Independent Consumer & Competition Commission

Stevedoring & Handling Services Pricing Review

Final Report

3rd June, 2008

© Independent Consumer and Competition Commission

Foreword

The Independent Consumer & Competition Commission ("Commission") is a statutory body established under the provisions of the *Independent Consumer and Competition Commission Act 2002* ("ICCC Act").

The Commission's primary objectives are to:

- enhance the welfare of the people of Papua New Guinea through the promotion of competition, fair trading and the protection of consumers' interests; and
- promote economic efficiency in industry structure, investment and conduct; and
- protect the long term interests of the people of Papua New Guinea with regard to the price, quality and reliability of certain goods and services.

The Commission has until the end of March 2008 and for the duration of this inquiry, had three Commissioners:

Thomas Abe, Commissioner
David Dawson, Associate Commissioner – Non Resident
Chris Gideon, Associate Commissioner – Resident

Mr Gideon, having completed his term has stood down from the Commission and his position is currently vacant and awaiting a new appointment.

The Commission is currently undertaking its first major regulatory review of the stevedoring and handling industry in Papua New Guinea (PNG).

Under section 10 (b) of the *Prices Regulation Act* (Chapter 320) **(PRA)**,the Minister for Treasury may, by notice in the National Gazette, declare any service, other than a service declared to be a regulated service for the purpose of the *Independent Consumer and Competition Act 2002* to be a declared service, for the purpose of the PRA.

On 2nd November 2006, the Minister for Treasury declared the stevedoring and handling industry when the industry was listed under Schedule 4 in a revised publication of National Gazette No. G203 as services declared under section 10(b) for the purpose of the PRA.

Although the declaration of the stevedoring and handling industry was made in 2006, regulation of the industry has been in place for well over two decades. Throughout much of the 1980's, 1990's and early 2000's, the Office of the Price Controller, an office within the Department of Treasury, regulated the charges of the stevedoring and handling industry.

Following the establishment of the Commission in 2002, the regulatory powers and functions of the Price Controller under the PRA were transferred to the Commission. Consequentially, the Commission assumed the regulatory oversight of all declared goods and services listed under a revised schedule of National Gazette No. G194.

The Commission recognises that price regulation is a second best option, and where possible, competitive markets should determine prices for goods and services. Accordingly, the Commission has been undertaking a number of reviews of the various goods and services it regulates to determine whether price regulation of these goods or services should continue. Therefore this review is part of the wider efforts of the Commission to investigate markets currently under price regulation to determine whether regulation is required.

In undertaking this review, the Commission is seeking to determine:

- whether price regulation of the stevedoring and handling industry is necessary, or if price regulation should cease; and
- if price regulation of the industry were to continue, what form of regulation should apply.

Ultimately, the Commission envisages an outcome that will promote and encourage economic efficiency within the industry, encourage investment and ensure that the interests of stevedores are balanced with those of consumers.

The Commission understands that this is not an easy task, given the varying and sometimes conflicting views and interests of stevedores and users of their services. To assist the Commission in making an informed decision on the future direction of price regulation of the stevedoring industry, the Commission has undertaken this review in an open and transparent manner by working closely with all interested stakeholders.

The Commission released an Issues Paper on the 3rd July 2006 which outlined some of the issues the Commission considered to be important to the review, and requested submissions on these issues from the stevedoring industry, key government departments, key stakeholders and the wider community.

Following the Issues Paper, the Commission release a Draft Report on 14th December, 2006 which detailed the Commission's draft determination on the future direction of price regulation for the industry. The Commission had formed its draft conclusions having considered the submissions received on the Issues Paper and also having assessed and analysed industry data in the context of the prevailing structure and market condition of the industry.

The Final Report is based upon the Commission's consideration of submissions received on the Draft Report, and in particular additional information that has been provided by the stevedoring industry in response to requests by the Commission. The Final Report should be read in conjunction with the Draft Report for a full appreciation of the arguments and issues that have been considered by the Commission. The Final Report has also had to take into account the fact that the stevedoring industry has increased it charges further during 2007, and thus the implications of these price changes have had to be factored into the analysis undertaken by the Commission.

Having concluded the Final Report, the Commission wishes to acknowledge and thank all the stakeholders who have contributed by responding through the various stages of the Review process and providing comments and specific industry data.

Thomas Abe

Commissioner & CEO

2 June 2008

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Executive Summary

The Independent Consumer & Competition Commission ("Commission"), a statutory body established under the provisions of the Independent Consumer and Competition Commission Act 2002 ("ICCC Act"), is empowered to promote competition and fair trading, the regulation of prices for certain goods and services, and the protection of consumers' interests and other related activities. The Commission through its regulatory responsibilities is statutorily obliged to monitor and regulate the prices of all declared goods and services under Section 10 of the Prices Regulation Act (PRA).

The Commission has undertaken the Review of the Stevedoring and Handling services under Section 25A(6) of PRA which states that the Commission may at any time, on its own motion, decide to conduct a review of a reviewable order. The main purpose of the review is to determine whether there is still need for the continuation of some form of price regulation of the industry or whether the current regulatory oversight can be discontinued. In order to form a conclusion, the Commission has considered competition issues and barriers to entry that apply in the industry concerned.

In undertaking this review, the Commission has had regard to the submissions made to the inquiry. In particular, the Commission notes the submissions received from the Association of Licensed Stevedoring Company (ALSC), individual stevedoring companies, the PNG Chamber of Commerce and Industry, the Department of Treasury and the Department of Trade and Industry. In addition to information obtained directly from the industry itself, the Commission has also had access to a wide range of information from other sources which have helped to inform the Commission and guide its deliberations.

The stevedoring and handling industry plays an important role in ensuring an efficient domestic and international trading sector. Facilitating the competitive structure and operation of the industry is fundamental to ensuring that PNG has access to the most cost efficient and effective port handling services possible. The impact of inefficiencies in this sector extent well beyond the stevedoring and handling industry itself as well as beyond the shipping and transport industries that have direct day to day interface with this industry. Thus, from an overall economic performance perspective, the efficiency and competitiveness of the stevedoring and handling industry is essential to ensuring the competitive performance of PNG in the world economy.

The Commission has formed a number of conclusions from its study of the stevedoring and handling industry, viz:

- Currently, all ports with the exception of Lae, Port Moresby and Kimbe are predominantly serviced by one major stevedoring operator. In Port Moresby, one stevedoring company handles all overseas vessels and another company handles all coastal shipping. In Lae, there are three operators who share the total market and two are engaged in servicing both coastal and overseas shipping;

- There is a high degree of vertical integration between the ownership of the stevedoring companies and the shipping lines that they service;

- The degree of vertical integration, cross ownership and economies of scale in the industry act as a barrier to entry, despite the "low" capital and associated set up costs for a new entrant. As a consequence, this has limited entry of potential new operators into the industry;

- Some new entry into the industry has been evident in certain locations, but usually as part of a special arrangement to service particular shipping customers, and often under the policy and political incentive of needing to establish links with local landowner groups. There is little likelihood of a significant new entrant independent from the existing participants in the market;

- Countervailing power held by the shipping lines is limited to the point of being non existent as a consequence of the vertical integration in the industry; and

- There is very little competition from other forms of transport providers to threaten the overseas and coastal shipping markets and therefore threaten the existing stevedoring businesses.

The above conclusions provide the basis for the Commission decision that there is the need for the continuation of some form of price regulation of the industry. Having considered the options available, the Commission has decided to adopt a price monitoring approach. This is less costly to administer than a direct price control approach while still allowing the Commission to continues to maintain some degree of regulatory oversight over the industry.

The Commission has examined the current prices being charged by the industry and has concluded that it can accept these prices as the initial prices for purposes of the price monitoring process. The Commission has also developed and specified a price comparator series that it will use in undertaking its price monitoring task. The Commission will apply price monitoring for a period of 5 years being the length of this determination. Should it become evident that prices in the industry are trending away from the movement in the comparator series, and the industry be unable to convince the Commission of the justification of this trend away from this series, the Commission will seek to have the industry declared for price control purposes.

In summary, the final determinations of the Commission are as outlined below:

The Commission will recommend to the Treasurer that stevedoring and handling services provided by the stevedoring and handling industry and as defined in Appendix 3 of this Final Report be regulated for price setting purposes under the provisions of the Price Regulation Act

The Commission will recommend to the Treasurer that stevedoring and handling services be declared for price monitoring under the provisions of section 32A of the PRA

The Commission will recommend to the Treasurer that the price monitoring will apply for a period of five years commencing 1st June 2008

The Commission will require of the industry that it provides an update of its price list for the price monitored services as at the commencement of each quarter, that list to be provided to the Commission by no later than the 15th day of the new quarter (eg, 15th January for the price list applying from 1 January)

The Commission will use a comparator series comprising CPI and retail diesel fuel price movements in Lae to monitor the movement in prices for the regulated services over the period from 1 January 2009 to 31 May 2013. For the remainder of 2008, the Commission will apply a freeze on stevedoring and handling charges, that price freeze to be at rates that applied for these services as at 1 January 2008

The Commission may at some future time within the five year period of this determination recommend to the Treasurer that the price monitoring arrangements be altered such that the regulated services become price controlled should the Commission form a view that prices for the monitored services are moving at a rate not consistent with movements in the comparator series, and the industry has been unable to satisfy the Commission as to why prices are behaving in this way

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1.0 Introduction

1.1 Background and purpose of Review

1.1.1 Purpose of Review

Stevedoring and handling services are currently declared under section 10 (1)(b) of the Prices Regulation Act chapter No. 320 (the PRA) as services declared for the purpose of price control. This declaration was made in a revised publication made by the Minister for Treasury and published on 13th December 2007 in the National Gazette No. G194.

The Commission is undertaking this Review to determine whether price regulation of stevedoring and handling charges should continue or if regulation of these charges should cease. In addition, the Commission must determine the best regulatory mechanism that will apply if regulation is to continue.

1.1.2 Regulatory background

Prior to the establishment of the Commission in 2002, prices for goods and services declared for regulation under the pre-amended Prices Regulation Act, were reviewed and set by the Office of the Price Controller.

The process and methodologies used by the Price Controller to set prices were not as transparent as is now regarded as 'best regulatory practice'. Pricing reviews were focused solely on pricing outcomes and failed to consider commercial realities such as the need to set cost reflective prices, which not only recovered efficient costs associated with delivering services, but also allowed providers of regulated services to earn an appropriate rate of return on the investment in the business.

Other important issues such as the protection of consumer interests, service standards and incentives to promote cost efficiencies within the industry were also not considered. In addition, pricing reviews occurred on an ad hoc basis in a non-transparent manner without industry, stakeholder, or public participation.

The Commission is aware that the industry association, the Association of Licensed Stevedoring Companies (ALSC), made numerous submissions to the Price Controller throughout the 1990's for tariff increases; however, these submissions were rejected by the Price Controller without clear explanations being provided to the industry. As a consequence, the ALSC has been adjusting stevedoring and handling charges since the late 1990's and during the early 2000's without seeking or notifying the office of the Price Controller or more recently the Commission.

Overall the then regulatory pricing framework consisting of the pre-amended Prices Regulation Act, and the regulatory processes in determining maximum prices adopted by the Price Controller in administering the then regulatory framework was very ineffective.

In 2002, a new regulatory framework was established through the enactment of the *ICCC Act*. With the introduction of the *ICCC Act*, amendments were made to certain provisions of the PRA to ensure that pricing reviews conducted by the Commission had a much wider scope not only in terms of the issues that were to be considered but also the level of consultation with the wider community and stakeholders through a public process. In addition, the Office of the Price

Controller was abolished and its functions and powers were transferred to the newly established Commission.

In conducting pricing reviews the Commission is now required by the amended PRA to consider a range of issues including:

- consumer protection,
- cost of service,
- encouraging industry efficiency,
- an appropriate rates of return,
- the financial position of service providers,
- service standards,
- impact of prices of regulated services and goods on inflation, and
- the broader economic and social impact of any pricing decision.

Therefore, in undertaking this review and in considering the above issues, the Commission envisages an outcome that will lead to greater economic efficiency within the industry and in those industries serviced by the stevedoring and handling services industry.

1.2 Legislative requirements

The Commission is undertaking this review under the amended provisions of the PRA, having regard to sections 10, 20(A, & B), 21, 25 (A, B & C) and 32A.

Under the provisions of the PRA, the Commission may, by order in the National Gazette, *inter alia*, fix the maximum price at which the declared services may be supplied.

The *ICCC Act* made a number of amendments to the Prices Regulation Act under which the prices for stevedoring and handling services can be determined. In particular, the Prices Regulation Act was amended in the following ways:

- Section 20A requires the ICCC to publicly notify its intention to determine a pricing order under Section 21 at least 30 days in advance.

- Section 21 (2A) *(see Appendix 1)* introduced specific requirements on the ICCC in terms of the matters that it must consider when making a pricing order, including encouraging greater efficiency, ensuring an appropriate rate of return, ensuring appropriate safeguards for quality, and protecting consumers from the misuse of market power by suppliers of declared goods and services,

- Sections 25A, 25B and 25C specify the process by which a review of a Pricing Order can be undertaken, the deadlines that must be met, the requirement for the Commission to publish details of its decisions, and the form of decision that can be taken by the Commission as a consequence of such a review,

- Section 25A (6) allows the Commission of its own volition to initiate a review,

- Section 25C(3) specifies that in response to a review, the Commission may determine to:

- ➢ Continue to operate the existing price control arrangements in their present form,
- ➢ Vary the existing price control arrangements, or
- ➢ Terminate the present price control arrangements.

- Section 32(A) provides for declaration of certain goods or services for price monitoring purposes as an alternative to price control.

1.3 Format of the review process

The stevedoring and handling review is being conducted in the following broad stages:

- ➢ Public announcement of the inquiry and invitation for submissions to be made to the Commission.
- ➢ Release of an Issues Paper discussing aspects of the inquiry and the major issues that the Commission believes need to be considered, and inviting submissions on these matters.
- ➢ Release of a Draft Report outlining the Commission's preliminary determinations and inviting of submissions on that Draft Report.
- ➢ Release of the Final Report and Determination.

In response to invitations for submission on matters under consideration as part of the inquiry, the Commission has received a number of submissions from interested parties. The following identifies those person and organisations that have made submissions to the Commission at the various stages of the inquiry.

Stakeholders Submissions & Comments	
Issues Paper	Draft Report
Department of Treasury (Treasury)	PNG Chamber of Commerce & Industry
Department of Trade and Industry (DTI)	Department of Treasury
Association of Licensed Stevedoring Companies (ALSC)	Association of Licensed Stevedoring Companies (ALSC)
Ahi Holdings Ltd	
Poreporena Stevedores Ltd	

The Commission would like to thank Departments, the ALSC and other interested stakeholders for their input during this review process. All comments and submissions have been analysed and were important in assisting the Commission reaching its final determination.

Copies of submissions to this review received by the Commission (unless treated as confidential) are available for public viewing at the Commission's office on a 'Public File' and also through the Commission's website on www.iccc.gov.pg. Copies can also be obtained from the Commission's office at a nominal cost for photocopying. The Final Report of the Commission is also a public document and can be obtained from the Commission's office or viewed on the Commission's website.

2.0 The Stevedoring and Handling Industry in PNG

2.1 The importance of shipping, ports and stevedoring within Papua New Guinea

The shipping, ports and stevedoring industries play a vital role in the ongoing economic development of PNG, by ensuring that important trade and commerce links within PNG and with major international trading partners are maintained.

The importance of these industries is demonstrated by the fact that PNG is not linked by land to any of its major trading partners, and that PNG itself is a country made up of numerous islands scattered across a large oceanic region. Most of the country's domestic and international shipping trade is facilitated through the ports of Port Moresby and Lae although coastal shipping facilitates a large proportion of the domestic trade around the country.

Stevedoring is basically the loading and unloading of cargo in the form of containers or other forms of cargo consolidation, on and off ships at ports. In addition to loading and unloading ships, stevedores also provide handling services that facilitate the movement of containers and cargo in and around the ports, such as, moving containers to and from stacking areas and land transport. Stevedores also perform ancillary tasks such as storage, maintenance and repositioning of containers in storage areas associated with the main port facilities. These functions all form part of the operation of a port facility and are a fundamental stage in the transport of goods through a port for either domestic or international trade purposes.

As such, the stevedoring industry plays an important role within the logistical supply chain by acting as an interface between land and sea transportation. In this role, stevedores play a vital role in determining the productivity of port operations, effectively controlling how quickly and safely ships can be loaded and unloaded to be ready for their voyages. Therefore, any inefficiency which may exist in the industry would act as a significant burden on the logistical supply chain and add to the cost of goods and services consumed in PNG and the competitiveness of PNG's exports.

Ultimately, having an efficient and competitive port and stevedoring industry within PNG, is one of the key prerequisites for enhancing and maintaining economic growth.

2.2 Legislative framework governing ports and stevedores

The legislative framework governing the operations of ports and stevedoring industries in PNG consists of the *Harbours Act (chapter 24)* (Harbours Act) and the *ICCC Act*. The Commission is responsible for the administration of these two acts.

Under section 25 (B1) of the Harbours Act, a licence is required by a business operator to carry out operations in the essential port services industry. An essential port service is defined under the Harbours Act as a port service consisting of:

(a) providing port facilities for loading or unloading vessels at a declared port; or
(b) providing berths and berth reservation services for vessels at a declared port

In 2002, PNG Harbours Limited, now known as PNG Ports Corporation Ltd ("PNG Ports"), a state owned corporation was declared by the Minister for Treasury to be a regulated entity under section

32 of the *ICCC Act.*

To regulate PNG Harbours, a tariff order, more commonly known as the PNG Harbours Regulatory Contract ("contract") was issued to PNG Harbours. This contract outlines the price path, capital expenditure requirements and service standards that PNG Harbours is required to meet.

In July 2002, the Commission granted PNG Ports a licence to undertake operations in the essential port services industry.

Section 2 of the Harbours Act grants the Minister the powers to declare a port in PNG or any waters of PNG and any land contiguous to such waters, to be a declared port for the purposes of the Harbours Act. The physical limits of the port, both by the sea component and the land component are defined by this declaration.

In PNG, there are 17 ports declared for the purpose of the Harbours Act, these ports being:

Port Moresby, Lae, Rabaul, Wewak, Kimbe, Bialla, Alotau, Madang, Buka, Oro Bay, Vanimo, Kavieng, Samarai, Aitape, Daru, Kieta and Lorengau.

All the above ports, except for Aitape and Samarai are operated by PNG Ports. Aitape and Samarai are operated by agents of PNG Ports. The Government has sold Bialla port to an oil palm company, and this port is now a private port.

At these declared ports, stevedoring services are regulated by PNG Ports, through the issuing of stevedoring licences to companies wishing to undertake stevedoring and associated handling activities. Licences have been issued to provide stevedoring services at all of the 14 declared ports and are issued for a period of up to five years with reviews annually. The licence fees charged by PNG Ports are set on a fair and reasonable basis.

Discussion

In their submission to the Commission, Treasury commented on the influence that PNG Ports operations and commercial strategies have on the costs within the supply chain incorporating the use of coastal or international shipping. In particular Treasury noted:

- The viability of downstream industries depended upon the efficient operation of ports. In particular, agricultural and rural industries were dependent on the costs, efficiency and reliability of shipping and port services for their viability

- PNG Ports' control of ports and related facilities meant that its operations and commercial strategies influenced the costs and efficiencies of downstream industries.

Treasury's submission highlighted the risks that, in examining the costs of different elements within the vertical transport supply chain as separate processes, the economic interdependence of these activities may be overlooked together with the need to consider the end-to-end efficiency of the waterfront sector.

