hypothesis:**

*Dry-bulk commodity exports from the Port of Richards Bay show a higher incidence of FOB sales.*

An intriguing situation emerges from the findings of this study, when on calculating simple averages only 45% of commodities are shipped from the port on FOB terms, thus leaving the shipping arrangement in the hands of foreign buyers, while the nearly 55% is shipped on terms, which allows South African exporters to fix the shipping space. From 55%, 33% is shipped on CIF, 16% on CFR and five per cent on DDU terms. The rest of the terms used in port are DES and EXW, which accounted together for less than one per cent.

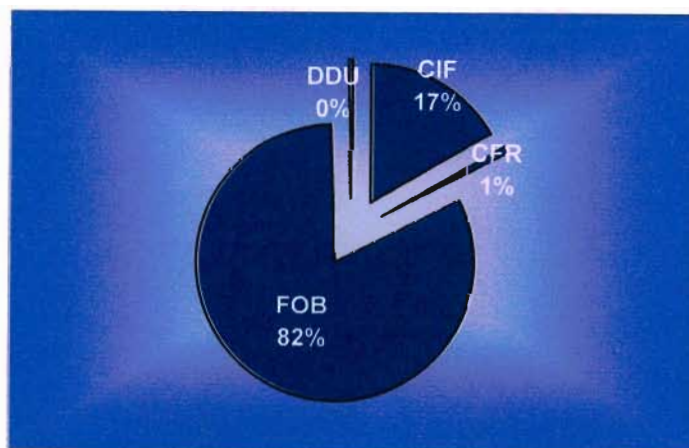
However the promising situation presented by the simple average is deceiving, in real tonnage terms the majority of cargoes are shipped on FOB terms.

In fact from the more than 78 million tons of cargo covered in the survey, more than 64 million is shipped on FOB terms. This constitutes approximately 82% of all exported commodities in terms of cargo volumes from the Port of Richards Bay. The fact that 85% or (57,8 million tons) of South African coal is shipped on an FOB base hugely overweighs the balance of control in the shipping arrangement in favour of foreign importers. Thus a higher incidence of shipments on FOB terms would have a negative impact not only on the country's foreign exchange income, but also decrease invisible earnings, decrease job opportunities and contract the skills base in the South African dry-bulk industry.

Diagram 5.1 below clearly shows the approximate distribution of international terms of shipment from the Port of Richards Bay as a percentage of the total cargo volumes exported. The diagram serves as unequivocal evidence of the imbalance in the terms of shipment dispersion, and clearly illustrates the predominance of FOB terms as the leading term used in exports of dry-bulk commodities from the port.

**Diagram 5.1**

**Terms of shipment as a percentage of the total volumes exported from the Port of Richards Bay\***



\* *DES and EXW terms not included due to minute percentages*

**Third hypothesis:**

*South African dry-bulk exporters from the Port of Richards Bay have enough bargaining power to negotiate a higher proportion of shipment on CIF terms.*

The typical export organisations are rational, profit maximizing enterprises, with an enormous task on their hands to conduct successful business, and negotiate successful contracts of sale with foreign buyers. It is the outcome of such contracts that ultimately determines the terms of shipment and consequently the responsibility for shipping arrangements. Historically, South African exporting departments of major mining houses were responsible for this daunting task. The situation where the country had been an outcast on the global economic arena, led to the view of export operations and supply chains as short terms goal activities. Therefore the shipping leg of distribution lies outside of the core business of mining houses. Thus logistics of operations only include delivery of mined commodities from the mine pit to the rails alongside sea-going vessels in the port. Furthermore, typically only backward vertical integration in the mining industry was considered as the strategy to build the competitive advantage of the industry value chain. Today, with the change in political and economic conditions, South Africa has become a fully-fledged player in the global economy with better access to foreign markets, but the legacy of the past is still haunting the country's exporters competitiveness and serves as an impediment to wielding more bargaining power in negotiation of the contract of sales. Global integration of South Africa requires from mining companies not only a change in strategies towards forward vertical integration in the business value chain, but also at the same time needs new skills in distribution, logistics and shipping. A lack in these necessary skills and slow responses to changed market conditions is most certainly contributing to the inability for industry to exert more power in negotiating sales contracts and commanding the terms of shipment. This explains the current situation where most commodities from the Port of Richards Bay are still shipped with a higher incidence of FOB contracts.

Furthermore, there is an inability of South African exporters to create a single coherent industrial body that is powerful enough to protect their mutual interests in the negotiation of sales contracts. This in a global economic arena, is yet another big impediment to increasing the proportion of shipments on CIF terms.