The Commission notes the dangers in examining individual parts of the overall supply chain without having regard to the full impact of these individual components. The Commission is also the independent regulator of PNG Ports and in mid February 2007 released its Final Report on the

operation of the coastal shipping industry. In its role as regulator of PNG Ports and under the provisions of the PNG Harbours Regulatory Contract, PNG Ports is required to charge for Stevedoring Access on a 'fair and reasonable' basis. In the event of a dispute in respect of the amount of a charge for Stevedoring Access, the Commission can determine a rate that is fair and reasonable. To date, the Commission has not been required to use its powers to settle a dispute in relation to stevedoring access charges. In its report on the Coastal Shipping industry, the Commission made a number of recommendations to the Government designed to improve the overall competitiveness and efficiency of that industry. The Government has acted upon some of these recommendations designed to streamline some regulatory aspects to improve the opportunity for the entry of new players into the industry.

The Commission therefore has regard to the interrelated nature of the transport supply chain which uses ports and associated facilities, and in particular, has noted certain aspects of the composition and ownership of various elements of the industry. This matter is discussed more fully below. It is timely to consider these wider implications of the efficiency of the overall transport supply chain in PNG, particularly as it has such a significant impact on the economy at all levels.

2.3 Participants and characteristics of the market

Papua New Guinea's coastal and international trade partly depends upon the efficient movement of freight by the stevedores at ports. To facilitate the movement of freight, stevedores at declared ports provide a range of services in the loading and unloading of cargo. The industry has two distinct services which are outlined below.

2.3.1 Stevedoring services

The services that are provided as **stevedoring services** include the discharging and loading of overseas and coastal cargoes, including the handling of:

- full containers
- other containers such as "A", "D" and "J" boxes
- break bulk cargo
- empty containers
- I.S.O approved containers

Stevedores are also engaged in the shifting of containers and the operation of vehicles for this purpose.

Stevedores also provide the following general services as part of the handling of cargoes at a port:

- loading and unloading of lighters or barges
- strapping of cargo
- tarpaulin hire
- provision and operation of various types of fork lifts onboard a vessel

All of the services as outlined above will be henceforth referred to **stevedoring services** for purposes of this report.

2.3.2 Handling services

Handling services provided by stevedores involve:

● transferring containers from the stacking area to the consignee's vehicle and the return of the empty container from the consignee's vehicle;

● delivery of container direct from ship hook to the vessel operators nominated transport contractors outside the port area and return of empty container to stack including issuing of appropriate documentation;

● delivery of container direct to ship's hook from vessel operators nominated transport contractors outside port area and return of empty container to stack including issuing of appropriate documentation;

● cleaning containers, internal and external;

● receiving and delivering general cargo; and

● receiving or delivering palletized cargo to and from vehicle

All the services referred to above will henceforth be referred to as **handling services** for the purposes of this Report.

2.3.3 Participants

Currently there are a total of 18 licensed stevedores operating in PNG who are providing stevedoring and handling services. These licensed stevedores operate at 14 of the declared ports in PNG. Table 2.1 below sets out the names of the licensed stevedores operating at each declared port.

Table 2.1 Licensed Participants in the Stevedoring Industry

Main Ports	Licensed Stevedores	Ownership
Port Moresby	Port Services (PNG) Ltd	Steamships + LLG (a)
	United Stevedoring Ltd	Kambang Holdings + Consort Express Lines (CEL)
Alotau	Alotau Stevedores & Transport Ltd	Private Ownership
Oro Bay	Steamships Shipping agencies	Steamships + LLG
Daru	SV Trading Ltd	Private Ownership + LLG
Lae	Lae Port Services Ltd	Steamships + LLG
	Riback Stevedoring Ltd	Consort Express Lines + Ahi Holdings
	United Stevedoring Ltd	Kambang Holdings + Consort Express Lines
	Meto Investment Ltd	Ceased operating
Madang	Madang Port Services Ltd	Steamships + LLG
Wewak	Sepik Coastal Agencies Ltd	Private ownership
Vanimo	Vanimo Agencies & Stevedoring Ltd	Private ownership

Table 2.1 Licensed Participants in the Stevedoring Industry (Cont'd)

Main Ports	Licensed Stevedores	Ownership
Rabaul	ENB Port Services Ltd	Steamships + LLG
Buka	Makerio Stevedoring Limited	Private Ownership
Kieta	Nikana Stevedores	Private Ownership
Kimbe	Kimbe Shipping & Transport & Stevedoring Ltd	Kimbe Bay Shipping Agencies (Private Ownership)
	Zilarou Stevedoring Ltd	LLG +NBP (small Scale)
	Meto Investment Ltd	Ceased operating
Kavieng	Kavieng Port Services Ltd	Steamships + LLG
	Meto Investment	Ceased operating
Lorengau	RL & VJ Knight Shipping Agency & Stevedoring Limited	Private Ownership

Source: PNG Ports and ALSC Submission 2006
a) LLG means a Local Landowner Group

The structure of the stevedoring market in PNG is shaped by the demand for stevedoring services across the various ports in PNG. Lae and Port Moresby are the main ports for coastal and overseas shipping (see section 2.4). The other ports in total handle less than 10% respectively of the overseas and coastal cargo for the country as a whole. Limited demand at these smaller individual ports creates marginal opportunities for any more than one stevedoring operator in that port. Where there is more than one stevedore in a port, such as in Kimbe, this can reflect the need for a specialist group to handle the stevedoring needs of a particular shipper using that port. Thus, in Kimbe, Kimbe Bay Shipping Agencies provides container and general cargo handling services, while Zilarou Stevedoring which is partly owned by New Britain Palm Oil Limited (NBPOL) and a land owner group, focuses on providing all the stevedoring needs of NBPOL for its oil palm shipments.

The Commission understands that Meto Investment, which is licensed to provide stevedoring services in Lae, Kavieng and Kimbe and is listed in Table 2.1, has ceased to operate at this time.

As the largest ports in PNG, the following outlines details of the activities of the stevedores operating in Port Moresby and Lae. The information relates to the estimates of market share based on information provided by the industry after making allowance for specialist bulk cargoes such as petroleum products and oil palm.

Port Services (PNG) Ltd

Port Services (PNG) Ltd is one of the largest stevedoring companies in PNG, and operates in Port Moresby. The stevedoring company is owned by Steamships Ltd (51.5 %) and a local landowner group. Port Services provides stevedoring and handling services to Laurabada[1] shipping (a subsidiary of Steamships), a company engaged in the coastal shipping market, and to the Swire[2] Group which is engaged in the international shipping market. It is important to note that Steamships is a subsidiary of the Swire Group. In addition to the Swire Group's shipping lines, Port Services also provides stevedoring services to other international shipping lines such as, Kyowa, Sofrana Unilines, Australia National Lines (ANL), Austral Asia Lines (AAL) and Pacific Container Lines (PCL).

In the port of Port Moresby, the cargo throughput in 2006 consisting of overseas and domestic cargo is estimated around 1, 098,578 tonnes. Overseas cargo turn to exceed 67,000 tonnes compared to the coastal cargo. Apparently, nearly all the international cargo vessels are serviced by Port Services apart from the coastal cargoes carried by Laurabada Shipping. That leaves Port Services as the major handlers of the overseas cargoes throughput. In terms of the aggregate market, Port Services is estimated to capture a market share of 63 percent.

United Stevedoring Ltd

United Stevedoring is licensed to provide stevedoring services in the ports of Lae and Port Moresby. Being partly owned by Consort Express Lines[3], United Stevedores provides all of Consort Express Lines' stevedoring and handling requirements at these two ports. In Port Moresby, United Stevedores only provide services to Consort Express Lines meeting all its stevedoring needs for coastal and a minor portion of overseas cargo throughput. Based on the industry data for 2006, the overall market share estimated for United Stevedoring in the port of Port Moresby is 37 percent. This market share is highly composed of the coastal cargoes. In Lae, United Stevedores provides stevedoring and handling services to Consort Express Lines and to Lutheran shipping which is engaged in the coastal shipping market, and to Austral Asia Lines (North Bound) and Australia National Lines who are engaged on international routes. It is imperative to note that all the coastal trade stevedoring requirement is predominantly met by United Stevedoring capturing 100 percent of the coastal cargo. In terms of tonnage, it is estimated to represent 816 591 tonnes of cargo throughput. Based on the industry data, the aggregate market held by United Stevedoring in the same year is estimated to be 49 percent. The market share is being dominated by its handling of the coastal cargoes with a insignificant amount from the overseas cargoes.

Lae Port Services

Lae Port Services (operating only in Lae port) is owned by Steamships Ltd (51.5 percent) and a local land owner group. It provides stevedoring and handling services to the Swire Group of ships.

In terms of market share, Lae Port Services Ltd does not provide services to coastal cargoes and focuses mainly on providing stevedoring services to Swire ships on international routes. The Commission estimates that Lae Port Services handles around 65% of the total overseas cargo

[1] Laurabada Shipping owns the Kikori Chief, Agutoi Chief and Goada Chief
[2] The Swire group includes New Guinea Pacific Lines (NGPL), Bank Lines (BL), Pacific Forum Lines (PFL), Indo Trans Asia (ITA), Indo Trans Pacific (ITP), Crocodile Lines (CL), Chief Container Services (CCS)
[3] Consort Express Lines (CEL) owns and operates the Papuan Coast, Madang Coast, Gazelle Coast, Niu Ailan Coast, Niugini Coast, Bougainville Coast and Morobe Coast

throughput in Lae port. This represents around 650,000 tonnes. In total, Lae Port Services has 30% of the overall market.

Riback Stevedoring Ltd

Riback operates in Lae and is owned by Consort Express Lines (49%) and Ahi Holdings. It provides stevedoring services mainly to international shipping lines including Sofrana Unilines, Kyowa and Austral Asia Lines (North Bound).

In terms of overseas cargo stevedoring needs, Riback competes with Lae Port Services to capture that segment of the market. Based on 2006 industry data, Riback is estimated to hold 21 % of the entire market in Lae.

Table 2.2 Overseas and Coastal Shipping Use of Stevedores

Main Ports	Licensed Stevedores	Shipping Lines	
		Coastal	International
Port Moresby	Port Services (PNG) Ltd	Laurabada Shipping	Swire Ships, Sofrana Unlines[4], Kyowa[5], ANL, AAL, Pacific Container Lines[6] (PCL)
	United Stevedoring Ltd	Consort Express Lines (CEL)	Consort Express Lines (CEL)
Lae	Lae Port Services Ltd		Swire Ships,
	Riback Stevedoring Ltd		Sofrana Unlines, Kyowa, ANL (South Bound), PCL
	United Stevedoring Ltd	Consort Express Lines, Lutheran Shipping[7]	AAL, ANL (North Bound)
Alotau	Alotau Stevedores & Transport Ltd	Laurabada Shipping	Swire Ships
Oro Bay	Steamships Shipping Agency	Laurabada Shipping	Swire Ships
Daru	Daru Trading Co Ltd	Laurabada Shipping	
Madang	Madang Port Services	CEL	Swire Ships
Wewak	Sepik Coastal Shipping & Stevedoring Agencies Ltd	CEL	Swire Ships
Vanimo	Vanimo Coastal Shipping & Stevedoring Agencies Ltd	CEL	
Rabaul	ENB Port Services Ltd	CEL	Swire Ships, Sofrana Unlines
Kimbe	Kimbe Shipping & Transport & Stevedoring Agencies Ltd	CEL	Swire Ships
Kavieng	Kavieng Port Services Ltd	CEL	Swire Ships
Kieta	Nikana Stevedores	CEL	
Buka	Makerio Stevedoring Ltd	CEL	
Lorengau	RL & VJ Knight Shipping Agency & Stevedoring P/L	CEL	

[4] Sofrana Unilines vessels include Sofrana Kermadec, Sofrana Magellan
[5] Kyowa vessel include Pacific Falcon and Pacific Condor
[6] Pacific Container Lines vessels include Newpac Cumulus, Papuan Gulf, Cape Morten, MV Telemachus
[7] Lutheran Shipping vessels include MV Madang Coast, MV Umboi, MV Maneba, MV Nagada, MV Talibabun, MV Morobe Coast

Table 2.2 provides a summary of the main shipping companies using the various ports, and the stevedoring service companies that are mainly used by these shipping companies.

As noted in the discussion above, there is a close link between a number of the existing shipping lines and the stevedoring companies. The main participants are Steamships, Laurabada, Consort Express Lines, and Lutheran Shipping.

Steamships through Laurabada Shipping Services (LSS) own and operate 10 vessels providing both a charter and a liner service for coastal trade in PNG waters. LSS is the only scheduled liner service in the southern part of the country and services some 30 domestic ports. It provides services for palletised, break bulk, liquid and containerised cargo. Most of the ports serviced by LSS are river ports rather than coastal ports. LSS operates a Port Moresby based ship maintenance, stevedoring and wharf operation which manages the liner service as well as the landside coordination of the shipping operations. Steamships has a 100 percent shareholding in LSS and a 33 percent shareholding in Consort Express Lines (CEL). Steamship is a publicly listed company and with the major shareholder being the Swire Group.

Consort Express Lines owns and operates eight (8) liner ships that provide coastal shipping and chartering services between ports within PNG as well as international shipping services. CEL is owned in equal shares by Steamships, Kambang Holdings, and Anton Lee Transport Ltd. In addition to carrying cargoes commercially for various shippers, CEL, as with other domestic coastal shipping companies, carries cargoes for its related businesses who have other commercial interests across PNG.

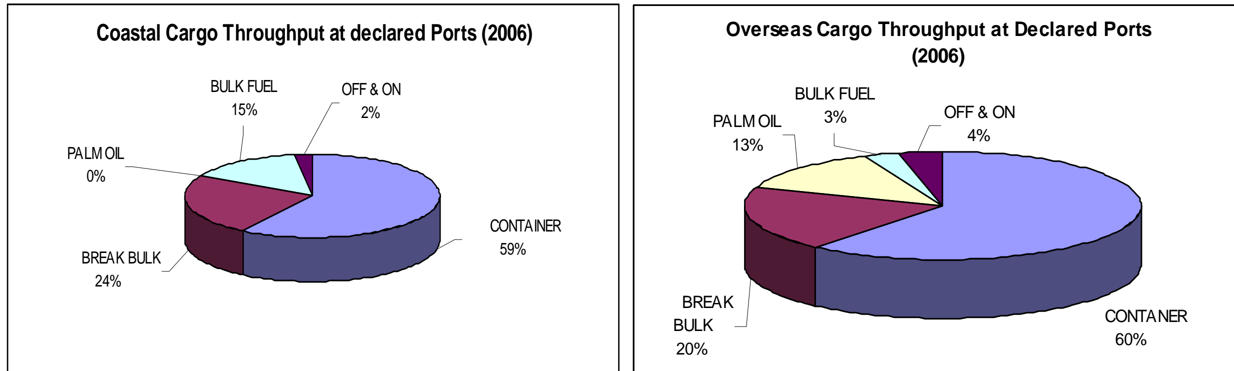
Lutheran Shipping (Luship) which previously had eleven (11) ships, now operates on the coastal route with six (6) vessels of which two are passenger vessels. Luship is own by the Lutheran Church, and mainly provides church and community transport services to the northern ports. It mainly operates its own private jetties outside of the main ports and provides its own stevedoring requirements except in the main ports.

2.4 Volume of trade

Generally, the cargo handled by the stevedores at declared ports comprises container, break bulk, palm oil, and bulk fuel. Figure 2.1 below provides a breakdown of the cargo throughput at declared ports in PNG.

Container cargo is the main form of cargo handled both for coastal and international shipping, and thus is the main area of activity for the stevedores. Break bulk cargo has diminished from the days when it would have represented the main form of cargo handled, but still represents about one fifth of the cargo handled both for coastal and international shipping.

Figure 2.1 Cargo Throughputs at Declared Ports

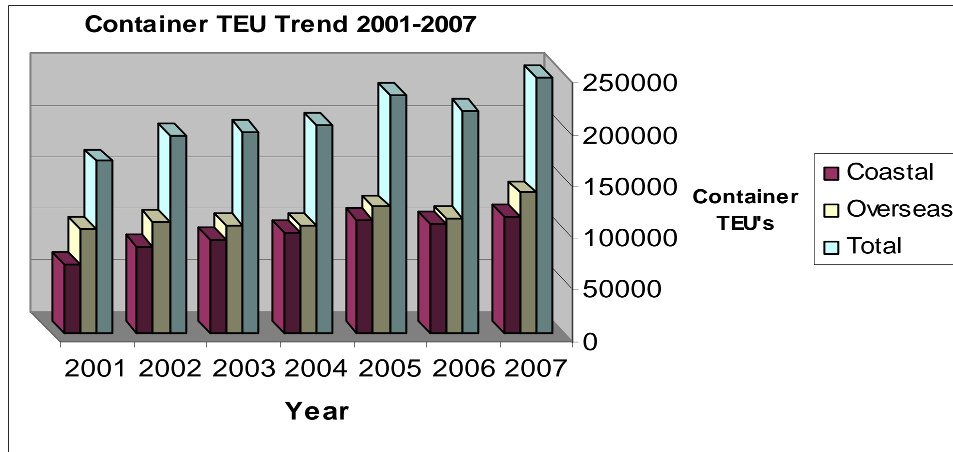


Source: PNG Ports, 2006

a) Cargo Throughput is measured in Tonnes

Stevedores typically charge on the basis of each container that is lifted. The standard container used within the industry is a 20 foot container (one twenty foot equivalent or one TEU). Apart from 20 foot containers, shippers also use 40 foot containers (two TEUs). The total throughput at PNG Harbours ports in 2007 was 247,186 TEU's. This includes both overseas (international) and coastal (domestic) containers. Figure 2.2 provides details.

Figure 2.2 Total Container TEU Throughput



Source: PNG Ports (2007)

Trends in the industry over recent years include:

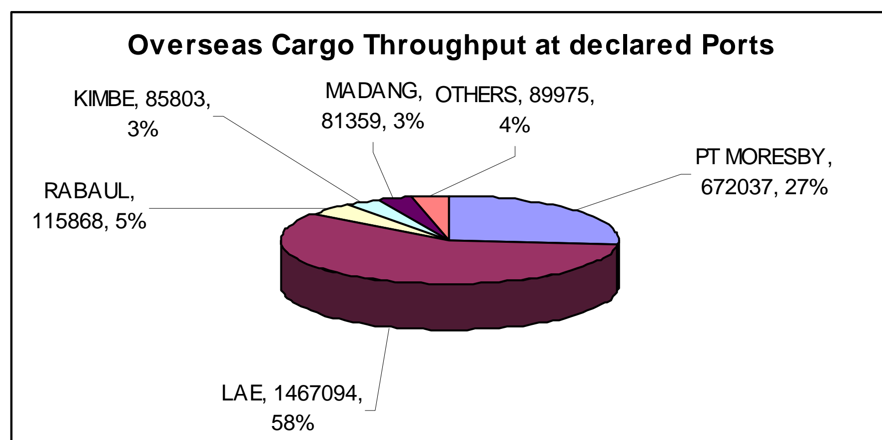
- stagnant growth in international (overseas) throughput between 2001 and 2006 and a significant increase in 2007;
- steady growth in coastal throughput between 2001 and 2005 with a marginal drop in 2006 and a recovery in 2007. Coastal throughput increased from 65,608 TEU's in 2001 to 111,998 TEU's in 2007;
- overall throughput increased from 166,234 TEU's in 2001 to 247,168 TEU's in 2007; and
- PNG's throughput is relatively very small when viewed from an international perspective. Australia's total throughput in 2006-07 was 5.5 million TEU's[8]. Australia's total throughput is

[8] BTRE, Waterline, Forthcoming Publication no.43, table October 2007

in turn minor by comparison to Singapore, which is the world's largest container port with a total throughput of 24.8 million TEU's in the same period[9].

The bulk of PNG's international trade (exports and imports) passes through the two major ports of Port Moresby and Lae. Overseas cargo throughput at the ports of Lae in 2006 was more than 1.4 million tonnes, which represented 58% of total international cargo throughput, while Port Moresby accounted for 27% of total international cargo throughput in the same year. Figure 2.3 provides a breakdown of overseas cargo throughput at declared ports in 2006.