Australian coal suppliers, were able through such an industrial body to successfully create a deadlock over FOB/CIF prices, and created a precedent of such a nature between Australian coal exporters and Japan's electric power companies. The stalemate not only frustrated Japan's electric power companies, but has also made it difficult for shipping companies to get an idea of when they will be able to conclude contracts to transport coal, thus give to Australian coal suppliers more bargaining power to negotiate better freight rates.

In South Africa the situation is most peculiar in the exports of steam coal and chromite, where the country's mining industry certainly holds relative power of monopsony and is able to affect world prices unilaterally, and is thus in position to command the most favorable terms of shipment. Unfortunately this is not the case. Sadly enough, among surveyed exporters in the Port of Richards Bay, such kind of bargaining power was only observed in the granite export industry, where five exporters through mutual cooperation were able to negotiate better freight rates and achieve economies of scale through the consolidation of the shipped tonnage.

It was noticed during the survey that the majority exporters still used term like "FOB rail", thereby neglecting what the abbreviation means: Free on Board, or C&F instead of the appropriate and correct Incoterm CFR, which is the only world-wide accepted standard abbreviation for the term "Cost and Freight (...named port of destination)".

Furthermore, the short-sighted vision of some of the prominent role players in the country's commodity exports sectors, failure to recognize the strategic importance of shipping in the South African economy and general unawareness among the freight community has led to a lack of general knowledge and skill depletion in the industry. Unfortunately despite the fact that the author has not been able to fully access the level of knowledge in the industry, it was most notably clear that the exports sector suffers from a reluctance and unwillingness to attract young talents and professionals with a wide range of managerial skills so important for the country's economy.

## **5.2 Policy recommendations**

The aim of this section is to discuss the domestic framework of the maritime policy, economics, legal, and political issues that have influenced the maritime environment in South Africa and therefore provide recommendations that can be considered by South Africa's policy makers in the maritime industry.

The dependence of the South African economy on maritime transport cannot be overstressed. With nearly 98% of South African exports conveyed by sea, the maritime industry, with activities unlike other industries, does not only provide a vital link between South Africa and her trading partners, but also benefits the economy through profit earned and foreign exchange. Furthermore, the country's reliance on relatively low-valued export commodities means that access to competitively priced maritime transport is therefore of high strategic priority. Especially when geographically South Africa is situated somewhere southward from the high cost freight barrier (latitude of twenty degrees south from the equator). Because of such a strategic importance for the economy, maritime affairs usually deserve political status and greater attention of the decision makers at the appropriate governmental level.

Thus Government's role as regulator in maritime matters cannot be underestimated. Most importantly, the opportunity exists for Government to seize the initiative and guide maritime reform in an intelligent and measured way, which would not only benefit the South African economy but also ensure the survival of essential maritime expertise.

Unfortunately in South Africa, Government appears to ignore the strategic role and the potential economic benefits that greater national participation in maritime activities would bring. It seems that important maritime transportation issues, especially the issues of dry-bulk commodities shipping just do not fit into the Government's agenda.

The case is rather urgent properly drafted, and implemented strategy could benefit South Africa. The blatant position by Government of non-interference in maritime affairs and the reliance on the “invisible hand” of the market, left to sort out all the problems is rather shocking and ignorant. Furthermore, the author strongly believes that the Government abrogation of the country’s shipping policy’s responsibilities harm the South African economy and act as an encouragement of some of the worst standards of international maritime industry.

Ten years have passed since the time of publishing the 1993 Report of the Committee of Inquiry into a National Maritime Policy for the Republic of South Africa and the recommendations of the Committee are still as relevant as ever. Rather than following a transparent framework incorporated in these recommendations, they have been largely forgotten, and left on paper, until the publication of the White Paper on National Transport Policy (1996). Consistent policy implementation was substituted by populist measures in pursuit of some political agenda. The strategic role and economic benefits of the South African maritime industry have been replaced and “sacrificed on the altar” by a vague term of the “freight industry” in 1998 *Moving South Africa* report of the Department of Transport.

Additionally the absence of a coherent maritime policy has aided the fact that virtually all South African export cargoes are shipped on foreign owned vessels. Therefore the inability to create, attract and retain the country’s Merchant Marine has further hampered the vision of South Africa as a great maritime nation. In the author’s opinion, great maritime nations are nations, which can demonstrate their maritime power by proudly flying national flags on the masts of a home flagged Merchant Marine.