Figure 2.3 Overseas Cargo Throughput by Declared Ports 2006: Tonnes



Source: PNG Ports.
a) Other Ports include Alotau, Buka, Daru, Kieta, Kavieng, Lorengau, Oro Bay Wewak and Vanimo.

In terms of coastal cargo, Lae and Port Moresby handle the largest volume of traffic. With more than 800,000 tonnes, Lae handled around 43% of the total coastal cargo throughput, while the port of Port Moresby handled more than 400,000 tonnes, which represents 22% of the coastal cargo. Table 2.3 provides a more detailed account of coastal cargo throughput at each declared port.

Table 2.3 Share of the Coastal Cargo Throughput 2006

Declared Port	Coastal Cargo Throughput (tons)	% of total coastal cargo throughput
Lae	816,519	43 %
Port Moresby	426,541	22%
Daru	9,121	0 %
Oro Bay	56,443	3%
Alotau	55,317	3%
Madang	9,756	1 %
Wewak	111,081	6%
Vanimo	24,457	1%
Rabaul	144,164	8%

[9] Maritime and Port Authority of Singapore www.mpa.gov.sg

Table 2.3 Share of the Coastal Cargo Throughput 2006 (Cont'd)

Declared Port	Coastal Cargo Throughput (tons)	% of total coastal cargo throughput
Kimbe	115,163	6%
Kieta	34,388	2%
Buka	43,842	2%
Kavieng	44,348	2%
Lorengau	19,557	1%

Source: PNG Ports, 2006

When using container throughput to assess the market, the same picture emerges. Lae and Port Moresby account for the most volume of traffic. According to PNG Ports estimates, total overseas container throughput in 2006 was 110,094 TEU's, and of that volume, Lae port handled around 58% of overseas container throughput while Port Moresby handled around 29%. In terms of the coastal container market, Lae and Port Moresby accounted for 46% and 23% of the coastal market respectively.

It is important to note that some portion of these cargoes are delivered through private arrangement to the private jetties at these ports, while the remainder is handled at the public ports by the licensed stevedores for those ports. Those products or activities handled by private stevedores servicing a specific industry or product include fishing, logging, palm oil, bulk fuel, grains and wheat vessels are usually unloaded at private jetties.

The demand for stevedoring and handling services is effectively derived from the activities of other sectors within the economy. This means that the demand for stevedoring and handling depends upon the demand for shipping transport, which in turn depends on the general economic activity occurring within PNG. Demand for stevedoring and handling would also depend on the level of competition from other forms of transportation such as road and air, although the use of these forms of transport can also be complementary to that of shipping as one feeds into another.

Economic growth in PNG has been relatively subdued up until the last two years when the worldwide minerals boom impacted strongly upon the PNG economy through higher prices for mineral and oil products. PNG has a number of new and expanded mineral, oil, and gas projects that are anticipated to commence operations or at least move into construction stages over the next few years, and this is expected to continue to maintain a strong domestic economy. These future projects include Ramu Nickel, and the PNG Gas project. Growth for stevedoring services can be expected in the main ports of Port Moresby and Lae as well as special ports which may be used as points for the delivery of specialised mining and production equipment and the like, and as the off-take point for products being exported from PNG.

In terms of the standard of service offered by stevedores at declared ports, there is some suggestion that cargo handling facilities for coastal operations are significantly inferior to those that are available for international shipping operations. This fact was highlighted in submissions to the Commission's review of the Coastal Shipping Industry. An inferior domestic operation implies that ship turnaround times are higher for these operations and hence productivity is relatively poor. In addition, the absence of efficient handling equipment and shortages of skilled labour in some ports make it necessary for ships to be equipped with on-board cranes and the use of the ship's crew to handle loading and unloading activities in some locations. This has also encouraged some shipping companies to construct and operate their own private jetties equipped with specific stevedoring

equipment designed to meet their particular needs.

A long-term feature of the port operations in PNG has been the use of on-board lifting and cargo movement equipment for use in the loading and discharge of cargoes at the main ports handling international shipping. The need for on-board facilities has actually dictated the type and operating arrangements for shipping travelling to and from PNG, and has been the driver of a number of significant innovations over the years in an attempt to improve productivity at the ports. PNG does not have the heavy lifting and container cargo handling facilities common in overseas major ports. Rather, it relies primarily on the ship's own facilities, supported by some shore based lifting equipment (mainly in Port Moresby and Lae), and shore based fork lift and trailer facilities to move containers and other break bulk cargo within the port designated area.

Discussion

In outlining the current state of the industry, the Commission has sought to address a number of issues raised in submissions received from interested parties to this inquiry. For example, in its submission to the Commission, ALSC argued that the stevedoring and handling market was much larger in size than that indicated in the Issues Paper, especially when stevedoring and handling activities occurring at undeclared ports are taken into account. ALSC noted that there are many companies that operate private ports and jetties and carry out stevedoring and handling activities to service their own cargoes to support their business operations in PNG.

ALSC identified a number of companies that undertook stevedoring and handling activities within or outside of declared ports:

- RH Trading
- InterOil
- Curtain Brothers
- OTML
- Bismark Maritime
- Lutheran Shipping
- South Sea Lines
- Mobil
- Agmark
- Rabaul Shipping
- RD Tuna
- Consort Express Limited

In addition to these companies, ALSC noted that there were many more companies that were engaged in stevedoring and handling activities, mainly to service their own cargo.

The Commission notes that the nature and physical requirements of the stevedoring and shipping transport industry in PNG has created an industry that in overall terms is serviced by a large number of stevedoring businesses. The specialist nature of the services provided by some of these stevedoring operators in servicing the needs of the specific port in which they are located, means that they are not necessarily in directed competition with the services provided by the operators servicing the major ports. However, the existence of these stevedoring operators does widen the size of the market beyond simply that which services the main ports for the general range of cargo that passes through these main ports.

What is evident from this brief review of the current composition of the industry, the size of the market, and expected developments, is that the market is highly concentrated in terms of its ownership between the shipping companies, the shippers, and the stevedoring businesses themselves. Although there are a number of stevedoring businesses located in ports around the country, in the main ports through which most of the domestic and international cargo is shipped, there are a limited number of stevedoring companies, and these companies tend to provide services

for related shippers or shipping companies. Even in the smaller ports or private ports, the stevedoring and handling services are linked to the main shipping company operating through that port. There is some ownership of stevedoring and handling businesses by local landowner groups, although this is often as part of some arrangement associated with the development of an exporting activity in that location such as a fish processing factory. Even where there is local landowner involvement in stevedoring and handling businesses located in the main ports, this is usually a minority ownership with the dominant partner being associated with the shipping/transport industry using that port.

The services provided by the stevedoring and handling businesses are predominantly directed towards the handling of container cargoes. However, this should not obscure the fact that break bulk and special cargoes are still an important component of the total market, and that stevedores are required to be equipped to handle a range of cargo types depending upon the port itself and the predominant types of cargoes handled through that port. This then raises the issue of port facilities themselves, and it is evident that much of the on and off ship movement is handled using on-board lifting facilities. These are used to move the cargo to or from the wharf side, and from that point fork lifts and trailers are used to handle the movement of cargo within the port area and to various storage and handling sheds.

Demand for stevedoring and handling services is linked with the general activity of the economy. Currently there is a strong demand as the economy has shown some improvement in performance and as new mining and oil and gas ventures are progressed from exploration and proving stages to actual production and export.

Despite this dynamic within the industry in terms of demand, there is a very high correlation between the ownership and operation of the stevedoring and handling services and the ownership of the main shipping lines. This matter is explored further below, but it highlights an industry that has a relatively stable number of participants and composition of participants, notwithstanding the departure of Meto Investments Ltd, and the entry of a few small stevedoring and handling operators in single ports servicing a single port specific client. The opportunity for new entrants to be licensed and enter the market is explored further below.

3.0 The Regulatory Process

Under the provisions of Section 25C(3) of the Prices Regulation Act, the Commission is required, when undertaking a review of this nature to consider whether to:

- continue to implement price control arrangements in their present form, or
- vary the existing price control arrangements, or
- terminate the existing price control arrangements.

In order to determine whether regulation is necessary, the Commission will need to assess the level of competition within the market and determine whether the degree of competition is adequate to ensure that prices are charged at efficient-cost reflective levels and that service are being delivered at appropriate acceptable standards.

The Commission has considered the following issues to determine the competitiveness of the market:

- Degree of competition within the industry
- Freedom of entry into and exit from the industry
- Countervailing power of users of the service including shippers, shipping lines, traders, exporters and importers who use the services
- Degree of competition from other industries

To assist in this process, the Commission has sought and received useful comment and data from the industry itself and from interested stakeholders. The Commission has considered all of this information in reaching a final decision on the level of competition and contestable behaviour in this industry and the future regulation of prices for the industry.

3.1 Degree of competition within the industry

The Draft Report examined the current structure of the stevedoring industry in arriving at a position on the level of competition in the industry. In particular, the Draft Report considered the market shares held by the various participants in the market and the concentration of the industry, particularly in terms of its ownership and nature of horizontal integration across the industry and vertical integration into the operations of the main users of the stevedoring services.

The stevedoring and handling industry in PNG is characterized by a high level of concentration. A single stevedore provides services at the ports of Alotau, Buka, Daru, Kavieng, Kieta, Lorengau, Madang, Oro Bay, Rabaul, Vanimo and Wewak. Single stevedores also provide services to many of the private ports and wharf facilities servicing specialist bulk cargoes. The main domestic and international cargo ports of Port Moresby and Lae are serviced by two stevedores and three stevedores respectively to meet all the stevedoring and handling demands of the coastal and overseas ships.

The high level of concentration within the market is in part explained by the level of demand for stevedoring and handling services in these ports, and the need for specialist types of equipment to allow the various cargoes to be readily moved within the port area and loaded or unloaded from the ships themselves in the most efficient manner. On the basis of this test, it could be argued that at each port, demand can only sustain a single or limited number of stevedores. This means that the few firms

operating within the industry will each have a significant share of the market.

The market share of a particular firm can in these circumstances provide an indication of the firm's market power. Firms who possess large market shares relative to their competitors may have the ability to raise their prices unreasonably or set the general level of service that is provided at a particular port without the fear of losing any market share. However, the ability of a firm to exercise such market power is influenced by a number of other factors such as threats of new entry, and countervailing market power exercised by the users of the stevedoring and handling service.

In PNG the sole stevedores operating in the minor ports of Alotau, Buka, Daru, Kavieng, Kieta, Lorengau, Madang, Oro Bay, Rabaul, Vanimo and Wewak have 100% market share of both the coastal or overseas cargo throughput. They are thus potentially able to exert an influence on stevedoring and handling rates, as visiting shipping lines lack countervailing market power, and the market may be too small to attract a viable competitor.

In the port of Port Moresby, Port Services has an 85% market share of the overseas cargo throughput, while United Stevedores has a 63% market share of the coastal cargo throughput. From an overall market perspective, they capture 56 % and 44 % respectively. However, of particular interest to the Commission and in considering the question of competition, it is noted that the market share held by Port Services and United Stevedores is derived in part from the position that their respective parent companies hold in the coastal and overseas shipping markets. As a 100% subsidiary of Consort Express Lines, United Stevedores handles all cargo throughput shipped by Consort Express Lines (the main shipper in the coastal shipping market although also engaged in international shipping). Port Services, as a subsidiary of Steamships (owned by the Swire Group), handles all overseas and domestic cargo in Port Moresby carried by the Swire Group shipping lines. In addition Port Services handles much of the non-Swire shipping lines other than that of CEL.

Thus, the ownership links between the stevedores and the shipping lines themselves become a key factor in determining the likely market behaviour of the stevedoring firms in Port Moresby.

In the port of Lae, the shareholding interests within the shipping industry ensure that United Stevedores and Lae Port Services handle most of the cargo throughput. United Stevedores has a 100% market share of the coastal cargo throughput, which comes from servicing Consort Express Line ships and Lutheran Shipping, while Lae Port Services has 61% market share of the overseas market, which comes from servicing all Swire Group shipping lines. In terms of the total market, United Stevedores hold 50 % of the market, and Lae Port Services holds 33%. The remainder is held by Riback.

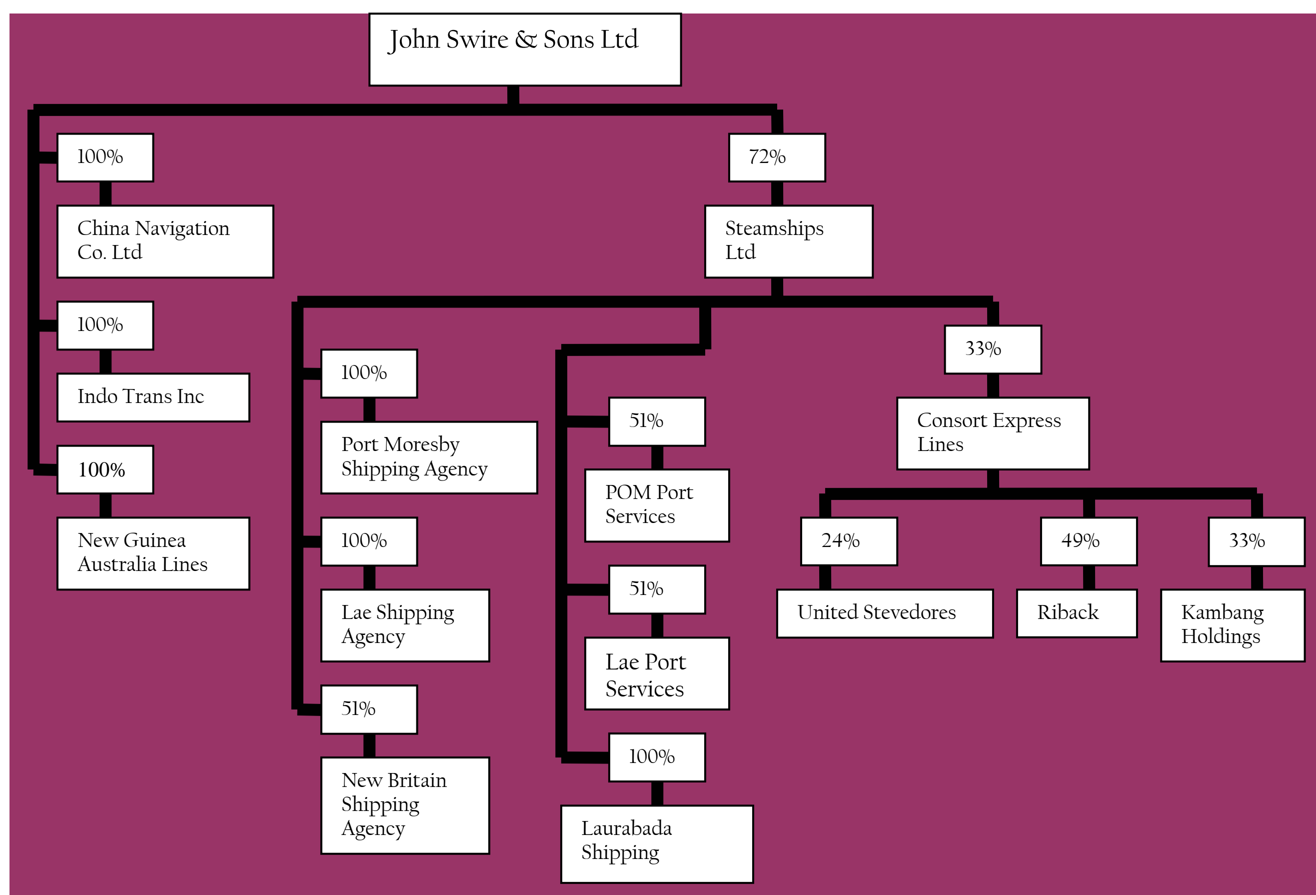
In the private ports, the stevedoring and handling services are often provided by businesses that are either wholly owned by the dominant user of the port services, or by local landowner groups who have a close association (and are dependent upon) the main user of the port or a combination of both.

While there is a high level of market share held by individual stevedoring and handling companies in each port, theoretically, the existence of at least one 'competitor' in each port should help to act as a constraint on the stevedoring and handling charges made by the other operator. Certainly even if there was a degree of close working arrangement between the stevedoring firm and the related shipping line which might lead to a willingness to pass through higher costs, it might be expected that the other operator (or operators in Lae), would, in these two main ports, seek to offer lower prices so as to try to attract some of the work that their rival holds with their associated shipping line. Conceptually this might be sufficient enough to discourage any of the stevedoring and handling operators in these two main ports from charging rates significantly above efficient cost levels.

However, this assumes that there is at least some separation between the competing stevedoring/shipping line businesses in terms of ownership (and therefore self interest). In terms of the market in PNG this does not appear to be the case. Rather, there is evidence to suggest that the interrelated nature of ownership between the shipping lines and the stevedoring firms is such as to discourage any action which might result in prices being set to encourage 'rival' shipping lines to change their stevedoring service provider.

The graph below which shows the cross ownership occurring within the industry, highlights this point.

Figure 3-1 Cross-Ownership in the Shipping and Stevedoring Industry



The cross ownership occurring within the shipping industry in PNG is both vertical and horizontal. The Swire Group is the main operator of the international shipping that services the overseas routes to and from PNG, and also holds a strong interest in the main domestic coastal shipping companies. In effect, from a vertical integration perspective, the Swire Group controls Port Services and Lae Port Services, and has a strong (although not controlling) interest in the activities of United Stevedores and Riback. Thus, notwithstanding the existence of notional 'competitor' stevedoring service operators in the two main ports, in reality these stevedoring firms have a high degree of common ownership. The incentive to enter into direct competition with their related firms can not be regarded as being particularly high, and indeed there is no evidence before the Commission at this time to suggest that shipping lines actually seek competing quotes for their stevedoring services or that the main shipping lines actually change their stevedoring service provider from time

to time as part of a process of attempting to keep service costs to a minimum while ensuring best possible service.

In submissions to the inquiry, the Commission understands that the position that the Swire Group currently holds in the PNG stevedoring and handling market (through Steamships) is reinforced by the requirement that all 'independent' shipping lines have to divulge their shipping load and discharge lists to their stevedore. It has been argued in a submission from the PNG Chamber of Commerce and Industry (PNGCCI) that this effectively creates a conflict of interest situation for Steamships as it gives that company with its wider interests in coastal and international shipping and other transport services, knowledge of all cargo movements and volumes being shipped through the independent lines. From the perspective of the stevedoring and handling industry, this would greatly assist firms associated with the Swire Group to anticipate possible changes in the industry, and in particular the potential for the possible entry of new service providers.

ALSC's submission to the inquiry has argued that there are advantages from vertical integration within the industry. These advantages include:

- Lower transaction costs;
- Greater business confidence within the relationship between shipper and stevedore which provide greater security when market contracts do not provide adequate incentives or safeguards;
- Ensured continuity of supply; and
- 'Ability to internalise externalities'.

The Commission has considered these arguments advanced by ALSC in favour of vertical integration from a competition perspective, but believes that they epitomise the reasons why vertical integration of this type is counter to competitive market behaviour. Lower transaction costs and 'greater business confidence' providing 'greater security when market contracts do not provide adequate incentives or safeguards' is simply another way of saying that a cosy deal can be done between the service provider and the service user without any regard for the interests of other parties who are affected. In a market where final consumers and those who are using the shipping service to transport goods have little or no ability to influence the prices that are charged (particularly when one shipping line is the single largest operator in the market), the ability of a vertically integrated industry to set the charges between different parts of the industry, and then simply pass these on to consumers who have no choice in terms of alternatives that they can use, is a classical example of non competitive behaviour.

Similarly 'assured continuity of supply' is an admission of the lack of competition, and assurance that the work will be given to the related stevedoring and handling business regardless of the price or service/price trade off.