In this environment, terms of shipment come into a powerful interplay, and exert considerable influence over benefits that a country receives. Importing goods “Free on Board” and exporting “Cost, Insurance and Freight” together with a competitive national Merchant Marine have far more benefits accruing to the wider economy than just a healthy balance of payments.

Thus to summarise the above, South Africa’s policy makers should consider the following recommendations:

- 1. Acknowledge the strategic role played by the maritime industry, and especially by dry-bulk shipping in South Africa's economy;**
- 2. Create within the National Department of Transport, a Maritime Policy and Regulation division solely responsible for, and concentrated on maritime affairs;**
- 3. Promote better understanding among the country's maritime community about the advantages for the South African economy of exporting on CIF terms and imports on FOB terms;**
- 4. Create a more favourable fiscal maritime environment, attractive enough to convince South African shipowners and ship's operators on the advantages of a South African Ship Register;**
- 5. Launch an awareness campaign among the general public with the intention to raise the industry's profile and to reach decision makers throughout the public, with the use of as wider media coverage as possible. For this purposes, various road shows and exhibitions can be used;**
- 6. Launch a nation wide marketing campaign similar to buy "Proudly South African" to promote the South African maritime industry, and the benefits it bestows on the wider economy. Marketing efforts should be concentrated specifically on the bulk trade;**
- 7. Ensure that all new initiatives and changes in maritime affairs are highly publicised by the Department of Transport and encourage national public participation in transport policy appraisal through public forums and encourage constrictive criticism;**

- 8. Invite the South African academic fraternity to debate alternative policies and provide financial funding and support for further research in the field of maritime economics; and**
- 9. Create an interactive web site, with a public domain, where the general public can freely access the latest information on maritime affairs.**

Some of these recommendations can be seen to be repetitions of recommendations made by the Floor Report (1993), but this is because, in the author's opinion, that at least ten years was lost by the country's policy makers in the creation of a coherent maritime policy in South Africa.

In the July/August 2003 issue of *Maritime Southern Africa*, it was mentioned that currently the National Department of Transport is busy drafting the Black Economic Empowerment Charter for the maritime industry. One of the visions identified in this strategy, is to see South Africa develop as "one of the world's top 35 maritime nations by year the 2014", and to "encourage local cargo owners to increase the cargo carried on South African ships to 25% by the year 2007 and 50% by the year 2014" (*Maritime Southern Africa* July/August 2003:9). To any unfamiliar observer these strategic visions can be identified as a very ambitious strategic intent of policy regulator who is striving to strengthen the position of the national maritime industry. On the other hand, for anybody with real knowledge of the state of maritime affairs in South Africa, these goals are simply fallacious.

As long as the needs of the maritime industry remain a low priority for the national Government, and without a clear plan of actions, a sustainable shipping industry in South Africa will remain a myth.

### **5.3 Areas for further research in the field of South Africa's dry-bulk exports**

*South Africa has no scientific research policy and in particular no policy towards marine and maritime research and development. The adoption of such a policy and its pragmatic implementation is undoubtedly necessary if the efficiency and success of the marine and maritime industries over the long term are to be promoted.*

(Floor Report, 1993:113)

Ten years ago the Floor Report (1993) acknowledged the paucity of published research on maritime matters in South Africa. Furthermore the Report recognized difficulties encountered by researchers in collecting the required information. All those findings were confirmed during the work on this dissertation.

This dissertation has researched many areas pertaining to the recognition of the terms of shipment as one of the major determinants of the fortunes of the shipping industry, the mercantile achievements in the dry-bulk exports sector and the prosperity of the South African economy as a whole. Therefore, this study is an important contribution to the scant available studies in the field of commercial practices among South African exporters.

Unfortunately the data collected in this research related only to one of the South African dry-bulk cargo ports– the Port of Richards Bay. It is obviously quite desirable to continue research into the international terms of shipment, with the final aim to create a comprehensive analysis of these terms for all South African ports involved in exports of dry-bulk commodities.

Research similar to this dissertation can be conducted for each port (Durban, Port Elizabeth and Saldanha) involved in dry-bulk export as separate stand-alone studies or can be combined as a comprehensive coordinated survey covering all dry-bulk exports in South Africa.

The latter is certainly better as it allows the person or persons conducting the survey to coordinate their efforts in collecting similar data and use identical questionnaires for all the ports.