Perhaps the most damaging admission however, is the suggestion that this arrangement allows the 'ability to internalise externalities'. Effectively this acknowledges that to the extent that there are efficiencies to be gained by this arrangement in the PNG context, there is no mechanism that forces at least some sharing of these operating efficiencies with final consumers. In a competitive market, firms often compete by seeking to gain operating efficiencies over their rivals, and in the process these efficiency gains, while possibly initially captured by the firm that has initially gained a competitive advantage, are ultimately then shared with consumers as other firms seek to improve their own efficiency and in the process bid prices down to the new efficient cost level whilst maintaining an acceptable level of service quality. ALSC has effectively acknowledged that the efficiencies that have been gained from the vertical integration arrangement are effectively internalised within the vertically

integrated businesses themselves.

To argue that these features highlight the lack of competition in this industry is not to downplay the importance of the industry being able to capture its share of efficiency improvements, or to suggest that the industry does not want to achieve greater efficiencies including faster turnaround times for ships. However, there is a danger that the lack of competition will result in the industry being less inclined to achieve greater efficiencies, and where these occur, to internalise the benefits in such a way as to lessen the overall economic gain available for the PNG economy as a whole. In the PNG context there has been no better recent example of the damaging effect on the economy of the lack of competition than the experience with telecommunications services. The advent of mobile phone competition is widely recognised as having had a dramatic positive effect upon the overall efficiency of the economy and a direct positive effect on the nation's GDP.

The Commission is required by its legislation to examine and consider the issue of the appropriate sharing of benefits between producers and consumers in making decisions on pricing and competition policy matters. The Commission recognises that there may be circumstances where the size of the market is insufficient to support more than one supplier/producer of a good or service. In these circumstances the Commission has to form a view as to whether some form of price control is necessary to ensure that the single supplier, or in this instance, a limited number of suppliers with strong vertical integrated links within the industry as a whole, does not exploit this market position to extract monopoly profits.

There are other tests regarding the performance of the industry that the Commission needs to apply, and these are discussed in more detail below. However, in terms of the make up and composition of the industry, the evidence in terms of stevedoring and handling activities in PNG suggests a market which has a high potential for monopoly profits to be extracted by way of prices that exceed the recovery of efficient costs (including an appropriate level of profit).

3.2 Barriers to entry, expansion and exit

Amongst the other tests that the Commission would normally apply in assessing the competitive state of a market is the existence of barriers to entry (and to exit). Ease of entry into and exit from a market is an indicator of whether or not markets are competitive. To the extent that new competitors can freely enter a market (or leave) there will be a degree of potential market contestability. In these circumstances an incumbent monopoly operator may choose not to exercise any monopoly pricing powers and thereby not encourage a new entrant from actually entering the market.

Ease of entry into and exit from the market is often dependent upon the types of barriers to entry that exist within the market, which either prevent or restrict potential entrants from entering the market to compete with the incumbents. Barriers to market entry can either be:

- Natural or intrinsic, or
- Regulatory.

3.2.1 Natural or intrinsic barriers to entry

Natural or intrinsic barriers to entry are the unavoidable costs that a firm would need to incur when first entering the market. For a new entrant to enter the stevedoring market, the costs of entering may include:

- Purchase of plant, equipment and vehicles
- Stevedoring licence fees
- Office set up costs
- Legal and insurance fees
- Labour recruitment including training
- Access to the wharf facilities, including storage areas

The extent to which unavoidable costs can become a barrier to entry depends on how much of the costs are allocated as sunk costs. Sunk costs are the costs that cannot be fully recovered by the firm upon exiting the market. These involve costs undertaken on specific asset investments such as the purchasing of stevedoring and handling equipment. Sunk costs can act as a barrier to entry by deterring potential entrants by raising the cost of exiting the market.

The Commission notes the industry's submission that sunk costs in the PNG context are not substantial. It is acknowledged that for a stevedoring and handling business in PNG there is not the high cost of establishing heavy cranes and specialised container lifting equipment which is permanently standing at the wharf. Indeed, the pattern in PNG has been for the use of on-ship loading and unloading equipment, with the stevedores simply providing access to forklifts, trailers and tractors to move containers around the port area. This is a relatively low cost arrangement by comparison to the type of lifting equipment used in most overseas main ports.

This does not mean that at some future time, loading and unloading of vessels in the main ports in PNG might not involve the use of land based gantry systems similar to that used in overseas ports. Clearly this is not a pre-requisite for entry into the market in PNG at this time. However, the Commission does note that there are proposals being discussed within government for the establishment of wharf facilities with this type of equipment. The Commission notes that such proposals may involve a trade-off in terms of granting certain monopoly rights to the operators of these facilities. Any decisions taken in regard to this matter would need to be based upon a very careful and full examination of the benefits and costs to the nation, not simply the benefits to the persons who are proposing the investment.

Other entry costs would involve matters such as the recruitment and training of staff, the office set up costs and the gaining of a licence and access arrangements for use of the wharf facilities. These are not particularly high costs, and against the cost of acquiring the capital equipment necessary to commence operations, they are relatively insignificant.

Another natural barrier to entry involves the presence of economies of scale in the market. Economies of scale occur when the average costs falls over the range of outputs demanded by the market. Within the stevedoring and handling industry, the demand for stevedoring and handling services at many of the coastal ports is small, and given the entry costs, a new entrant would need to capture a significant portion of the market to ensure that the business was economically viable. For these ports, entry on a small scale may not be economically feasible unless the stevedore was entering to serve a particular niche market (for example oil palm operation or a fish processing factory). A new entrant may need to capture the whole market from the incumbent in these smaller ports to ensure that its business is successful. It is therefore highly unlikely that a new entrant would enter one of the smaller ports of Oro Bay, Daru, Madang, Rabaul and Kavieng where size of the market is a factor.

A new entrant wishing to enter the larger ports of Port Moresby and Lae would face similar economies of scale issues, but potentially has a larger market in terms of the tonnage passing through the port. However, even for the larger ports, PNG's trade volumes are relatively

small, and may not allow for more than two or three stevedores to operate efficiently. It would be expected that in these circumstances that the incumbent has been able to capture the economies of scale and therefore give it a cost advantage over a new entrant, thereby discouraging a new business from entering the market.

More importantly than the economies of scale of the individual ports will be the vertical ownership arrangements that exist between the existing stevedoring and handling firms and the shipping lines and shipping agents. The Commission notes that ALSC has argued in its submission that there is nothing stopping an existing shipping line from integrating forward and establishing its own stevedoring and handling company. It is argued that this acts as a deterrent to stevedores from excessive charging. However, the Commission is not convinced that this necessarily provides a realistic opportunity for a new entrant to service the market. For example, the Commission understands that besides the two major ports of Lae and Port Moresby, the only other domestic port that handles non-Swire ships is Rabaul. If Sofrana Unilines for example, was not happy with the services of the incumbent stevedore, ENB Port Services (partly owned by Steamships), Sofrana Unilines could, in theory establish its own stevedoring activities in Rabaul. However, the economic viability of this new stevedore would depend greatly on the frequency that Sofrana vessels call into Rabaul and the volume of cargo throughput. Sofrana Unilines has two ships, and it is highly unlikely that these two vessels would provide enough cargo throughputs at a port such as Rabaul to justify establishing a stevedore in this location. The economies of scale would effectively ensure that Sofrana Unilines kept using the existing stevedore unless the prices charge were so high as to overcome what is in effect a very high entry barrier.

Similarly in the larger ports, these other shipping lines do not have the frequency of service or tonnage to justify the establishment of a stevedoring and handling service simply to meet their own needs. With the existing stevedoring and handling businesses heavily linked with their vertically integrated shipping operations, there is little likelihood that a new entrant would be able to attract sufficient business from these existing stevedores to overcome the entry barriers.

In terms of the intrinsic or natural barriers to entry, while superficially these do not appear to be large, given the nature of the markets and the market share held by the incumbents, there would be little likelihood that a new entrant would be able to surmount these barriers and commence a viable operation in an existing port in PNG. The only opportunity for a new entrant would be where that new entrant has an exclusive contract with a particular shipper. This is more likely to occur where a new venture (such as a fishing cannery, or mine operation) is being established. Even in these circumstances, the ability of the existing stevedores to price their services at a level that would make it very difficult for the new entrant to gain a market position (particularly when the stevedoring services offered by the incumbents can be linked to other shipping and related transport services that can be offered by the vertically integrated incumbent firms) would severely limit the opportunities for new operators to enter the market and operate viably. Where new entrants have been successful it has usually been linked to arrangements whereby was part of a new mining or other business development which wishes to access port services, has needed to establish business activities with a local landowner group. This pattern is seen in a number of ports across PNG.

3.2.2 Regulatory barriers to entry

Those wishing to undertake services in the essential port services industry need a licence. The Commission has granted PNG Ports a licence to provide essential services at declared ports throughout PNG. PNG Ports in turn licenses firms wishing to undertake stevedoring and handling activities.

In PNG there appears to be relatively 'free' entry in terms of the process of obtaining a licence to set up as a stevedore. The Commission understands that the cost of obtaining a stevedoring licence is K5000.00 and the licence is valid for a period of 5 years although reviewed annually. There is no quota on the number of licences issued at each port.

There do not appear to be any regulatory entry barriers to the establishment of new stevedoring businesses.

3.3 Countervailing power of shipping lines

Countervailing power refers to the "power" a purchaser of a service has over the supplier by being able to take its business elsewhere if the purchaser is unhappy with the prices or services offered by the service provider. In PNG where there are a limited number of shipping lines, a shift in a shipping line's preference from one particular stevedore to another could have a major impact on the profitability of a stevedore due to the thinness of the stevedoring market.

However, shipping lines do not have a wide range of choice at each port in PNG as only one or two stevedores may operate in each location. In addition, the countervailing powers of shipping lines may be constrained by the limited capacity of any particular stevedore to take on increased container traffic, although this point is not certain as the ability to gear up in a relatively short time would overcome most of these types of limitations.

Countervailing power is also restrained by the fact that competition between the two major ports of Port Moresby and Lae is not possible due to:

- lack of a road or rail link between Port Moresby and Lae. If appropriate road infrastructure were in place connecting these two ports, there potentially could be some form of competition between these two ports for transport services, and therefore shipping lines would have a greater degree of countervailing power in decisions on switching ports and stevedores;

- both ports of Port Moresby and Lae are owned by PNG Harbours and port charges are standardized (and regulated by the Commission), thus limiting the opportunity for competition to occur between the two ports for additional tonnage volumes; and

- the presence of the same stevedores companies in Port Moresby and Lae.

More significantly, however, is that countervailing power is limited by the fact that shipping lines, especially the Swire Group and Consort Express Lines, are unlikely to take their stevedoring and handling requirements to other suppliers, preferring to give all their work to related firms. There is very little additional demand for stevedoring and handling services outside of that required by the main international and coastal shipping lines, each of whom has a direct business relationship to one of the incumbent stevedoring companies operating in the two main ports. For the other smaller ports, the demand for stevedoring services is much less than that for Port Moresby and Lae, and thus the ability of users of stevedoring and handling services in these ports to exercise any countervailing power is extremely limited and highly unlikely to emerge as a countervailing factor in the pricing and service behaviour of the incumbent operators.

Countervailing power by the shipping lines is therefore for all practical purposes in the PNG context at this time, non-existent.

Similarly, there is little countervailing power that can be applied by the companies and businesses that are using the shipping lines to transport their goods into and out of PNG. Where such power exists, it is usually reflected in the fact that the business has its own stevedoring service providers (such as a mine or oil palm operation). However, for other users of these services, they are reliant on the decisions made by the shipping lines and their agents. In these circumstances they have little opportunity to seek competing service providers, be it by way of the stevedoring and handling services, or potentially even for shipping services themselves where on some routes and for some services there is little competition.

The Commission has found no evidence to support an argument that there is countervailing power in the market that will constrain the activities of the incumbent stevedoring and handling businesses. Rather, the market has more of the appearance of a market where there are a limited number of service providers, and their activities are effectively undertaken in close consultation with their main customer base rather than in a spirit of competitive tension.

3.4 Degree of competition from other industries

The degree to which alternate industries can compete with the shipping industry for the transportation of containerised and bulk goods in PNG is not realistic, certainly not in the short term.

For international transportation of imports and exports, PNG does not have access to road or rail to link it with its major international trading partners. Air transport is expensive and not suited for most forms of trade in bulk goods.

In terms of domestic trade, the Islands region will continue to rely on shipping transportation to trade with mainland PNG. In addition, the lack of a national road network, such as having a road link between Port Moresby and Lae that would compete against coastal shipping, places a limit upon this form of competition with coastal shipping.

3.5 Summary of the final findings

The Commission is required to determine whether some form of regulation of prices is required, and if so, the form of regulation that should be applied. In examining the need for regulation, the Commission has considered the extent to which competition applies in the market for stevedoring and handling services. Its examination of this issue has involved consideration of the current operation of the stevedoring and handling market, the interaction between the existing service providers both in terms of competition between these suppliers and the customer base they are seeking to service, the potential for new entry and countervailing action by users of stevedoring and handling services, and the availability of alternative forms of transport which would allow transport users to avoid the use of the ports and associated stevedoring and handling services.

The Commission has determined from the evidence available that the volume of cargo handled through the various ports across PNG largely drives the market for stevedoring and handling services in PNG. This has implications for the possible entry of new competitors as the size of the market is relatively small in a number of ports. Even within the existing larger ports, there are limits to the size of the market, although the market can be expected to grow as PNG grows as an economy based on its strengths in minerals, oil and gas, and certain agricultural, forestry and fishing products.

The following summarises the Commission's findings based on the available evidence:

- Currently, all the ports with the exception of Lae, Port Moresby and Kimbe are serviced by just one stevedoring and handling operator. In Port Moresby, one stevedoring and handling company handles all overseas vessels and one company handles all coastal shipping. In Lae, there are three operators who share the total market and two are engaged in servicing both coastal and overseas shipping;

- There is a high degree of vertical integration between the ownership of the stevedoring and handling companies and the shipping lines that they service;

- The degree of vertical integration, cross ownership and economies of scale in the industry act as a barrier to entry, despite the "low" capital and associated set up costs for a new entrant and this has limited entry of potential new operators in the industry;

- Some new entry into the industry has been evident in certain locations, but usually as part of a special arrangement to service particular shipping customers, and often under the incentive of needing to establish links with local landowner groups;

- Countervailing power held by the shipping lines is limited to the point of being non existent as a consequence of the vertical integration in the industry; and

- There is very little competition coming from alternate industries to threaten the overseas and coastal shipping markets and therefore threaten stevedores.

Based on its analysis of the market, the Commission has reached a conclusion that there is no adequate competition in the stevedoring and handling market to prevent stevedoring firms from utilising their market power in the determination of prices and condition of services to be offered. The vertical integration of the industry creates some concern because of the potential for abuse of market power in these circumstances. As acknowledged by the industry, they perceive that there are certain 'advantages' of having a highly integrated industry. However, it is not clear that the benefits that arise from this arrangement are in fact being shared with the remainder of the PNG economy. The role of the Commission, under the provisions of its legislation, would be to ensure that there is an appropriate sharing of any benefits that come from this integration within the industry such that the service providers are appropriately rewarded for their activities and consumers are also able to benefit from cost efficient service delivery.

Therefore the Commission's final decision is that the stevedoring and handling industry is not competitive and that some form of price regulation should be applied through the powers of the Prices Regulation Act.

The Commission has made the final determination that it will recommend to the Treasurer that the stevedoring and handling services provided by the stevedoring and handling industry be regulated for price setting purposes under the provisions of section 32A of the Price Regulation Act

4.0 Form of Regulation

The Commission has made the final determination that it will continue price regulation of the stevedoring and handling industry.

Under the Prices Regulation Act, the Commission has the option of choosing between a lighter and less intrusive form of regulation and a heavier handed and more intrusive form of regulation.

The heavier handed approach would involve the Commission declaring the industry under section 10 of the PRA for the purpose of price control. Alternatively, the light-handed approach would involve the Commission declaring the industry under section 32A of the PRA for the purpose of monitoring prices.

4.1 Price monitoring

A price monitoring approach would allow the stevedoring industry to set its own tariffs for its stevedoring and handling services independently of the Commission. The Commission would then monitor movements in these rates and compare these movements to an appropriate benchmark over time.

The benchmark could be the Consumer Price Index (CPI)[10], or the Commission could use some other comparator including constructing a price monitoring index using the major cost drivers of the business, such as labour costs, fuel, transport and lifting equipment costs, and other relevant costs.

If prices changes deviated from movements in the benchmark, the Commission would initially seek an explanation from the stevedoring companies. Depending upon the response provided by the stevedoring companies, the Commission would have the option of recommending to the Treasurer that the regulation of the industry be returned to price control under Section 10 and 21 of the PRA or continuing the price monitoring arrangements.

Should a price monitoring approach be used, the Commission would initially determine the opening stevedoring rates to ensure that these reflected efficient costs. Adjustments to these rates could then be made by the industry once the initial rate was determined, and provided these adjustments remained within the bounds set by the monitoring process, the Commission would not need to intervene. Under this arrangement, in order to set the initial rates, the Commission would need to determine the current efficient costs of the industry.

Discussion

The use of a monitoring arrangement for prices is often favoured as a lighter form of regulation, which minimises the cost to the regulated entities and to the Commission. At the same time, it provides a regulatory discipline on the operation of the industry, and seeks to address the market imperfections that have justified the need for some form of price regulation.

The Commission is very conscious however, that whatever form of regulation that is applied, the costs and effectiveness of the method used needs to be such that the overall cost of regulation does not outweigh the benefits. Thus the Commission is particularly conscious of the issues that have been

[10] The Commission uses CPI that excludes betel nut, tobacco and alcohol that is provided by the National Statistics Office.

raised by the industry itself in its submission to the Commission. In this submission, ALSC has argued that to make price monitoring effective, the following would need to be specified:

- ease of constructing the price index comparators for stevedoring and handling services prices and the suitability of the cost benchmarks;

- information requirements and the format in which firms would have to provide; and

- the circumstances in which firms would be considered to have potentially abused market power and the form of Commission intervention in those circumstances.

In addition, the Commission notes the comments of ALSC regarding the establishment of the initial prices for the purpose of price monitoring:

> *'It would be important to ensure that these 'opening' rates are set at an appropriate level and this would involve full consultation with the industry. In particular, the initial rates should not be based on current asset values as there is a need to replace those assets. A more appropriate basis may be forward looking rates, taking into account the need to replace assets if service standards are to be maintained or improved'*[11].

In its use of price monitoring for other industries[12], the Commission has endeavoured to meet the objectives raised by the ALSC. For other industries, the Commission has used the building block methodology to establish efficient costs to determine the initial prices for a good or service subject to price monitoring. In that process the Commission has been aware of the need to 'value' the industry at an appropriate level for purposes of determining the Regulated Asset Base to be used in determining the return on assets. In particular the Commission has endeavoured to use an economic valuation of the business rather than simply rely upon the accounting valuation of existing capital equipment, be it the historic cost of the equipment or their current replacement value. These valuation methodologies are discussed further below. However, the Commission recognises that there may be certain issue that relate to this particular industry, including the likely future need to invest in updated capital equipment. The Commission would seek to examine the arguments for the inclusion of such capital investment requirements as part of any determination of the economic value of the business.

The Commission agrees with the industry that the price index used to monitor the industry's tariffs should be easy to construct and must be suitable cost benchmarks. In terms of information requirements to establish the initial price, the Commission would undertake process similar to that discussed in Section 5 in terms of constructing an appropriate efficient cost base using a building blocks approach. Furthermore, should the Commission favour a monitoring approach, the Commission has for other industries adopted an approach where the industry concerned advises its current price schedule on a monthly basis. This allows the Commission to monitor any movement in that price schedule over time. This would mean that the Commission would require the industry to provide information on current stevedoring and handling rates on a monthly basis to be benchmarked against the specified price monitoring index.

Under a price monitoring approach, the Commission accepts that on occasions, stevedoring and handling rates may move independently from the designated price monitoring index. The Commission will not necessarily react to these short term differences in movements in charge rates and the index

[11] ALSC submission, p50

[12] For example, see the Commission's reports on the rice, flour, and petroleum industries

used to monitor those movements; however, where stevedoring and handling rates deviate substantially from the price monitoring index for a extended period of time, the Commission will seek an explanation from industry as to why the rates have deviated in this way. If the Commission is not satisfied with the explanations given by industry, the Commission will be inclined to recommend to the Treasurer that the industry be declared for price control purposes.

4.2 Price control

The alternative to price monitoring would be direct control of prices by the Commission. If the Commission were to adopt this form of regulation, the Commission must have regard for sections 20A, 20B and 21 of the PRA. These provisions require the Commission to:

- Undertake a public review process each time it was proposed to alter the maximum prices under the price declaration

- Prepare and publish draft reports and other material relating to the proposed price change; and

- Have regard to the requirements of section 21 (2A) of the PRA that *inter alia* require the Commission to ensure that an appropriate balance is kept between the interests of customers and stevedores.

This process is more time consuming for both industry and the Commission and therefore is more costly to all parties. For other industries where some form of price control is adopted (for example, for the setting of the wholesale and retail margins on declared petroleum products), the Commission has adopted an approach which involves the development of a declared price path for the goods or services declared. This approved price path is usually linked to some form of CPI+/-X formula that would allow for annual automatic adjustments in prices.

To develop the price path for the stevedoring industry, the Commission would need to consider the efficient costs of providing stevedoring and handling services. The methodology for determining this price path is outlined in Section 5 of this report.

The additional cost to industry and the Commission of the use of a price control mechanism is something that the Commission has considered carefully when examining the stevedoring industry. The Commission has found that a price monitoring system works well for some goods and services. However, this has usually been in the context where there have been readily available comparators that can be used for price monitoring purposes. For the stevedoring and handling industry, the Commission is not aware of a 'like for like' comparator that is readily available and that also is available from an independent source so that all interested parties who wish to observe price movements and assess the monitoring performance of the Commission can access the comparator data. It is this level of transparency that the Commission seeks to achieve so that there can be no doubt to all parties, be they service suppliers, or service users, that the Commission is acting in a non discriminatory fashion in its decisions.

The additional cost of a price control mechanism over a monitoring system may not be that significant, particularly as the Commission will need to determine an initial price for the stevedoring and handling industry regardless of the form of price regulation adopted. In this regard, the Commission is aware not only of the need to address some of the issues raised by the industry when discussing the establishment of the initial price (for example, the need for new

capital investment has been raised by the industry), but also the number of different ports that the Commission may have to consider and for which prices may need to be set reflecting the particular services and activities in those ports. As there is no obvious competition between stevedoring businesses even in those ports where more than one operator is in existence, in those ports where there is only one operator there is little likelihood that competitors will emerge to keep prices at efficient levels. Therefore the Commission is not in a position where it can simply monitor a small number of representative services across the whole industry. Rather, regardless of whether a monitoring or price control approach is adopted, the Commission will need to establish prices for the whole range of services involved.

The Commission notes from its observation of the industry, that a high proportion of the costs of the industry are linked to labour costs. As such, there is potentially a strong link between the cost of labour and movements in that cost, and the rates charged by the industry. However, the industry is also reliant upon machinery and other equipment either purchased or operated by the stevedoring industry itself, or available on the vessels that are serviced in the individual ports. The Commission notes that there is a degree of difference between the types of vessels that are serviced in the different ports and the extent to which own-capital equipment is used to load or unload these vessels, and the use of equipment that is carried by the vessels themselves. It may be that this use of on-board equipment is linked to the type of vessels serviced, for example, international line vessels having more sophisticated and less labour intensive loading and unloading facilities, while coastal vessels are more labour intensive.

From its examination of the Coastal Shipping industry, the Commission is particularly conscious of the moves by that sector to achieve greater efficiencies in operations so as to keep operating costs to a minimum while maintaining services to small outlying ports. Innovation and equipment development and improvement has also been a feature of the vessels used on the international routes, and it is important that the form of price regulation used by the Commission does not lessen the incentive to achieve further improvements in the loading and unloading activities in PNG ports.

The issue of innovation and improvement in technology can to some extent be dealt with through the process of the timing of reviews of the need to continue some form of regulation (see following section). However, the need to undertake formal price determinations, even for the setting of the initial price for a monitoring regime, raises the difficulties and cost involved in undertaking a detailed analysis of all stevedoring firms.

4.3 Length of regulatory period

Regardless of which form of regulation (price monitoring or price control) is applied the Commission has to decide how long the period of regulation should apply.

The Commission's views are that a five-year regulatory period is the most appropriate time period. This recognises that innovation and technology changes occur over time, and that there needs to be an opportunity for the industry to retain some of the initial benefits of these changes, but that over time these benefits should be shared with customers through lower prices or improved service quality. A five-year period also recognises the cost involved in undertaking these types of inquiries, and so seeks to keep these costs to a minimum while at the same time providing an open, transparent process for the determination of price and consideration of the need to continue with some form of price regulation.

Before the end of this period, the Commission would again conduct a review of price regulation in the

industry and come to a view as to whether some form of price regulation was still required. This process ensures that decisions to regulate prices are continually under review and that change in circumstances and industry conditions are recognised.

The Commission notes the industry's views on the length of the regulatory period:

> *'A regulatory period of 5 years or around 5 years has been adopted in many jurisdictions for example Australia and the United Kingdom and seems reasonable as a starting point for Papua New Guinea. However, as noted, if starting point prices were considered to be reasonable and the regulated firm was allowed to retain the profits from efficiency improvements there would be stronger incentives to reduce costs with a longer regulatory period'*[13].

It is not clear just how the industry anticipates that there will be an incentive for the industry to share efficiency improvements with customers assuming that efficiency improvements were retained by the industry and the length of the regulatory period was lengthened. However, as noted above, the Commission has sympathy with the view that there needs to be an incentive for new innovation, and that as part of this incentive is a process which allows the industry to retain some of the benefits. The use of a five year price determination will provide that incentive. It also has the advantage of being a reasonable period for which to project estimates of likely costs and volume of cargoes handled. These types of projections would be necessary if the Commission was to adopt a price control mechanism.

The Commission also notes that adoption of a five year period places a reasonable limit on the number of years that the price regulation would operate before it was necessary to assess again the need for the continuation of such an arrangement. Thus, there are benefits for both the service suppliers and for the customers from the adoption of a regulatory period that is not unduly long.

The Commission has made a final determination that a 5 year regulatory period shall apply.

4.4 Form of regulation

In response to the Draft Report, the Commission has received several submissions on the form of regulation that it should apply. The PNG Chamber of Commerce and Industry (PNGCCI) expressed concern with the operation of the proposed monitoring arrangement on the grounds that it did not provide the opportunity for the Commission to take immediate action against pricing behaviour that was outside of the limits set by the movement in the monitoring indicator. The PNGCCI considered that this provided the opportunity for the stevedoring companies to taken action outside of the monitoring arrangements similar to the price increases that were introduced in 2007 which occurred without ICCC approval.[14] As a variation on the monitoring arrangement usually applied by the Commission, the PNGCCI suggested that the Commission should adopt an arrangement whereby a declared percentage margin above the monitoring indictor movement could be used by the Commission to determine whether it would take action against the businesses that had increased prices to a level outside of the movement in the indicator series.

The PNGCCI's proposal raises an interesting issue for the Commission. Under the price monitoring arrangement that currently operates for all industries, the Commission monitors the movement of

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[13] ALSC submission, p52

[14] In late 2007 there was a similar occurrence when Inter Oil increased its ex refinery petroleum product prices at a rate higher than that indicated by the monitoring arrangements that applied under the then Project Agreement between InterOil and the Government on ex refinery prices that the Commission was monitoring.

prices on a monthly basis. The Commission effectively allows a degree of discretion in the movement in prices, as the cost series used for monitoring purposes usually move in a gradual, progressive manner whereas the prices charged by suppliers for the declared goods or services adjust their prices periodically (for example, every twelve or six months).[15] The price adjustment made by the stevedores in 2007 was outside of the provisions of any formally approved price adjustment mechanism, and as the Commission had not completed its review as required by its legislation, it was not able to take direct action against the stevedoring companies at that time. However, with the completion of this current report and the formal gazettal of the pricing arrangements, the Commission will have stronger powers to take more timely action against price adjustments by the industry which are outside of the parameters set by the monitoring arrangement.

However, for the monitoring arrangements to be effective and to prevent unwarranted price adjustments by regulated industries, the Commission must be prepared to take action under its legislation if the regulated industry blatantly adjusts its prices outside movements in the monitoring indicator series. The setting of a margin around the movement in the price indictor series along the lines proposed by the PNGCCI, will not necessarily resolve the issue of the need for the Commission to take swift and decisive action if the regulated industry blatantly adjusts its prices beyond the movements in the indicator series. Rather, it will simply set a upper target for the industry indicating just how much above the indicator series they can adjust their prices with immunity. The Commission would rather not specify the extent to which it will allow movement around the indicator series, but rather observe movements in the prices over time against the indictor series. Simply allowing the industry to set their prices at a margin above the indicator series over time will allow the industry to increase incrementally its prices well beyond the cost reflective prices that the price monitoring arrangements are meant to enforce.

In its response to the Draft Report, ALSC sought to clarify a number of aspects of how the price regulatory arrangements would operate. In particular, ALSC sought clarification on:

- *'Whether it is necessary to provide the Commission with charges on a monthly basis or simply to advise the Commission of the changes in the rates;*
- *Whether the Commission will seek to set initial prices for each and every services (a very complex and demanding task) or simply set of required revenue and allow companies to set individual charges within that revenue'.*[16]

ALSC also sought further clarification on various technical issues associated with the determination of prices, be they the initial prices to be used under a monitoring arrangement, or the setting of prices on a periodic basis under a price regulation type scenario.

The industry through the ALSC has indicated its preference for a price monitoring approach, although many of its questions were directed towards obtaining clarification on how the monitoring arrangement would operate.

The Commission has had the opportunity to review the additional financial and other information made available in response to the release of the Draft Report. In the following section, the Commission has outlined its approach to assessing the current prices charged by the industry and the

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[15] For the ex refinery petroleum product prices, the monitoring arrangement is linked directly to international prices for these products with certain agreed adjustments for freight and other relevant costs as set out in the Project Agreement between InterOil and the Government.

[16] ALSC's submission to the Draft Report piv

decision of the Commission on the appropriateness of these prices in terms of the current market conditions and cost of providing the service. Initially the Commission must decide whether to use a form of monitoring, and if so, how this monitoring arrangement will operate.

The Commission notes the submission of the PNGCCI. If the Commission is to adopt a form of monitoring of stevedoring prices, then there needs to be a process whereby the Commission can take swift action should prices be seen to moving outside of the indicator series. The task for the Commission under a monitoring approach is made more complex by the fact that there are a large number of services which the industry provides. For a monitoring approach to be effective, the Commission will need to ensure that it does not simply monitor the movement in the charges for one or two services, but adopts an approach which allows consideration of movement across a wide range of services.

In addition, while there are only a limited number of operators in any one port, across the country as a whole, there are a large number of stevedoring companies. Some of these are relatively small operators or are providing specialist services under contract to specific port users. The setting of prices for these specialist services are often established under agreements established between landowner owned stevedoring businesses set up as part of an agreement to give the port user concerned access to the port or surrounding land for their business operating purposes.

The existence of a large number of individual services offered by the industry presents a practical problem in terms of establishing a price regulatory arrangement regardless of whether price monitoring or price control is used. The Commission is concerned that if it adopts an approach whereby it focuses its price regulation upon a small number of services, there will be a temptation by the industry to adjust the prices for unsupervised services such that there is effectively some form of cross subsidisation occurring within the business concerned. This would effectively defeat the purpose of having price regulation. Thus, the Commission considers that it needs to have a mechanism which effectively encompasses all services offered by the industry.

The existence of 'single service' stevedores in certain specialist ports and negotiated agreements between those operators and the specialist port users (often forming part of a larger government endorsed agreement relating to the establishment of a new industry around that port, such as a mine, palm oil plantation or fish cannery) creates an additional factor which the Commission has to consider. However, this does not necessarily mean that the adoption of some form of price regulation cannot operate. Nevertheless, such arrangements would cause the Commission to lean more favourably towards a monitoring approach as the form of price regulation to be adopted. Price control under the PRA is a much more formal process under which the Commission is required to gazette prices as and when they are approved. Even the adoption of a price path approach using some form of approved price path around a CPI+/-X price path will require appropriate gazettal of prices. The establishment and gazettal of prices for all of these ports and services would represent somewhat of a logistical problem.

In addition, the ability of the Commission to take into account prices negotiated between arms length stevedores and port users in the specialist ports would also be more readily handled through a price monitoring approach rather than a price control arrangement which would effectively gazette and lock in prices not withstanding agreement being reached between service providers and users in these ports that a price adjustment is justified.

The Commission needs to consider the practicality of any form of price regulation it adopts, and in these circumstances, needs to be aware of the costs that price regulation creates for all parties, costs

that are ultimately passed through to consumers. It is not the intention or desire of the Commission to create additional costs except to the extent that the benefits gained for consumers outweigh the costs involved.

Having considered these practical issues, the Commission has concluded that price monitoring is the appropriate form of regulation to be applied over the next five years. The price monitoring to be adopted by the Commission will need to have the following characteristics:

- Price monitoring will apply to all individual services offered by the stevedoring businesses;
- All stevedoring businesses will be required to provide details of their prices for individual services;
- The Commission will require all stevedoring businesses to provide details of their service prices on a quarterly basis;
- The monitoring process will be undertaken by the Commission against an indicator series to be discussed further in this report; and
- The Commission will recommend to the Treasurer that the monitoring process for individual services (or all services) should be subject to price control under the PRA should it be found that stevedoring prices are adjusted at a rate that exceeds the movement in the monitoring indicator rate over time (and after the Commission has sought an explanation for a rate of increase above the indicator rate).

The Commission will recommend to the Treasurer that the prices for all stevedoring and handling services be subject to price monitoring for the next five years, with all stevedoring businesses being required to provide details of their prices for all services offered to the Commission on a quarterly basis to allow the Commission to monitor movement in those prices over time against movement in the indicator monitoring series.

5.0 Determining Initial Prices

5.1 Methodology used

Having determined that a monitoring approach will be used to regulate stevedoring and handling prices, the Commission must reach a decision on the appropriate initial prices that will apply. The industry already has a pricing regime, which, for members of the ALSC, is a standardised set of prices applied across the relevant ports. For non ALSC members, the prices that are charged have been set by the individual stevedores. These have been set based upon the particular circumstances of the individual ports involved, and take into account the nature of the services being provided, the relationship between the main port user and the stevedoring company, and any special services that are required of the stevedores concerned. Importantly, however, is that the rates set by the ALSC and which apply in the main ports, set the standard for other stevedoring companies in terms of the rates they set or that they negotiate with their main customers/port users.

In August 2007, the ALSC increased its handling service fees by 14.67% and its stevedoring fees by 18.75%. This fee increase applied to the members of ALSC. This represented a significant increase in prices for these services especially in the context of the underlying inflation rate within PNG at the time. Although the Commission was at that time still undertaking the current review and technically was not able to take direct action in terms of reviewing and assessing the reasoning behind this increase, having now reached the stage where the Commission will have the Treasurer formally declare the industry for monitoring purposes, the opportunity exists for the Commission to form a view of the acceptability of the current prices charged by the industry including the price increases implemented in 2007, for purposes of setting the initial cost reflective prices for purposes of the price monitoring process.

In March 2008, Port Services wrote to the Commission to advise that it was proposing to further increase its stevedoring and handling charges by 24%. Should this price increase proceed, it is likely to be adopted by other stevedores in PNG. Port Services argued its case for an increase of this magnitude on the basis of its interpretation and application of the comments on the weighted average cost of capital included in the Commission's Draft Report. This matter is discussed further below.

In order to form a view on the acceptability of the current prices charged by the industry, the Commission has adopted an approach whereby it has assessed the profitability of the industry against recognised standards and allowing for the recovery of efficient operating costs and recognising future investment requirements. It is for this purpose that the Commission obtained from the industry certain detailed financial information following the release of the Draft Report. This financial information was obtained from the main operators who service the vast bulk of the stevedoring requirements of the nation plus financial information from a sample of smaller stevedoring businesses who service some of the smaller ports. The Commission has obtained this information on the basis that for individual businesses the data will be confidential to the Commission. However, the Commission has used the information to derive an aggregate summary of the financial performance of the industry, and from this analysis to form a view as to the overall profitability of the industry.

In its Draft Report, the Commission indicated that it favoured the use of some form of building block approach to the establishment of the appropriate initial price. The building block approach allows for firms within the industry to recover in their charges for stevedoring and handling services, the following efficient costs:

- Operating and Maintenance Costs (Opex)
- Return on Capital
- Return of Capital (Depreciation)

The sum of these efficient costs represents the notional revenue that the stevedoring businesses will earn in any given year and should thus equate to the actual revenue earned given the prices that are being applied. The Commission outlined in the Draft Report the various elements of the building block approach. In response to this proposal, the ALSC made a number of comments and raised some issues on which it sought clarification. In particular the ALSC raised some issues in relation to the determination of the level of profit, including the calculation of the rate of return and the valuation of the asset base that would be used in determining the revenue requirement under the building block methodology. The issues raised included:

- How would the Commission plan to estimate the Optimised Deprival Value (ODV) of assets;
- What source will the Commission use to obtain the risk free rate, forecasts of inflation for PNG and inflation forecasts for USA in calculating weighted average cost of capital (WACC);
- Evidence to support the contention that the industry's revenues and profitability is more volatile than the PNG economy as a whole, justifying the use of a relatively high equity beta in the WACC calculation; and
- The need for a higher market risk premium to be used in calculating the cost of equity in a developing country such as PNG as compared to calculating equity cost in a country with a mature equity market such as the USA[17].

These matters will be addressed below in the discussion on the analysis that the Commission has undertaken using the financial information provided by the industry.

5.2 Operating and maintenance costs

Operating and Maintenance costs (Opex) are normally considered to include the ongoing costs of a non-capital nature incurred by the stevedoring firms. Opex costs include, but not limited to costs such as:

- salaries
- repairs and maintenance
- fuel and lubricants
- printing and stationary
- administrative costs
- overheads
- uniforms and clothing
- insurance

The Commission has used the information provided by the stevedoring businesses that have been surveyed and have provided financial information. Those companies included in this analysis have included Riback, United Stevedoring, Port Services (Port Moresby, Lae and Madang), and Alotau Stevedoring. For purposes of the analysis, the Commission has combined the operating costs of these companies and examined the results from a per tonne of cargo handled as a guide to likely differences between the performance of individual operators. The Commission has used the operating costs that the businesses have provided rather than attempt to make any judgement as to the efficiency of the costs concerned as it has not been possible to make any meaningful comparison of these operating costs with those of other stevedoring businesses operating in other ports or other countries.

[17] ALSC's submission to the Draft Report piv

5.3 Return on capital

Return on capital is the return that the stevedoring company will earn on the assets (Regulated Asset Base "RAB") that is employed within the business to provide stevedoring and handling services. The calculation of the return on assets and the asset base itself is the most contentious area, and the area where the industry has raised most of its points of concern about the methodology to be used by the Commission.

Return on capital is calculated by applying a rate of return on the RAB, thus:

Return on Capital = WACC * RAB

where WACC is the weighted average cost of capital.