Furthermore, in the White Paper on port policy (1996), Government recommended that commercial ports should continue operating on a national basis, complementing each other rather than competing. This recommendation however, does not focus on the positive economic growth and political changes in Mozambique, as well as the Maputo port upgrade project. Thus possible international competition may have been overlooked with the close geographical location of Durban, the Port of Richards Bay and Maputo. Therefore it would be very interesting to investigate and compare the following:

- Dry-bulk products shipped through the three ports together with commonly used terms of shipment for different commodities;
- Rail tariffs that will be applicable for dry-bulk commodity exporters (especially those located in Rustenburg, Steelpoort and Phalaborwa) to Durban, Richards Bay and Maputo;
- The balance between FOB/CIF terms of shipment as the most common terms on which cargo is sold. It will be very interesting to do a full comparative analysis regarding the cost for exporters of the above terms at the three different ports for dry-bulk commodities.

The dissertation also noted the comparative advantages of South African exporters in the exports of dry-bulk commodities such as steam coal and chromite, where the domestic mining industry holds the relative power of a monopsony.

Indeed, these two commodities certainly deserve further rigorous separate studies (especially the coal export industry), which can identify convincing factors that can be utilized to exert more power in negotiating a higher incidence of CIF terms of shipment in the export operation.

Further studies would well be advised not to overlook the impact and advent of the global mining companies in the South African economic arena, and the influence these global players exert on shifting exports of dry-bulk commodities from departure contracts of sale to more advanced arrival contracts of sale.

Additionally, during the work in this dissertation, it was discovered that substantial volumes of dry-bulk cargoes are moved in containers by road from the Port of Richards Bay to Durban. The author estimates that this volume to be approximately eight hundred TEU (twenty foot equivalent unit) on a monthly basis. Thus it would be very interesting to investigate comparative freight rates between road and maritime modes of transport, and conduct a possible feasibility study on the viability of using short-sea maritime transport links between the Port of Richards Bay and Durban. The outcome of this study can possibly lead to the encouragement of the establishment of a domestic short-sea shipping industry and create greater employment of South African maritime factors of production.

Finally, with the incoming promulgation of the proposed Black Economic Empowerment Charter, further studies are urgently needs to be conducted to assess the impact of this policy on the South African maritime industry. Especially in the light of the anticipated possible intervention on the part of the Government to reserve African cargoes, moving through South African ports to be carried on South African ships.

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Jordaan D., Manager Logistics and Shipping at Heric, Pretoria. June 2003, Telephonic interview.

Klue P., Manager Chrome marketing and planning at Bayer, Johannesburg. May 2003, Telephonic interview.

Lamberg D., Logistics Manager, Marketing at Ticor, Richards Bay. May 2003, Personal conversation.

Loynes D., Marketing Manager at Portnet, Richards Bay. June 2003, Personal conversation.

Molver B., BHP Billiton Marketing AG at BHP Billiton, Richards Bay. May 2003, Personal conversation.

Muller C., Manager Logistics and Shipping at Foscor, Johannesburg. July 2003, Telephonic interview.

Naidoo V., Distribution Manager at Mondi Craft, Richards Bay. May 2003, Personal conversation.

Nun W., Mill Manager at Shincel, Richards Bay. May 2003, Telephonic interview.

Preyser J., Marketing Manager at Richards Bay Minerals, Richards Bay. May 2003, Personal conversation.

Roodtman M., Export Manager at Xstrata, Rustenburg. May 2003, Telephonic interview.

Schaffler B., Sales and Logistics Manager at Phalaborwa Mining Company, Phalaborwa. May 2003, Telephonic interview.

Shange T., Key Account Manager at National Ports Authority, Richards Bay. May 2003, Personal conversation.

Spence L., Key Account Manager at Portnet, Richards Bay. May 2003, Personal conversation.

Swain D., Regional Manager at ISS-Voigt Shipping, Durban. May 2003, Personal conversation.

Swanepoel A., Operations planning Manager at Richards Bay Coal Terminal, Richards Bay. May 2003, Personal conversation.

Swart J., Senior Manager at Central Timber Cooperative, Pietermaritzburg. May 2003, Telephonic interview.

Taylor R., Shipping and Logistics Manager at Kelgran, Johannesburg. June 2003, Telephonic interview.

Thomas Q., Export Manager at Samrec, Pretoria. May 2003, Telephonic interview.

van Rooyen T., Shipping Manager at Kudu/Marlin, Pretoria. June 2003, Telephonic interview.

van Biljon D., Manager Exports at Iscor, Richards Bay. July 2003, Telephonic interview.

Vorster V., Senior Export Manager for steel products at Highveld, Steelpoort. July 2003, Telephonic interview.