5.3.1 Regulated Asset Base (RAB)

To determine the return on capital for a service provider, the Commission must initially establish the value of the RAB that is employed to deliver the regulated services. The RAB is often determined based on the cost of the assets that are employed by the industry or the regulated business. This is a reflection of the investment that has been made in the business. The critical issue for the regulator however, is what represents the economic investment in the industry rather than just the physical investment in the industry. The economic investment implies investment that is economically efficient and prudent. The use of accounting concepts such as the valuation of the assets of the business as reported in the financial accounts, does not necessarily represent the economic valuation of the business (although accounting standards are increasingly being adjusted to bring them into line with the concept of an economic value). Thus, a regulated business may have a higher or lower value in economic investment terms than simply the book valuation of its assets. This is often reflected in the premium over the book asset valuation that purchasers of a business are willing to pay when acquiring a business.

In its Draft Report, the Commission discussed a number of possible methods of calculating an initial RAB for the industry. These could be broadly identified as the:

- Depreciated historical valuation method
- Optimised depreciated replacement costs (ODRC) method
- Optimised deprival value (ODV) method

Without repeating the discussion on these methods which was contained in the Draft Report, the Commission did note that it would need to consider all the available information that would be collected from the industry before making a final decision. The Commission also noted however that it had concerns about the use of the ODRC approach and that the Commission was more inclined towards the use of the ODV method[18]. An ODV valuation has the theoretical advantage of determining the value of the business from a financial perspective. While the other methodologies rely

[18] The Commission's concerns about the use of the ODRC methodology is demonstrated by the March 2008 confidential submission from Port Services where an attempt has been made to calculate the ODRC valuation without the assistance of a specialist independent engineering advisers. While the numbers used are confidential, the methodology used by Port Services is flawed, as is demonstrated by the fact that having depreciated certain assets to a zero value, the company reintroduced a value based on a 'net realised disposal value' to value these assets that under a DORC valuation would have been written off and therefore not included in the valuation used.

upon an approximation of the business based on the asset value or the actual expenditure on physical assets, the ODV approach seeks to recognise the fact that it is the financial value of the business upon which an owner seeks to generate a return. If the owner cannot earn a competitive return on this financial valuation of the business, the owner would be inclined to look for an alternative investment opportunity. Conceptually this represents a more appropriate valuation of the business for regulatory purposes.

The Commission indicated in its Draft Report that it would apply a Return on Assets (RAT) test as a means of determining an ODV. A RAT test essentially seeks to determine a value of the business based upon current and future earnings assuming that no new investment is made in the industry. In other words, the RAT test is seeking to determine what value a buyer would place upon the business if it was to be sold as a going concern with it existing capital and infrastructure base.

ALSC on behalf of its members made a submission in response to the Draft Report seeking further clarification on how the Commission planned to estimate the ODV of the industry. In particular, the industry association queried what initial revenues and costs were to be selected (2006, the 2007 budget or an average of a number of years), how the costs and revenues were to be projected forward, and over how many years would the Commission project forward these revenues and costs in calculating a net present value of the assets.

In its Draft Report the Commission indicated that it would seek from the industry certain financial information for a sample of the operating stevedoring companies. For this purpose, the Commission obtained information from the larger operators and a sample of the smaller operators. It was based on this information that the Commission undertook a process of considering the appropriate asset base to apply to its modelling of the industry and an assessment of the return on that asset base that the industry has been able to achieve.

For this purpose, the Commission did not seek to establish a RAB for the whole industry, but rather used the aggregated information on the sample of operators to undertake an assessment of the overall profitability of the industry. Thus, for purposes of assessing an asset base for this sample of operators, the Commission applied a profit projection based on the projected growth in activity provided by the respondents themselves and used this as the base for the growth in the profit that could be expected over the next twenty years. The Commission adopted a growth in profit commensurate with the growth in activity projected by the industry over the first three years and then held that profit constant in real terms extending into future years[19]. The initial profit estimates used were commensurate with the average profit generated for the three years to 2006. The resultant RAB derived, having applied a nominal rate of return[20] to the projected real profit estimates over twenty years, was over a third greater than the written down asset value reported from the balance sheets of the businesses sampled. This in part addresses the industry's concern that the valuation of the business should be greater than the written down value of the assets as reported in their financial accounts, and reflects the profitability of the industry over recent years and prior to the price increases announced in 2007 (but not formally approved by the Commission).

[19] The March 2008 submission from Port Services sought to apply a RAT test, but has incorrectly assumed that the volume of the business can continue to grow for all practical purposes indefinitely without any additional capital expenditure. What the RAT test seeks to do is to determine a value of the business on the basis that no further investment occurs, and therefore there is a limit to the additional volume of business that the operator can undertake as is assumed by the Commission. In effect the business is being valued in its current state having achieved all available growth potential from its existing infrastructure.

[20] The rate of return used for this purpose and also for the calculation of the WACC is discussed in section 5.3.2 below

In its March 2008 confidential submission to the Commission, Port Services sought to apply a RAT test to derive an economic value of its stevedoring and handling business. However, the approach used effectively overestimated the economic value of the business. As noted in a footnote above, Port Services assumed a continuing growth in the volume of business it could undertake using its existing infrastructure. Thus, effectively the calculation undertaken by Port Services overvalued the business as it effectively assumed that it could grow its profits at a constant rate over the 30 years used in the analysis undertaken without any new net investment. The Commission's approach has assumed that there is some potential from the existing infrastructure base for growth in the profit of the sample of businesses used in its analysis, but that there is a limit to this growth. Thus the Commission's approach is a more consistent with normal financial valuation practices used to derive the net present value of the business in its current state.

The Commission is satisfied that the approach it has used provides a financially prudent and acceptable mechanism to determine a RAB upon which it can then assess the overall profitability of the industry as will discussed further below.

5.3.2 Weighted Average Cost of Capital (WACC)

For purposes of both deriving a RAB for the sample of businesses included in this analysis, and to derive the return on assets that should be included in the building block approach to assessing the total revenue requirement of the business concerned, the Commission has had to establish a fair and reasonable rate of return to apply to the RAB. The WACC is a commonly used measure for determining a fair rate of return that will apply to the RAB. In setting the WACC, the Commission seeks to set a rate that best approximates the appropriate commercial return for providing stevedoring services. If the Commission was to set a rate of return below the cost of funds in the financial markets, it would make it unattractive for the industry to undertake further investment to develop the industry. Conversely, setting a rate of return too high would lead to the industry earning a return in excess of its capital costs.

The standard formula for calculating the WACC is;

$$WACC = Re * E/V + Rd*(1-T)D/V$$

Where :

- Re = post tax cost of equity
- Rd = cost of debt
- T = effective tax rate
- E = market value of equity
- D = market value of debt
- V = market value of debt plus equity

The Re is derived by using the Capital Asset Pricing Model (CAPM) discussed further below.

The WACC formula used by the Commission ensures that the firm earns a return that is able to meet the cost of debt and equity. The WACC formula can be rearranged to reflect a pre-tax real WACC or pre-tax nominal WACC.

In its Draft Report, the Commission discussed in some detail the various elements that are used to

determine the WACC. It is not intended to repeat that discussion here, but rather to note the decision taken by the Commission having considered the submissions received on the Draft Report.

Gearing Ratio

In the Draft Report, the Commission indicated that it was prepared to adopt a gearing ratio of 30:70 debt:equity. From the sample of businesses surveyed, the debt:equity ratio was closer to 15:85. Adoption of this rate makes a very small difference to the WACC calculation. At the same time, it reflects an industry that is not as highly geared as might be considered to be economically efficient.

In its March 2008 submission to the Commission, Port Services has calculated a WACC assuming a wholly equity funded operation. The Commission does not consider that this necessarily reflects the appropriate debt:equity ratio for the industry as a whole. In addition, from a purely financial efficiency perspective the Commission is not convinced that a 100% equity funded business is the most appropriate structure to use. For other industries, the Commission would be more inclined to use at least 50:50 debt:equity structure.

There were no other submissions on the debt: equity ratio. Accordingly, the Commission will maintain the ration at 30:70, which by standards used in other industries is still a very low level of debt, but reflects the current characteristics of this industry.

Return on debt (or cost of debt)

The return on debt is normally calculated by adding a debt margin to the risk free rate. Usually, a long-term bond rate is used to determine the risk free rate. For example, in Australia, the bond rate for 10 years Commonwealth Government has been used for various regulatory decisions. In the USA, either a 10 or 30 year government bond is used to measure the risk free rate. However, in PNG there is no long-term risk free bond rate upon which the Commission can base the risk free rate. Currently, the longest dated Treasury Bills are 182 days. The yields on these PNG treasury bills are unlikely to reflect the yields of the normal "risk free" bonds of mature financial markets which have significant depth and strong bond liquidity.

As a consequence, the Commission will adopt a similar approach to that used in its other regulatory price decisions. This approach draws on international finance theory which uses the risk free rate in a country in which debt is internationally traded, adjusts this rate for inflation in the country concerned and also in PNG, and then makes a further adjustment for the country risk premium for PNG.

Thus, the Commission has used the following formula to compute the PNG risk free rate:

$$Rf = (1+Rf_{USA}) / (1+f_{USA}) * (1+f) * (1+CRP)$$

Where:

Rf = risk free rate for PNG estimated using a foreign liquid currency
Rf_{USA} = the risk free rate within a country having a liquid government bond market with long dated maturities
f_{USA} = inflation in the USA
f = inflation within PNG
CRP = country risk premium

The Commission discussed in its Draft Report various estimates of the inputs to be used in the risk free rate calculation. The Commission dismissed a proposal by the industry to use a CRP of 5% and indicated its intention to use a rate of 3%. The Commission has not changed its position on this issue.

In terms of the other inputs, the Commission has re-examined the various data sources to update the inputs. For the purposes of assessing whether or not the industry has been generating profits at a level above what is considered to be non-monopoly profit rates in 2007, the Commission is effectively seeking to determine what would have been the appropriate rate that applied in December 2007. Thus the Commission has examined the data for that period and has used data in the WACC and CAPM modelling that reflects conditions at that time. The following are the inputs that have been used in deriving the risk free rate[21]:

Rf_{USA} = 3.9%
f_{USA} = 2.8%
f = 2.1%
CRP = 3 %

The Commission notes that more recently the risk free rate in the USA has fallen significantly. However, there has also been evidence of some additional cost flow throughs in PNG refecting an uplift in inflation levels domestically (measured by CPI excluding betel nut and beverages). At the same time the USA inflation rate has risen. The inputs that have been used for this analysis should therefore not be taken as being the current rates that the Commission would set, but rather reflect conditions at the end of 2007 corresponding with the profit outcomes for the industry that the Commission is seeking to assess.

To the risk free rate there needs to be added an allowance for a debt margin. The debt margin is the percentage margin above the risk free rate associated with corporate debt, and reflects the risks in the regulated business's ability to repay its debts. Usually, debt margins are related to the current market interest rates on corporate bonds. A business with high credit ratings will usually have a low debt margin. The debt margin can also include the transaction cost of raising the debt if this has not been included as a sperate cost in the build up of the overall operating costs of the business.

ALSC have suggested a debt margin of 2.5% based on the need to recover the transaction costs of raising debt[22]. The Commission has on previous occasions used a debt margin of 2%.

In the Draft Report, the Commission said that it would re-examine the issue of the debt margin. Based on recent analysis undertaken by the Australian Energy Regulator based on studies of movements in corporate bond rates, it appears that there has been some upward movement in the overall level of the debt margin[23]. This suggests that some increase above the 2% rate previously allowed would be appropriate. Having examined the movement in corporate bond rates by comparison to the risk free rate, the Commission has decided to update its debate margin to 2.5% as proposed by the industry.

Taxation

[21] www.federalreserve.gov/releases/h15/data/Business_day/H15_TCMNOM_Y10.txt
http://data.bls.gov/PDQ/servlet/SurveyOutputServlet
www.bankpng.gov.pg/images/stories/qeb_tables/qb9-1.xls

[22] ALSC Submission, p 64-65

[23] Australian Energy Regulator, *SP AusNet transmission determination*, January 2008

As in previous studies the Commission has used the statutory tax rate of 30% in its calculation of the WACC. Using the statutory tax rate assumes that the business will pay the full tax rate on each Kina of profit generated, and therefore, the business is given a strong incentive to manage its tax liabilities effectively, such that lower tax liabilities will mean greater returns to the business.

The Commission has noted that the industry agrees with the use of the statutory tax rate.

Capital Asset Pricing Model

To calculate the cost of equity "Re", the Commission uses the capital asset pricing model (CAPM). CAPM is a generally accepted formula for estimating the cost of equity for a particular business. Basically, CAPM estimates the cost of equity by classifying the risks associated with investing in a particular business into two classes, these being systematic risk and specific risk.

In the Draft Report the Commission discussed various aspects of the CAPM model and its components at some length. It is not proposed to repeat this discussion in the Final Report, but interested readers should refer to the Draft Report.

The CAPM formula adopted is as follows;

$$Re = Rf + Be\ (MRP)$$

where;

Re = the post tax cost of equity
Rf = risk free rate
Be = Equity beta, which is the relative systematic risk of the individual company's Equity
MRP = Market Risk Premium

The Commission uses the Monkhouse formula (below) to calculate the equity beta;

$$Be = Ba + (Ba - Bd) * (1- [Rd/((1+Rd)*t)]* D/E$$

Where;

Be = equity beta
Ba = asset beta
Bd = debt beta
Rd = Cost of debt

Equity Beta

The equity beta is basically a measure of a company's share price volatility in relation to the market as a whole. Therefore it is a measure of a company's systematic risk that cannot be eliminated by an investor who invests in a well diversified portfolio. A low equity beta (less than 1.0) indicates that the stock is less volatile, and reacts less than proportionate to movements of the market. An equity beta of 1.0 means that the stock moves inline with market and an equity beta greater than 1.0 means that the stock is more sensitive to any moves by the market. Ultimately, the equity beta incorporates market wide risks, such as, regulatory, industry, legal and taxation risks and wider issues such as geopolitical risks.

In their submission to the Commission ALSC has argued that the stevedoring industry is more volatile than the market as a whole, given that trade volumes and revenues fluctuate markedly from year to year. In addition, the smaller ports experience greater fluctuations in activity. This is argued by the industry that these fluctuations in the trade volumes are far greater than the general level of economic activity. Given these fluctuations and uncertainty, ALSC have proposed an asset beta of 1.1. ALSC have combined this with a debt beta of 6%, and using the Monkhouse formula has derived an equity beta of 1.53 for the stevedoring industry.

In the Draft Report, the Commission indicated that it was not convinced that an equity beta of 1.53 was the appropriate rate to adopt, notwithstanding the volatility in activity that exists in some of the smaller ports. The Commission further noted that not all ports are dependent upon a single or small number of products for shipment from that location. Even where there are a small number of products being shipped from those ports, some of these ports have long-term contracts for products which are less volatile than the traditional agricultural products that have in the past provided most of the throughput in these ports. Furthermore, there is a high degree of common ownership across the industry, even in the smaller ports, which suggest that at least to some degree there is the opportunity for stevedoring firms in a number of these smaller ports to spread their risk across a wider number of stevedoring operations and ports.

The Commission also notes that in its March 2008 submission, Port Services has proposed the use of an equity beta of 1.1. This is significantly less than the 1.53 that had previously been proposed by the industry.

The Commission does not believe that there is sufficient justification for the equity beta to be any greater than 1 on the grounds that it reflects an industry where the volatility in activity is closely related to the volatility in the economy as a whole. Also, in the context of the assessment that the Commission is making of the profitability of a sample of businesses which are predominantly the larger operators in the industry, the Commission does not believe that opportunities do not exist for the stevedoring businesses concerned to spread their overall investment risks to compensate for any perceived volatility in demand for their stevedoring services. Thus the Commission has adopted an equity beta of 1.

Market Risk Premium (MRP)

The market risk premium reflects the additional return over and above the risk free rate that an investor would expect to earn by holding a well-diversified portfolio of assets.

The industry has proposed a Market Risk Premium of 8% *to reflect the greater market risks in an economy such as Papua New Guinea compared to Australia and the United Kingdom*[24].

There is ongoing debate in financial and regulatory circles about the level of the MRP. While regulators in Australia and the UK (amongst a number of countries) have used a 6% MRP over recent years, there is some research that suggests that this rate in fact is falling, and is possibly down as low as 4%. In the USA, research suggests that the MRP is even lower, reflecting the sophistication of the US market for securities. At the same time, there is argument in Australia for example, that in fact the rate is rising, and could be as high as 8%. The Commission notes that there is not a general consensus

[24] ALSC Submission, p65-66

of what is the appropriate rate, other than to note that there is a degree of disagreement over the number.

In considering the appropriate MRP to apply, the Commission has been conscious of the relative level of sophistication of the PNG financial market compared to the financial markets in other countries. At the same time, the Commission notes the predominant overseas ownership of the stevedoring businesses that are primarily under review for purposes of this assessment of current profitability of the stevedoring industry. With the ownership of these businesses held by a few major investors in PNG, the Commission is conscious of their ability to manage their borrowing and funding arrangements both inside and outside of PNG to maximise their competitive position. In these circumstances, the Commission is not prepared to increase the MRP above the 6% rate simply on the basis of the lack of sophistication of the PNG financial market when these businesses have ready access to wider international markets where the evidence seems to suggest that the MRP is below the 6% rate. Thus the Commission will continue to apply a MRP of 6%.

Summary of Rate of Return

From the various data inputs summarised above, the Commission has calculated the WACC for use in its assessment of the profitability of the sampled businesses. The Commission has also used this rate as the discount rate for purposes of determining the RAB by way of the RAT test. The values of the components are as outlined in Table 5.1 below.

Table 5.1 Rate of Return (WACC)

Parameter	Value
Nominal Risk Free Rate	6.3%
Real Risk Free Rate	4.1%
Inflation Rate	2.1%
Cost of Debt Margin over rf	2.5%
Nominal pre-tax cost of debt	8.8%
Real pre-tax cost of debt	6.6%
Market Risk Premium	6.0%
Corporate Tax Rate	30.0%
Gearing	30.0%
Debt Beta	6.0%
Asset Beta	72.5%
Equity Beta (uses Te)	100.0%
Post-Tax Nominal WACC	10.5%
Post-Tax Real WACC	8.2%
Pre-Tax Nominal WACC	14.9%
Pre-Tax Real WACC	12.6%

5.4 Depreciation

The building block approach includes an allowance for depreciation. The inclusion of depreciation recognises the need for the business to recover the cost of the initial outlay over the useful life of the asset. The amount of capital that will be recovered through depreciation will be directly linked to the value of the RAB.

In line with its Draft Report conclusion, the Commission has adopted a straight-line form of calculating depreciation, and for the purposes of modelling the depreciation allowance that will be applied to the sample of businesses under review, has used the depreciation allowance that is included in the accounts provided by these businesses.

5.5 New investment

New investment in the industry is an important component of any consideration of the efficient costs of the industry. Under the Price Regulation Act, the Commission is required to consider the impact of its decisions on new efficient investment as part of any price regulatory arrangements.

The industry has indicated a need for new investments in the industry, reflecting claimed under-investment in equipment and machinery. In financial information provided to the Commission, the sampled businesses included projections of new investment requirements. These new investment projects exceeded the allowance being made for depreciation in the accounts for the businesses reviewed, suggesting that the industry was in fact planning new investment activity to maintain and improve overall efficiency.

For purposes of the modelling undertaken, the Commission included in the estimated RAB for the 2007 year the additional net investment for the sampled businesses (that is new investment less depreciation). Thus effectively the Commission has fully allowed for the investment that the industry has proposed for purposes of considering the performance of the industry in 2006 and 2007.

In considering the ongoing price regulation arrangements, the Commission needs to give recognition to the net new investment that is proposed over the coming years. At the same time, it is anticipated that this new investment will in part contribute to efficiency savings that will help the industry recover the initial outlay on the infrastructure concerned. Ultimately, these efficiency savings need to be shared with consumers of stevedoring services, although this process may occur over time to assist the industry in its recovery of its new investments.

5.6 Initial prices

The discussion to this point has focussed upon the elements of the building block approach for purposes of determining the cost efficient revenue requirements of the business. The Commission has used this methodology to review the overall profitability of the sample of businesses for which data has been provided. For confidentiality reasons, the Commission cannot release the actual financial results of the businesses concerned. However, the Commission has taken the data provided to build a model based on actual financial results for the 2006 year and an estimate of results for the 2007 year. The Commission has then examined the implied pre tax rate of return for each of those years and compared these results against the WACC calculated as outlined above. In this process, the Commission has used the RAT based RAB calculated for the 2006 year and has adjusted this RAB for inflation and net investment for the 2007 year. Thus, the Commission has allowed fully for the net new investment that the businesses have made and adjusted the RAB for inflation during the year to generate a value of the asset base in nominal terms.

During 2007, the industry increased its charges for handling services by 14.67% and for stevedoring services by 18.75%. To allow for this increase on an annual basis, the Commission has included in the projected revenue for the 2007 year an average price increase of 6.9% to take account of the price increases part way through the year and the application of these price increases

to handling and stevedoring charges. In addition, the Commission has included provision for a 3% growth in volume of activity projected by the industry. This has allowed the Commission to derive an estimate of the total revenue generated by the sampled businesses for the 2007 year.

Against this revenue estimate, the Commission has estimated operating expenses by applying the 2006 opex data provided by the businesses adjusted by 5% to allow for inflation[25], and then allowed a 3% growth in expenses to allow for the growth in volume. This methodology has effectively allowed the businesses to retain any operating efficiencies that they may have achieved in 2007 as a result of new investment and improved operating arrangements to handle the 3% growth in volume, and has allowed an increase in costs greater than the movement in costs as measured by the CPI. Thus, the Commission has sought to be conservative in its estimation of operating costs.

Using the 2007 nominal RAB estimate derived as discussed above and the pre tax real rate of return WACC as summarised in Table 5.1 above, the Commission has derived a total revenue requirement for the sampled businesses and compared this against the revenue for 2007 based on the adjusted volume of activity and the price increase implemented in 2007. This analysis indicates that the revenue generated (and thus the prices currently being applied in the industry) is 3.7% greater than the implied prices derived using the RAB asset value and the rate of return summarised in Table 5.1. In other words, prices being charged by the industry are on average 3.7% greater then they should be and still be able to generate a rate of return commensurate with competitive market conditions.

In its March 2008 submission to the Commission, Port Services sought an increase in prices of 24% over the levels that currently exist. The Commission has examined the proposal presented by Port Services and has a number of concerns with the analysis presented. As Port Services has requested confidentiality for the numbers included in the submission, the Commission cannot provide a full working of the proposal presented or of the shortcomings in those numbers. However, the Commission can highlight the areas where it has concerns with the submission:

- The attempt to determine a ODRC valuation of the RAB was not independent and was based upon some erroneous assumptions. The ODV valuation of the business was artificially inflated by the inclusion of a continual annual revenue tonne growth assumption as part of calculating the net present value of the business, effectively implying that the business could continue to grow at a fixed rate indefinitely without any additional net new investment
- The rate of return (WACC) calculation had some errors of fact including an incorrect US risk free rate, and adoption of 100% equity funding
- The analysis incorrectly applied the **nominal** rate of return estimate to the **nominal** asset base value in deriving a value for the return on capital which effectively double counted the inflation effect in the rate of return and the asset valuation
- The operating cost and depreciation estimates could not be readily reconciled with audited information previously provided to the Commission (even allowing for the additional year's worth of data provided) and appeared to include interest charges (which are included in the WACC and not in the operating cost).

The Commission has made some adjustments to the proposal from Port Services, and simply by including the correct US risk free rate in the WACC calculation, and adjusting the operating cost and depreciation estimates to more closely reflect the historical audited results after allowing for assumed volume growth, the outcome suggests at least a 2% reduction in charges is required, not a 24%

[25] Actual inflation for the year was 2.1% excluding the impact of betel nut and beverage price movements. The headline CPI rate of adjustment for the year as reported by NSO was 0.9%.

increase. In undertaking this quick check, the Commission has still used the ODRC valuation prepared by Port Services that the Commission believes overvalues the asset base for regulatory purposes. However, this brief assessment demonstrates the need for caution when considering price adjustment claims made by businesses and the need for the Commission to formalise arrangements for the future price regulation of this industry to remove any confusion in the minds of the industry and of consumers on the process to be used to determine prices over the five year regulatory period.

Based upon this assessment of the profit rates achieved by the industry and the WACC that has been calculated by the Commission, the Commission concludes that the current rates of charges applying to stevedoring and handling services are at the upper end of the range that it might be prepared to accept as the starting point for a price monitoring regulatory arrangement. The Commission notes the impact on average prices of the significant price increases introduced in August 2007, and is concerned to note the more recent proposal from at least one large operator for a further significant price increase. The Commission will not countenance any further adjustment to prices for stevedoring and handling services in the immediate future.

The options that the Commission now faces is whether it should take steps to reduce the current level of prices or effectively freeze prices at their current level for a period of time after which some adjustment may be made. The Commission, having considered these options believe that the appropriate approach in these circumstances would be to freeze the current rates (that is the rates as applied as at 1 January 2008 and as set out in Appendix 4 to this Report). Given that prices were last increased in August 2007, and that the available evidence suggests that they are slightly above a level that the Commission would otherwise approve as being efficient cost reflective prices, the Commission proposes to freeze prices at their current level until 1 January 2009. After that date, the Commission will use the prices as at 31 December 2008 as the starting point for the monitoring of charges for the following 51 months until 31 May 2013.

The Commission will adopt the current charge rates as applying at 1 January 2008 and reproduced in Appendix 4 as the rates to be applied for the remainder of 2008, and these rates will be the initial starting point as at 1 January 2009 for the pricing of stevedoring and handling services which are to be subject to a monitoring regime for the following 51 months until 31 May 2013.

6.0 Monitoring Comparator

6.1 Defining the monitoring series

For a monitoring approach to price regulation to be effective, the Commission will need to establish a 'comparator' which can be used both by the Commission and can be readily obtained and referred to by the industry. Desirably this comparator will be based on some externally generated data source that can be readily accessed by the industry and other interested parties, and is available on a regular and timely basis.

In order to consider what might be regarded as an appropriate comparator, the Commission has referred to the financial data that has been provided by a sample of the stevedoring businesses. The financial data provided allows a break down of costs into a number of categories. However, for simplicity and ease of use, and given the limited data series available in PNG, it is not readily possible to assign cost movement indicators to each of these cost components. Thus, the Commission has opted to consider a broad grouping of a number of costs, while at the same time separating out the major cost items.

In broad terms, the cost structure of the industry can be represented in the following three categories:

- Wages/salaries 45%
- Fuel/lubricants 10%
- Other costs 45%

It is acknowledged that this represents a broad characterisation of the cost make-up of the industry. Nevertheless, for purposes of providing a comparator to guide the industry and the Commission, it is satisfactory.

The price series that can be used against each of these cost components needs to reflect the best available information on cost movements in PNG. The Commission has considered the use of some form of indicator of changes in interest rates as a indictor in movements in the rate of return, but notes that the available series in PNG are for relatively short term loans (even the Treasury bond rates are limited to 182 days) and the market for these bonds is relatively thin. Furthermore, while the proportion of 'profits' as a percentage of total costs can be identified from the available financial data, this percentage does not necessarily move in line with the movement in interest rates. For example, changes in profit as a percentage of total costs may reflect greater efficiencies in the operation of the business. It is not intended that the return from these efficiency improvements would immediately be transferred to customers, although over time and against other price indices used in the comparator series, it might be expected that these efficiency benefits will ultimately be shared with customers. Thus the Commission has opted not to use an interest rate comparator in its monitoring series.

Having considered the limited range of publicly available options in PNG, the Commission has opted to use a combination of series built around the NSO consumer price series and a series based on

movement in the retail price of diesel fuel in Lae[26]. The series will be weighted in the following manner and will use the following price series:

Table 6.1 Composition of the Comparator Series

Cost Item	Indicator Series	Weighting
Wages and salaries	CPI headline rate	45%
Fuel	Retail diesel prices (Lae)	10%
Other costs	CPI excluding betel nut, beverages and tobacco	45%

The series will be updated on a quarterly basis as the NSO CPI series becomes available. The Commission will maintain the series for its own purposes, but copies of the series can be made available to others should they so wish.

The movement in this series over the last two years is provided in Table 6.2. The series essentially reflects the underlying movement in costs across the economy. It is not intended for the purpose of the monitoring arrangements that the Commission should adjust this series in some way to reflect potential efficiency gains (for example by having a form of CPI-X approach which effectively limits the industry to price increases at a rate below underlying inflation across the country). Rather, the Commission will be monitoring the movements in the charges made by the industry against movements over time in the comparator series defined in Table 6.1. At the time of the next price review in 2012/13, the Commission will again assess the need for a continuation of some form of price regulation, and at that time will consider whether prices reflect efficient cost recovery (making an appropriate allowance for any carryover of efficiency gains which may at that time still need to be recovered by the industry) and the effectiveness of the comparator series that the Commission will use over the next 5 years.

Table 6.2 Movements in the Comparator 2005-2007

Quarter		All Groups	CPI Excl DTB	Diesel Retail - Lae	Combined
		45.0%	45.0%	10.0%	
2005	**Mar**	100.00	100.00	100.00	100.00
	Jun	101.14	102.29	132.53	104.80
	Sep	101.70	102.79	121.97	104.21
	Dec	105.98	103.85	128.47	107.27
2006	**Mar**	102.84	104.28	122.97	105.50
	Jun	103.63	105.27	133.43	107.35
	Sep	107.05	108.40	142.98	111.25
	Dec	104.98	107.95	131.18	108.94
2007	**Mar**	103.93	106.53	125.83	107.29
	Jun	104.67	107.99	130.50	108.75
	Sep	105.33	109.07	141.57	110.64
	Dec	108.39	111.26	147.33	113.57

All Groups CPI, NSO
CPI Excl DTB means CPI excluding beverages, tobacco and betel nut, NSO
Diesel retail Lae, ICCC

[26] The Lae series is used as it incorporates additional costal shipping costs that are not part of the price that is paid for diesel fuel in Port Moresby.

6.2 Operation of the monitoring arrangements

Under the provisions of section 32A of the PRA, the Minister on advice from the Commission may declare any goods or services as being a declared monitored good or service. Subsection 32A(3) provides that the Commission will monitor the prices of declared monitored goods or services and as required from time to time report to the Minister (being the Treasurer) the desirability or otherwise of having the goods or services declared for price control purposes. In considering as to whether the declared monitored goods or services in question should be declared for price controlled purposes, the Commission has regard to the behaviour of prices for those goods or services, using some form of comparator of the movements in the prices for those goods or services.

As discussed above, the Commission proposes to use as the comparator for the movement in the prices for the monitored stevedoring and handling services provided by stevedoring businesses, an index of movements in prices in PNG. The approach that the Commission will adopt will be to require that the industry provide to the Commission on a quarterly basis the latest prices that are to apply to the services that they offer.

Currently the industry has provided information on these prices through the ALSC or from direct requests to individual operators from the Commission. The Commission is aware that the prices being quoted in the ALSC list do not represent the prices applying in all ports, particularly smaller ports or ports which service a single main shipper (for example, the ports linked to fishing or oil palm operations). In these ports, the rates that apply may be rates that have been agreed between the main port user and the stevedoring company concerned. The Commission, in declaring all port stevedoring and handling services for price monitoring purposes, will require all stevedores, regardless of the size of the port being serviced, to provide their updated price list for services provided.

The price lists that are provided should be those that are current on the first day of each new quarter, that is, 1 January, 1 April, 1 July, and 1 October. These price lists should be made available to the Commission by no later than the 15th of the month in question, that is 15th January, 15th April, 15th July, and 15th October. While the Commission proposes to freeze prices at their current levels until 1 January 2009, the Commission will still use its powers to require stevedoring companies to provide their price lists by the designated notification dates throughout 2008.

As with the monitoring arrangements that the Commission already has in operation for other declared goods, the Commission will monitor the movement in prices against the comparator series over time. This recognises that prices and the monitor series will not necessarily move in precise alignment from quarter to quarter. However, the Commission will be seeking to determine whether there is any evidence that the prices being charged are moving beyond the general trend of the comparator series.

Should the Commission conclude that there is a movement in prices outside of the general trend in the comparator series, the Commission will issue a request to the businesses involved to provide reasons as to why prices appear to be moving at a rate that is inconsistent with the comparator series. The Commission will consider those reasons before taking any action with regards to the possibility of requesting that the Minister declare the services concerned for price control purposes.

It should be noted, that under the provisions of subsection 32A(3)(b) of the PRA, the Commission is to have regard to the provisions of section 21(2A) of the PRA when providing advice on the desirability of having the services re-declared as services to be price controlled rather than price monitored. Section 21(2A) of the PRA provides certain safeguards for the industry in terms of the

need for the Commission to have regard to the cost of providing the service, and the borrowing and cash flow requirements of the industry. This section also requires that the Commission have regard to the interests of consumers. Thus, the Commission will need to form a view that takes into account all of these issues. For purposes of setting a declared control price, the Commission would need to undertake a further public inquiry, and as part of this process would also have to have regard to the provisions of section 21(2A).

7.0 Final Determination

7.1 Summary of conclusions

The Commission has examined the stevedoring and handling industry in PNG and concluded that the industry is part of a highly vertically integrated industry linking stevedoring and handling operations, transport operations, shipping lines, shipping agencies and other port operation activities across PNG.

There is a strong link between the stevedoring and handling companies operating in PNG and the shipping lines that they service. There is little indication of competition or any form of competitive behaviour between the current operators in this industry even in those ports where there is more than one stevedoring company operating. The cross ownership within the industry is such that the industry has a very high level of ownership from the Swire Group through the activities of Steamships in PNG.

Thus, the Commission has concluded that, as there is little contestable behaviour in the industry with no indication of the likely entry of new operators who might compete with the incumbent firms for some time yet, some form of price regulation is required necessary.

Having considered the options, the Commission has decided to adopt a price monitoring approach as it represents the least cost mechanism while still maintaining a regulatory oversight over the industry.

The Commission has undertaken modelling of the industry using financial information obtained from a sample of stevedoring firms including the larger operators in PNG. Based on this modelling and the Commission's own analysis of an appropriate rate of return on a Regulated Asset Base established independently by the Commission, the Commission has concluded that the prices currently being charged by the industry as represented by the price lists provided by the industry (as at Appendix 4) are at the upper end of the prices that the Commission would consider to be appropriate for the recovery of efficient costs. Thus, the Commission will place a freeze upon stevedoring and handling charges at the rate that applied as at 1 January 2008 (see Appendix 4), and this price freeze will remain in force until the end of 2008. For monitoring purposes to take effect from the end of this price freeze period, the Commission will adopt the prices as applying at 1 January 2008 as being the initial prices that will be used in examining any price movements after 1 January 2009.

The Commission has established a price monitoring comparator series, which will be used for the purposes of monitoring movements in stevedoring, and handling service prices over the period form 1 January 2009 and 31 May 2013. The Commission will review prices on a quarterly basis and the industry will be required to provide updated price lists to the Commission on a quarterly basis with these price lists to be made available to the Commission no later than the 15th day of the month immediately following the end of the quarter (eg, 15th January). The Commission will monitor the trend in prices over time, and should the Commission conclude that prices appear to be moving outside of the trend, the Commission will initially seek an explanation from the industry as to why prices are trending away from the comparator series, and if not satisfied with that explanation, will recommend to the Treasurer that the prices for the regulated stevedoring and handling services be declared for price control purposes.

The period of this determination will apply from 1 June 2008 to 31 May 2013. Prior to this end date the Commission will undertake a further inquiry under the provisions of the PRA to consider whether or not there is a need to continue with some form of price regulation for the stevedoring and handling industry, and if so what form of regulation should apply.

7.2 Determination

The following is the final determination of the Commission on the matters under consideration as part of this inquiry:

The Commission will recommend to the Treasurer that stevedoring and handling services provided by the stevedoring and handling industry and as defined in Appendix 3 of this Final Report should be regulated for price setting purposes under the provisions of the Price Regulation Act

The Commission will recommend to the Treasurer that stevedoring and handling services be declared for price monitoring under the provisions of section 32A of the PRA

The Commission will recommend to the Treasurer that the price monitoring will apply for a period of five years commencing 1st June 2008

The Commission will require of the industry that it provides an update of its price list for the price monitored services as at the commencement of each quarter, that list to be provided to the Commission by no later than the 15th day of the new quarter (eg, 15th January for the price list applying from 1 January)

The Commission will use a comparator series comprising CPI and retail diesel fuel price movements in Lae to monitor the movement in prices for the regulated services over the period from 1 January 2009 to 31 May 2013. For the remainder of 2008, the Commission will apply a price freeze on stevedoring and handling charges, that price freeze to be at the rates that applied for these services as at 1 January 2008

The Commission may at some future time within the five year period of this determination recommend to the Treasurer that the price monitoring arrangements be altered such that the regulated services become price controlled should the Commission form a view that prices for the monitored services are moving at a rate not consistent with movements in the comparator series, and the industry has been unable to satisfy the Commission as to why prices are behaving in this way

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Appendix 1

Section 21 (2a) Prices Regulation Act

When making an order under Subsection (1), the Commission shall have regard to

(a) the need to protect consumers and users of the declared goods or services from misuse of market power in terms of prices, pricing policies (including policies relating to the level or structure of prices) and the standard of the declared goods or services; and
(b) the cost of making, producing or supplying the declared goods or services; and
(c) the desirability of encouraging greater efficiency in relation to making, producing or supplying the declared goods or services; and
(d) the need to ensure an appropriate rate of return on any investment in relation to the declared goods or services; and
(e) the borrowing, capital and cash flow requirements of persons making, producing or supplying the declared goods or services; and
(f) considerations of demand management and least-cost planning; and
(g) existing standards of quality, reliability and safety of the declared goods or services, and the desirability of encouraging improvements in those standards; and
(h) the effect any proposed order on general price inflation over the medium term; and the economic and social impact of any proposed order; and
(i) any other matters the Commission considers relevant.