Wentzel R., Shipping Manager at Ore and Metal, Johannesburg. June 2003, Telephonic interview.

Wilsch J., Port Planner at National Ports Authority, Richards Bay. May 2003, Personal conversation.

Wright R., Senior Manager at Island View Shipping, Durban. June 2003, Telephonic interview.

## APPENDIX I

The competitive market of the maritime industry is very complex and depends on various factors that have an influence on demand and supply side in the market. The Table below is a simple model of demand and supply in the shipping market that identifies the ten most important key variables.

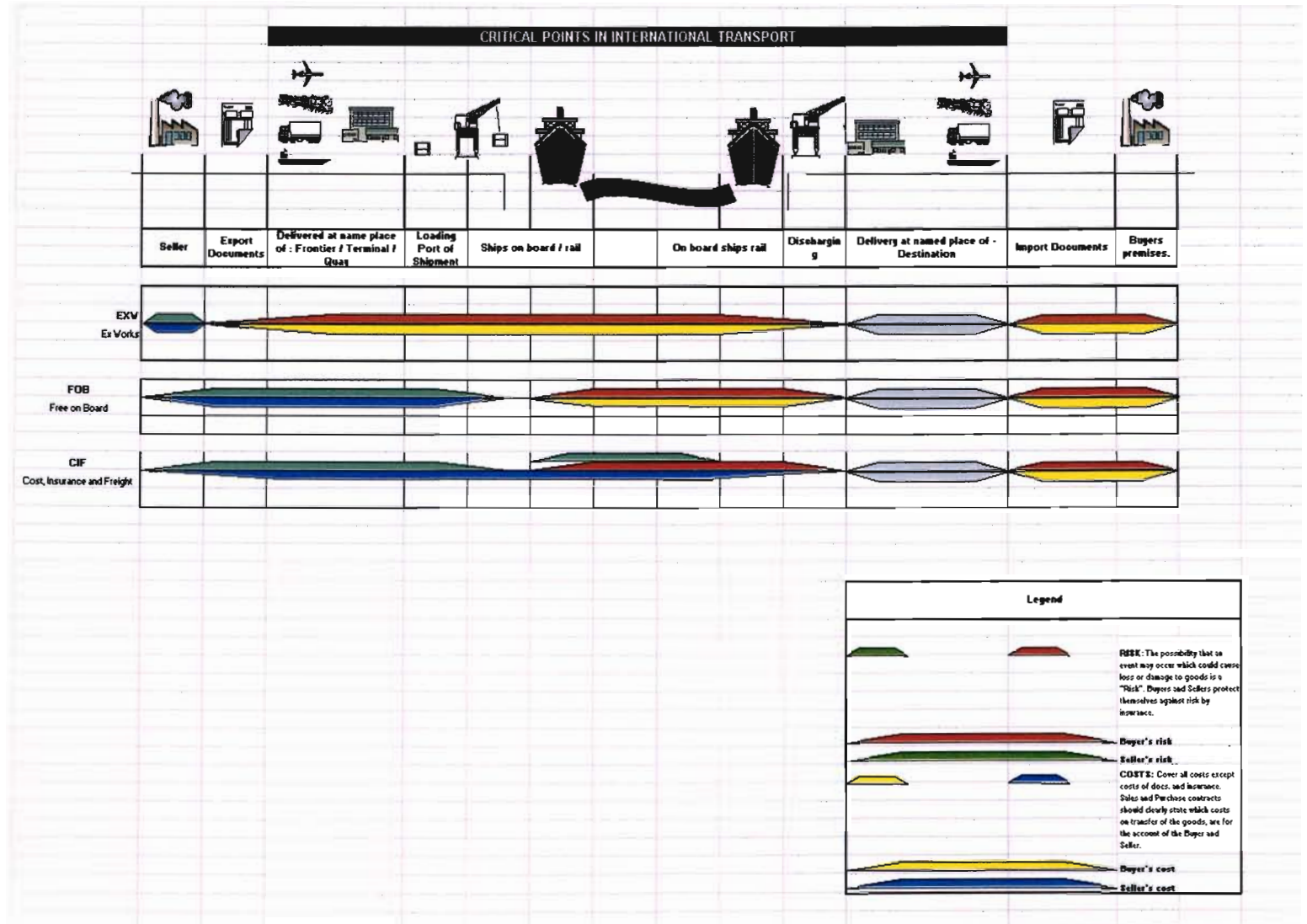
<b>Demand</b>	<b>Supply</b>
1. The world economy	1. World fleet
2. Seaborne commodity trades	2. Fleet productivity
3. Average haul	3. Shipbuilding production
4. Political events	4. Scrapping and losses
5. Transport costs	5. Freight rates

Source: Stopford (1988: 61)

## APPENDIX II

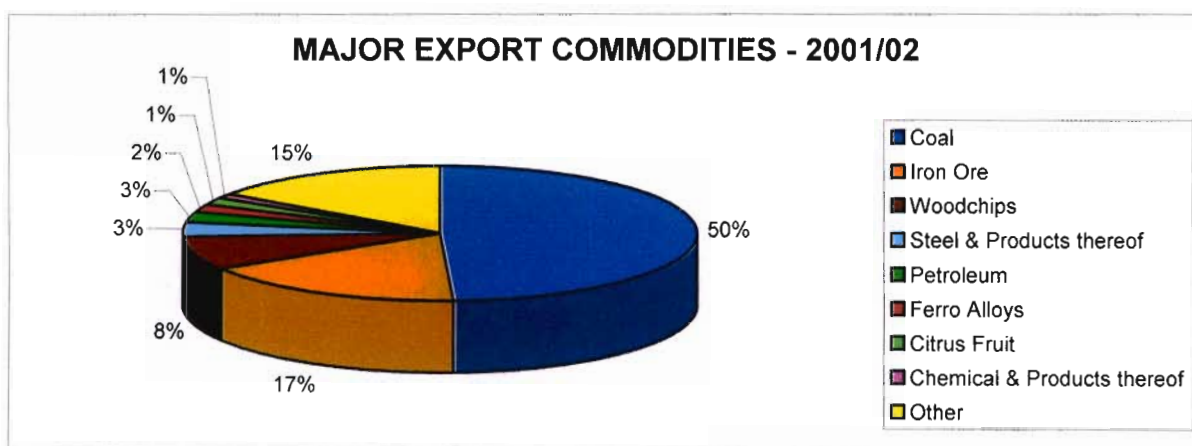
### UNDERSTANDING CIF AND FOB

Source: Chasomeris (2003a)



### APPENDIX III

#### South Africa's major seaborne export commodities



Source: South African Port Authority (2003)

EXPORTS	
Commodity	Tonnage
Coal	67,553,279
Iron Ore	23,236,859
Woodchips	11,347,444
Steel & Products thereof	4,388,594
Petroleum	3,499,894
Ferro Alloys	2,805,371
Citrus Fruit	1,953,904
Chemical & Products thereof	1,751,342
Other	20,940,445
	<b>137,477,132</b>