Appendix 2

Submissions on Stevedoring & Handling Issues Paper

- The Association of Licensed Stevedore Companies (ALSC)
- Department of Treasury
- Department of Trade and Industry
- Poreporena Stevedores Ltd
- Ahi Holdings

Submissions and specific industry data receipt from the Draft Report

Submissions

- PNG Chamber of Commerce and Industry
- Association of Licensed Stevedoring Companies (ALSC)

Specific Industry Data

- Alotau Stevedoring and Transport Company
- Port Services Limited
- Riback Stevedoring Ltd
- Kimbe Bay Shipping Agency Ltd
- United Stevedoring Ltd

Appendix 3

Definition of Stevedoring and Handling Services

For the purposes of the declaration of stevedoring and handling services for price monitoring services, the following definition of these services has been used:

The services that are provided as **stevedoring services** include

- the discharging and loading of overseas and coastal cargoes, including the handling of:
  - full containers
  - other containers such as "A", "D" and "J" boxes
  - break bulk cargo
  - empty containers
  - I.S.O approved containers
- the shifting of containers and the operation of vehicles for this purpose
- loading and unloading of lighters or barges
  - strapping of cargo
  - tarpaulin hire
  - provision and operation of various types of fork lifts onboard a vessel

Handling services provided by stevedores include:

- transferring containers from the stacking area to the consignee's vehicle and the return of the empty container from the consignee's vehicle;
- delivery of container direct from ship hook to the vessel operators nominated transport contractors outside the port area and return of empty container to stack including issuing of appropriate documentation;
- delivery of container direct to ship's hook from vessel operators nominated transport contractors outside port area and return of empty container to stack including issuing of appropriate documentation;
- cleaning containers, internal and external;
- receiving and delivering general cargo; and
- receiving or delivering palletized cargo to and from vehicle

Appendix 4

Maximum Stevedoring and Handling Tariff by Licensed Stevedoring Company

Service Type	Description	Unit of Measure	POM Port Services	Lae Port Services	United Stevedores	Riback Stevedores	Alotau Stevedoring	Kavieng Port Services	Madang Port Services	Oro Bay Port Services	ENB Port Services	RL & VJ Knight	Vanimo Ageny & Stve Ltd	Sepik Coastal Agencies	SV Trading Limited
DISCHARGE	Full 20' container	per Unit	95.00	95.00	87.59	100.00	47.23	105.00	105.00	105.00	105.00	120.00	69.65	51.51	126.90
DISCHARGE	Full 40' container	per Unit	190.00	190.00	175.18	150.00		209.00	209.00	209.00	171.00			103.02	253.80
DISCHARGE	Full 9m3 container	per Unit					14.67	34.84	34.84	34.84	34.84	72.00	31.75	15.98	42.30
DISCHARGE	Full "D" container	per Unit					9.86	15.45	15.45	15.45	15.48	32.00	14.55	10.75	18.80
DISCHARGE	Empty 20' containers	per Unit	95.00	95.00	55.47	50.00	28.00	105.00	105.00	105.00	105.00	40.00	35.80	26.52	10.81
DISCHARGE	Empty 40' containers	per Unit	190.00	190.00	94.33	75.00	47.23	209.00	209.00	209.00	171.00			53.04	21.62
DISCHARGE	Empty 9m3 container	per Unit					7.30	34.84	34.84	34.84	34.38		10.75	7.96	4.14
DISCHARGE	Empty "D" container	per Unit					5.18	15.48	15.48	15.48	15.48		7.65	5.65	2.35
DISCHARGE	Transhipment 20' containers	per Unit	95.00	95.00	87.59	100.00	60.00	105.00	105.00	105.00	105.00			51.51	126.90
DISCHARGE	Transhipment 40' containers	per Unit	190.00	190.00	175.18	150.00	120.00	209.00	209.00	209.00	171.00			103.02	253.80
DISCHARGE	Transhipment Breakbulk	per RT	6.35	6.35	7.75	11.00	4.68	9.74	9.74	9.74				4.54	
DISCHARGE	Transhipment Vehicle	per RT	4.28	4.28	7.75	9.00	3.33	3.93	3.93	3.93				3.50	
DISCHARGE	Breakbulk	per RT	8.85	8.85	7.75	9.00	4.16	9.74	9.74	9.74	9.74	5.80	6.15	4.54	
DISCHARGE	Palletised	per RT	32.00	32.00	7.75	9.00	3.21	35.20	35.20	35.20	35.20	5.50	4.80	3.50	
DISCHARGE	Unitised	per RT	10.18	10.18	7.75	5.00	3.33	35.20	35.20	35.20	35.20			3.50	
DISCHARGE	Grain	per tonne				11.00					35.20				
DISCHARGE	Obnoxious cargo	per RT	10.18	10.18	7.75	9.00	5.25	11.92	11.92	11.92	11.20		6.60	4.52	
DISCHARGE	Vehicles - LoLo	per RT	8.85	8.85	7.75	9.00	3.33	9.74	9.74	9.74	9.74	4.80	4.80	3.50	

DISCHARGE	Vehicles - RoRo up to 12 m3	per Vehicle	12.42	12.42		9.00	10.69	14.66	14.66	14.66					
DISCHARGE	Vehicles - RoRo over 12 m3	per Vehicle	37.27	37.27		9.00	37.27	43.98	43.98	43.98					
IRS	Onboard cell - cell 20'	per Unit	95.00	95.00	87.59	105.00	50.00	105.00	105.00	105.00	105.00			25.76	126.90
IRS	Onboard cell - cell 20' empty	per Unit	95.00	95.00	55.47	50.00	26.32	105.00	105.00	105.00	52.00			12.91	10.81
IRS	Onboard cell - cell 40' Full	per Unit	190.00	190.00	175.18	155.00	100.00	209.00	209.00	209.00	171.00				253.80
IRS	Onboard cell - cell 40' empty	per Unit	190.00	190.00	94.33	75.00	52.64	209.00	209.00	209.00	85.50				21.62
IRS	Onboard cell - cell 9 m3 Full	per Unit					14.67	52.25	52.25	52.25	34.84			11.75	42.30
IRS	Onboard cell - cell 9 m3 Empty	per Unit					5.18	52.25	52.25	52.25	17.42				4.14
IRS	Onboard cell - cell "D" Full	per Unit					9.86	30.96	30.96	30.96	15.48			4.94	18.80
IRS	Onboard cell - cell "D" empty	per Unit					5.18	30.96	30.96	30.96	7.71				2.35
IRS	Onboard cell - cell Breakbulk	per RT	27.14	27.14	7.75	11.00	4.16	29.85	29.85	29.85	9.74			7.65	
IRS	Onboard cell - cell Vehicle	per RT	27.14	27.14	7.75	9.00	3.21	29.85	29.85	29.85	29.85				
DLR	Cell - cell via wharf 20' Full	per Unit	190.00	190.00	131.78	150.00	47.25	209.00	209.00	209.00	209.00			51.51	126.90
DLR	Cell - cell via wharf 20' empty	per Unit	190.00	190.00	83.21	75.00	24.33	209.00	209.00	209.00	104.50			26.52	10.81
DLR	Cell - cell via wharf 40'Full	per Unit	380.00	380.00	262.76	225.00	94.50	418.00	418.00	418.00	342.00			103.02	253.80
DLR	Cell - cell via wharf 40' empty	per Unit	380.00	380.00	141.49	112.50	47.25	418.00	418.00	418.00	171.00				21.62
DLR	Cell - cell via wharf 9 m3 Full	per Unit					14.67	52.25	52.25	52.25	52.25			15.98	42.30
DLR	Cell - cell via wharf 9 m3 empty	per Unit					7.30	52.25	52.25	52.25	26.15			7.96	4.14
DLR	Cell - cell via wharf "D" Full	per Unit					9.86	30.96	30.96	30.96	30.96			10.75	18.80
DLR	Cell - cell via wharf "D" empty	per Unit					5.18	30.96	30.96	30.96	15.48			5.65	2.35
DLR	Cell -cell via wharf Breakbulk	per RT	27.14	27.14	15.50	13.00	4.16	29.85	29.85	29.85	29.85			13.06	
DLR	Cell - cell via shed Breakbulk	per RT	27.14	27.14		13.00	4.16	29.85	29.85	29.85	29.85			16.69	

DLR	Cell - cell via wharf Cement or Obnoxious	per RT	31.20	31.20	15.50	13.00	4.42	34.33	34.33	34.33	34.33			13.48	
DLR	Cell - cell via shed Cement or Obnoxious	per RT	31.20	31.20		13.00	4.42	34.33	34.33	34.33	34.33			17.04	
DLR	Cell - cell via wharf Unitised or Palletised	per RT	64.00	64.00	15.50	13.00	3.21	70.40	70.40	70.40	70.40			9.78	
DLR	Cell - cell via shed Unitised or Palletised	per RT	64.00	64.00		13.00	3.21	70.40	70.40	70.40	70.40			13.40	
DLR	Cell - cell via wharf Vehicle	per RT	27.14	27.14	15.50	9.00	3.33	29.85	29.85	29.85	29.85				
TRANSHIPMENT	Transhipment Fee 20'	per Unit	50.15	50.15	172.00	45.00		57.00	57.00	57.00	55.17				
TRANSHIPMENT	Transhipment Fee 40'	per Unit	56.65	56.65	240.80	90.00		64.00	64.00	64.00	62.32				
TRANSHIPMENT	Transhipment Fee Breakbulk	per RT	6.35	6.35	12.90	2.50		7.00	7.00	7.00	6.99				
LOAD	Full 20' container	per Unit	95.00	95.00	87.59	150.00	47.23	105.00	105.00	105.00	105.00	120.00	69.65	51.51	126.90
LOAD	Full 40' container	per Unit	190.00	190.00	175.18		94.50	209.00	209.00	209.00	171.00			103.02	253.40
LOAD	Full 9 m3 container	per Unit					14.67	34.84	34.84	34.84	34.84	72.00	31.75	15.98	42.30
LOAD	Full "D" container	per Unit					9.86	15.48	15.48	15.48	15.48	32.00	14.55	10.75	18.80
LOAD	Empty 20' container	per Unit	95.00	95.00	55.47	50.00	28.00	105.00	105.00	105.00	105.00	40.00	35.9-	26.52	10.81
LOAD	Empty 40' container	per Unit	190.00	190.00	94.33	75.00	47.23	209.00	209.00	209.00	171.00			53.04	21.62
LOAD	Empty 9 m3 container	per Unit					7.30	34.84	34.84	34.84	34.84	10.00	15.90	7.96	4.14
LOAD	Empty "D" container	per Unit					5.18	15.48	15.48	15.48	15.48	5.00	7.95	5.65	2.35
LOAD	Breakbulk (Revenue tonnes)	per RT	8.85	8.85	7.75	9.00	4.16	9.74	9.74	9.74	9.74	5.50	6.15	4.54	
LOAD	Palletised	per RT	32.00	32.00	7.75	9.00	3.21	35.20	35.20	35.20	35.20	5.50	4.80	3.50	
LOAD	Unitised	per RT	32.00	32.00	7.75	9.00	3.33	35.20	35.20	35.20	35.20			3.50	
LOAD	Vehicles - LoLo	per RT	8.85	8.85	7.75	9.00	3.33	9.74	9.74	9.74	9.74	4.80	4.60	3.50	
LOAD	Copra	per tonne				25.00	4.68				10.00				

LASHING	As recorded on Ship's Log	per ganghour	95.00	95.00		82.00	51.28	101.00	101.00	101.00	118.90				
OTHER	Receival & Delivery overtime: Mon - Fri	per hr	105.00	105.00		45.00		95.00	95.00	95.00	95.00				
OTHER	Receival & Delivery overtime: Saturday	per hr	127.00	127.00		60.00		127.00	127.00	127.00	127.00				
OTHER	Receival & Delivery overtime: Sundays & PHs	per hr	158.00	158.00		60.00		158.00	158.00	158.00	158.00				
OTHER	Transfer of ctrs between wharves 20' Full	per TEU	160.00	160.00		30.00		219.00	219.00	219.00	160.00				126.90
OTHER	Transfer of ctrs between wharves 40' Full	per TEU	320.00	320.00		60.00		429.00	429.00	429.00	320.00				253.40
OTHER	Transfer of ctrs between wharves 20' Empty	per TEU	160.00	160.00		30.00		214.00	214.00	214.00	160.00				10.81
OTHER	Transfer of ctrs between wharves 40' Empty	per TEU	320.00	320.00		60.00		429.00	429.00	429.00	320.00				21.62
OTHER	Transfer of breakbulk cargo between wharves	per RT	19.00	19.00		5.00		19.47	19.47	19.47	19.47				
OTHER	Transport Detention		109.00	109.00				110.00	110.00	110.00					
HANDLING	Import FCL	per RT	8.77	8.77	6.88	6.88	6.30	7.63	7.63	7.63	6.30			7.22	
HANDLING	Export FCL	per RT	8.77	8.77	6.88	6.88	6.30	7.63	7.63	7.63	6.30			7.22	
HANDLING	Import LCL	per RT	14.78	14.78	12.90	12.90	11.71	13.43	13.43	13.43	11.71			13.43	
HANDLING	Export LCL	per RT	14.78	14.78	12.90	12.90	11.71	13.43	13.43	13.43	11.71			13.43	
HANDLING	Import Breakbulk	per RT	14.78	14.78	12.90	12.90	11.71	13.43	13.43	13.43	11.71	11.40		13.43	
HANDLING	Import Palletised	per RT	14.78	14.78	11.00	12.90		12.85	12.85	12.85	9.59	9.34		13.43	
HANDLING	Import Palletised Shrunk Wrapped	per Rt	14.78	14.78	8.42	12.90		12.85	12.85	12.85	7.80	7.50		8.94	
HANDLING	Import Unitised	per RT	14.78	14.78	6.87	12.90		12.85	12.85	12.85	5.99			11.00	
HANDLING	Export Breakbulk	per RT	14.78	14.78	12.90	12.90		12.85	12.85	12.85	11.71	11.40		13.43	
HANDLING	Export Palletised	per RT	14.78	14.78	10.47	12.90		12.85	12.85	12.85	9.59	9.34		8.94	

HANDLING	Export Unitised	per RT	14.78	14.78	6.87	12.90		12.85	12.85	12.85	7.80			11.00	
HANDLING	Motor Vehicles	per cbm	9.38	9.38	9.38	9.38		9.38	9.38	9.38	8.18	7.96		9.38	
YARD MOVES	Internal Movement Full Container	per Unit	32.21	32.21		30.00		38.94	38.94	38.94					
YARD MOVES	Internal Movement Empty Container	per Unit	16.28	16.28		30.00		38.94	38.94	38.94					
YARD MOVES	Internal Movement Breakbulk	per RT				5.00									
YARD MOVES	Inspection Lift - 20' Container / Nesting of flats (per nest)	per Unit	35.00	35.00	120.00	60.00		38.00	38.00	38.00	35.05				
YARD MOVES	Inspection Lift - 40' Container	per Unit	69.00	69.00	180.00	120.00		77.00	77.00	77.00	70.10				
CLEANING	Cleaning - Internal Sweep 20'	per Unit	26.00	26.00		25.00	45.00	29.00	29.00	29.00	26.64			25.00	
CLEANING	Cleaning - Internal Sweep 40'	per Unit	52.00	52.00		50.00	45.00	58.00	58.00	58.00	49.28			50.00	
CLEANING	Cleaning - Exterior Wash 20'	per Unit	42.00	42.00		45.00	45.00	53.00	53.00	53.00	45.00			25.00	
CLEANING	Cleaning - Exterior Wash 20' (with insecticide)	per Unit	50.00	50.00		55.00		60.00	60.00	60.00	50.00				
CLEANING	Cleaning - Exterior Wash 40'	per Unit	47.40	47.40		90.00		120.00	120.00	120.00	90.00				
CLEANING	Cleaning - Sweep and Wash 20'	per Unit	47.40	47.40		45.00		82.00	82.00	82.00	45.00			25.00	
CLEANING	Cleaning - Sweep and Wash 40'	per Unit	94.80	94.80		90.00		178.00	178.00	178.00	90.00			80.00	
CLEANING	Cleaning - Wharf Washing	per hour												100.00	
CARTAGE	TO CARRY 20' CONTAINERS FROM WHARF TO TERMINAL	Per Unit	30.00	30.00											

CARTAGE	TO CARRY 20' CONTAINERS FROM TERMINAL TO WHARF	Per Unit	30.00	30.00											
CARTAGE	TO CARRY 40' CONTAINERS FROM WAHRF TO TERMINAL	Per Unit	40.00	40.00											
CARTAGE	TO CARRY 40' CONTAINERS FROM TERMINAL TO WHARF	Per Unit	40.00	40.00											
TERMINAL MOVES	TO LIFT OFF OR ON 20' CONTAINERS	Per Unit	15.00	15.00											
TERMINAL MOVES	TO LIFT OFF OR ON 40' CONTAINERS	Per Unit	20.00	20.00											

Maximum Stevedoring and Handling Charges for Kimbe Shipping Agency

Service Type	Description	Kimbe Shipping Agency	
		Unit of Measure	Kina
DISCHARGE	Full 20' container	per RT	4.62
DISCHARGE	Full 40' container	per RT	4.62
DISCHARGE	Full 9m3 container	per RT	4.62
DISCHARGE	Full "D" container	per RT	4.62
DISCHARGE	Empty 20' containers	per RT	4.62
DISCHARGE	Empty 40' containers	per RT	4.62
DISCHARGE	Empty 9m3 container	per RT	4.62
DISCHARGE	Empty "D" container	per RT	4.62
DISCHARGE	Transhipment 20' containers	per RT	4.62
DISCHARGE	Transhipment 40' containers	per RT	4.62
DISCHARGE	Transhipment Breakbulk	per RT	4.62
DISCHARGE	Transhipment Vehicle	per RT	4.62
DISCHARGE	Breakbulk	per RT	4.62
DISCHARGE	Palletised	per RT	4.62
DISCHARGE	Unitised	per RT	4.62
DISCHARGE	Grain	per RT	4.62
DISCHARGE	Obnoxious cargo	per RT	4.62
DISCHARGE	Vehicles - LoLo	per m3	4.62
DISCHARGE	Vehicles - RoRo up to 12 m3	per m3	4.62
DISCHARGE	Vehicles - RoRo over 12 m3	per m3	4.62
IRS	Onboard cell - cell 20'	per Unit	20.00
IRS	Onboard cell - cell 20' empty	per Unit	20.00
IRS	Onboard cell - cell 40' Full	per Unit	40.00
IRS	Onboard cell - cell 40' empty	per Unit	40.00
IRS	Onboard cell - cell 9 m3 Full	per Unit	10.00
IRS	Onboard cell - cell 9 m3 Empty	per Unit	10.00

IRS	Onboard cell - cell "D" Full	per Unit	7.00
IRS	Onboard cell - cell "D" empty	per Unit	7.00
IRS	Onboard cell - cell Breakbulk	per RT	4.62
IRS	Onboard cell - cell Vehicle	per m3	4.62
DLR	Cell - cell via wharf 20' Full	per Unit	20.00
DLR	Cell - cell via wharf 20' empty	per Unit	20.00
DLR	Cell - cell via wharf 40'Full	per Unit	40.00
DLR	Cell - cell via wharf 40' empty	per Unit	40.00
DLR	Cell - cell via wharf 9 m3 Full	per Unit	10.00
DLR	Cell - cell via wharf 9 m3 empty	per Unit	10.00
DLR	Cell - cell via wharf "D" Full	per Unit	7.00
DLR	Cell - cell via wharf "D" empty	per Unit	7.00
DLR	Cell -cell via wharf Breakbulk	per RT	4.62
DLR	Cell - cell via shed Breakbulk	per RT	4.62
DLR	Cell - cell via wharf Cement or Obnoxious	per RT	4.62
DLR	Cell - cell via shed Cement or Obnoxious	per RT	4.62
DLR	Cell - cell via wharf Unitised or Palletised	per RT	4.62
DLR	Cell - cell via shed Unitised or Palletised	per RT	4.62
DLR	Cell - cell via wharf Vehicle	per m3	4.62
TRANSHIPMENT	Transhipment Fee 20'	per RT	4.62
TRANSHIPMENT	Transhipment Fee 40'	per RT	4.62
TRANSHIPMENT	Transhipment Fee Breakbulk	per RT	4.62
LOAD	Full 20' container	per RT	4.62
LOAD	Full 40' container	per RT	4.62
LOAD	Full 9 m3 container	per RT	4.62
LOAD	Full "D" container	per RT	4.62
LOAD	Empty 20' container	per RT	4.62
LOAD	Empty 40' container	per RT	4.62
LOAD	Empty 9 m3 container	per RT	4.62
LOAD	Empty "D" container	per RT	4.62
LOAD	Breakbulk (Revenue tonnes)	per RT	4.62
LOAD	Palletised	per RT	4.62

LOAD	Unitised	per RT	4.62
LOAD	Vehicles - LoLo	per RT	4.62
LOAD	Copra	per RT	19.60
HANDLING	Import FCL	per RT	6.31
HANDLING	Export FCL	per RT	6.00
HANDLING	Import LCL	per RT	7.81
HANDLING	Export LCL	per RT	7.81
HANDLING	Import Breakbulk	per RT	11.71
HANDLING	Import Palletised	per RT	7.81
HANDLING	Import Palletised Shrunk Wrapped	per Rt	7.81
HANDLING	Import Unitised	per RT	7.81
HANDLING	Export Breakbulk	per RT	11.71
HANDLING	Export Palletised	per RT	7.81
HANDLING	Export Unitised	per RT	7.81
HANDLING	Motor Vehicles	per cbm	8.20