## APPENDIX IV

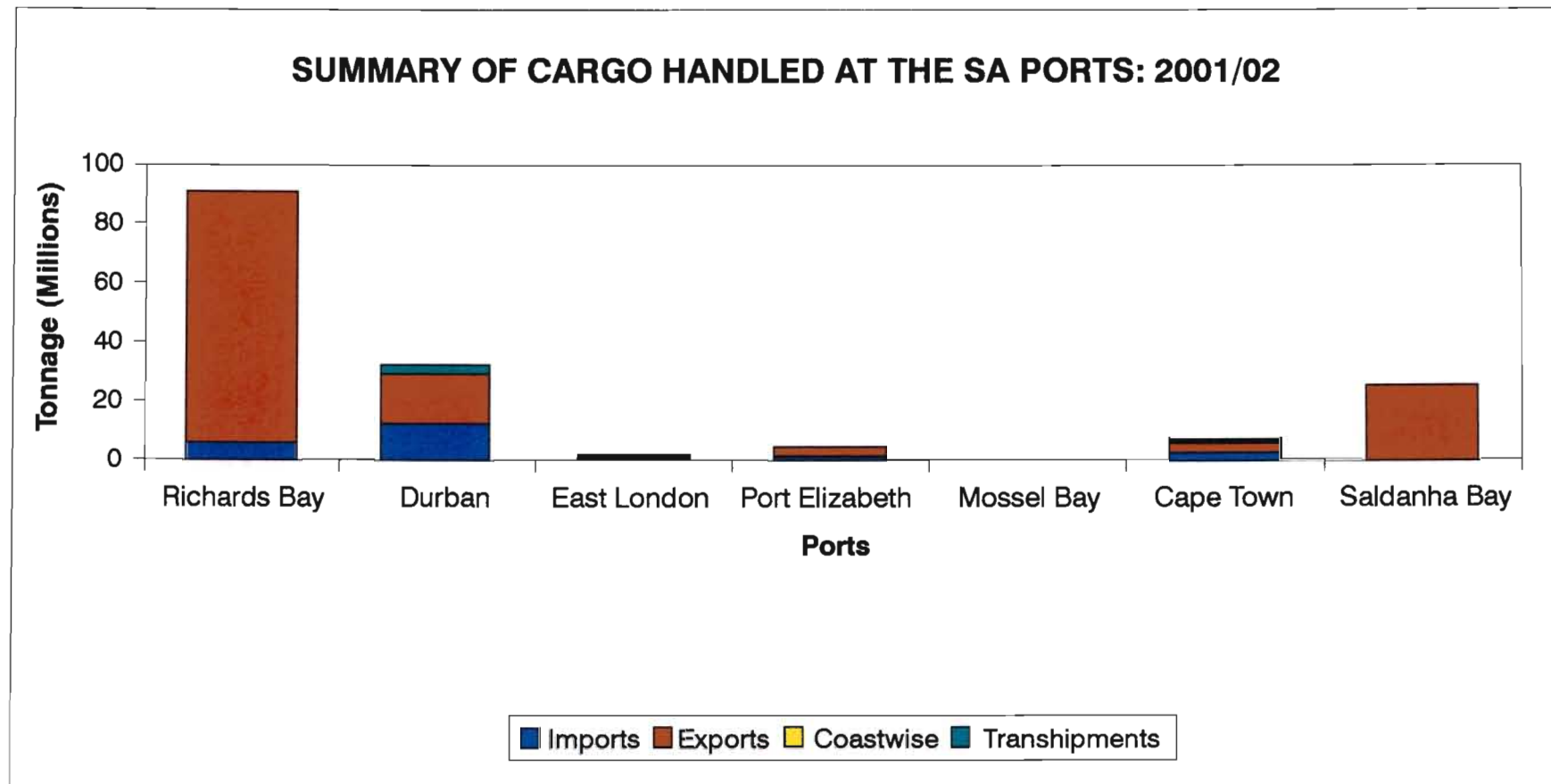
### Geographical distribution and percentage of the South African seaborne exports to international destinations



Source: South African Port Authority (2003)

## APPENDIX V

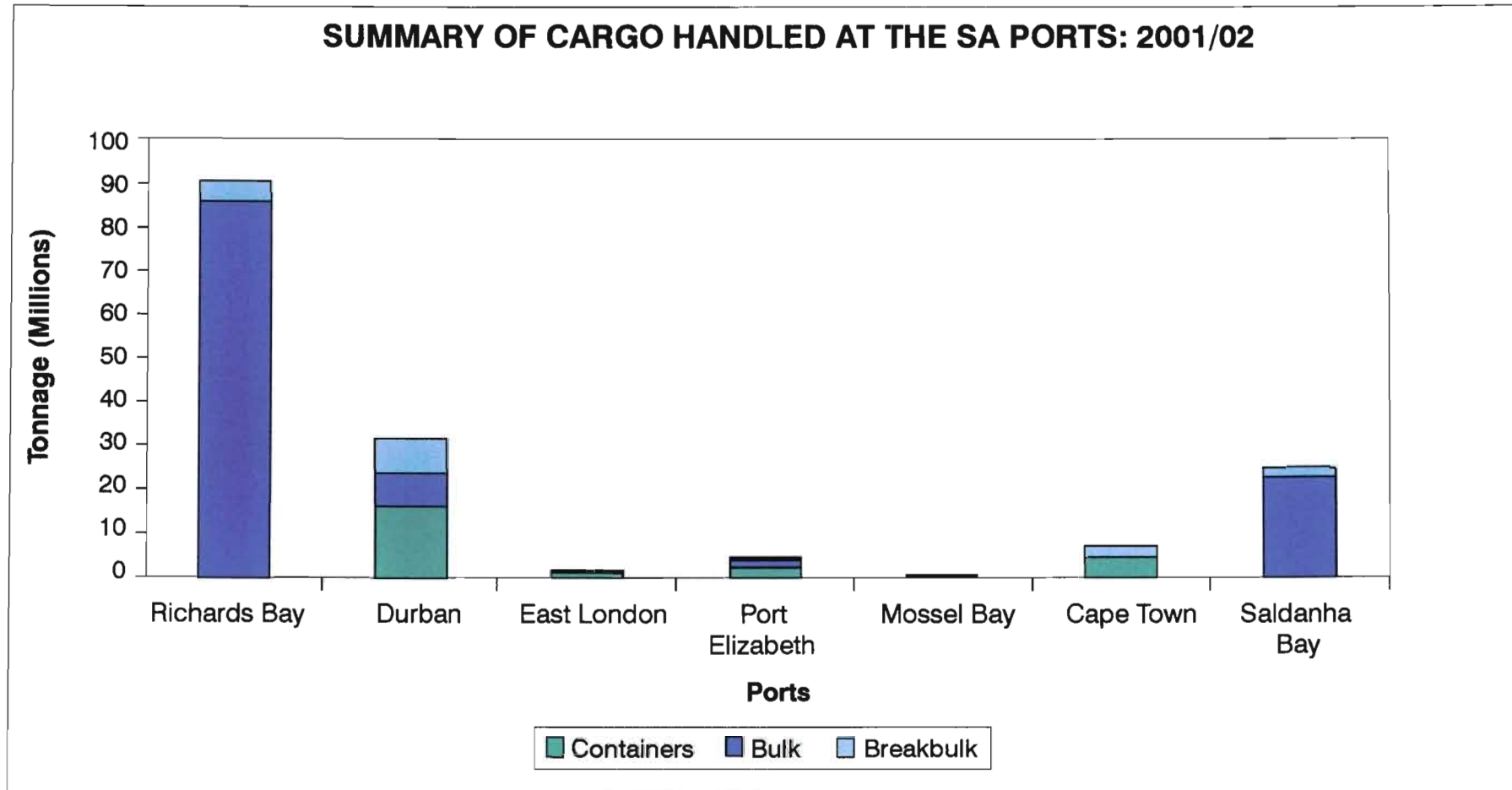
### Cargo volumes handled at South African ports



Source: South African Port Authority (2003)

## APPENDIX VI

### Cargo types handled at South African ports

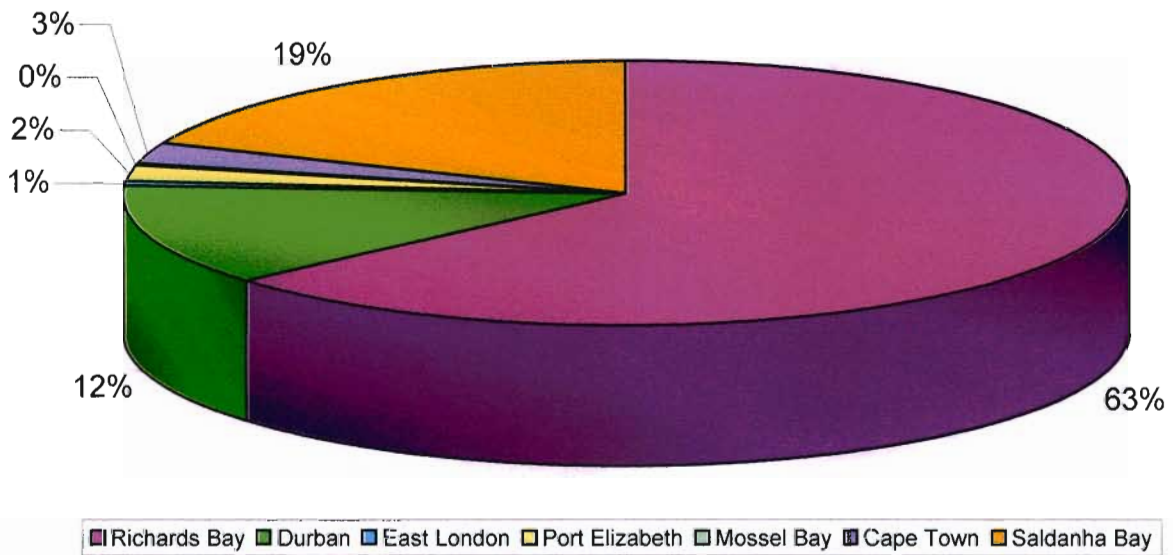


Source: South African Port Authority (2003)

## APPENDIX VII

### The Port of Richards Bay's share in South Africa's seaborne exports

CARGO SHIPPED PER PORT (EXCL. PETROLEUM): 2001/02



Source: South African Port Authority (2003)

## APPENDIX VIII

The most favourable locations for any distribution center lies in the banana shaped area representing the economic heart of Europe.



Source: Antwerp Port Authority (2003:26)

**DDP: Delivered Duty Paid**

DELIVERY: Placed at the disposal at named Place of Destination – not unloaded

**Transfer of Risk & Costs:** Place of Delivery