Cost benefit analysis regarding the clearing and forwarding business in Ceylon Shipping Corporation Ltd.

N. P. Kalpage
World Maritime University

Follow this and additional works at: http://commons.wmu.se/all_dissertations

Recommended Citation
http://commons.wmu.se/all_dissertations/382

This Dissertation is brought to you courtesy of Maritime Commons. Open Access items may be downloaded for non-commercial, fair use academic purposes. No items may be hosted on another server or web site without express written permission from the World Maritime University. For more information, please contact library@wmu.se.
WORLD MARITIME UNIVERSITY

Malmö, Sweden

COST BENEFIT ANALYSIS REGARDING THE CLEARING AND FORWARDING BUSINESS IN CEYLON SHIPPING CORPORATION LTD

By

N.P.KALPAGE
Sri Lanka

A dissertation submitted to the World Maritime University in partial fulfilment of the requirements for the award of the degree of

MASTER OF SCIENCE

in

SHIPPING MANAGEMENT

2000

© Copyright N.P.Kalpage, 2000
This Dissertation is dedicated

To my Wife, Son and

Parents
Declaration

I certify that all the material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the University.

Supervised by:
Professor Patrick Donner
Associate Professor,
Shipping Management,
World maritime University

Assessor:
Professor Bernard Francou
Associate Professor,
Port Management,
World Maritime University

Co-assessor:
Professor P.M. Alderton
Former Resident Professor,
Ports and Shipping Administration,
World Maritime University
ACKNOWLEDGEMENT

At the outset, I am grateful to my employer Ceylon Shipping Corporation Ltd for providing me with this opportunity to study at World Maritime University. I am also thankful to General Manager, Mr. M.S.P. Gunawardena, former Marketing Manager Mr. N. Balasooriya, former Operations Manager, Mr. C. Goonasekara, former Deputy Operations Manager, Mr. S. N. A. N. De Silva and Assistant Manager, Mr. P. Samaranayake of the Ceylon Shipping Corporation Ltd.

I owe my gratitude to the Carl Duisberg Gesellschaft (CDG) Germany for providing me with a fellowship to study at World Maritime University.

I wish to acknowledge my sincere gratitude to my course professors; Prof. Shuo Ma, Prof. Patrick Donner, Prof. Bernard Francou, Prof. Tor Wergeland and other members of staff of the Shipping Management Course, for their academic support and guidance during my entire period of study at the university.

Professor Patrick Donner who was my supervisor deserves my sincere appreciation for his tireless efforts made and the excellent guidance provided to me on my research work during the course of his supervision. Gratitude is also to my assessor Professor Bernard Francou for assessing my research work.

To the WMU library staff who made available all books and articles related to my dissertation, my utmost gratitude.

I am also grateful to numerous expert personnel and visiting professors for their valuable and informative lectures, without whose help, guidance and understanding this study project would have been difficult to complete. In addition, I wish to express my gratitude to those shipping companies, ports, ship yards, insurance companies, classification societies and other related organisations in Denmark,
Greece, Norway, the United Kingdom, Germany and Sweden who received me cordially to visit and gave me the opportunity to gain clear insight of each of the individual organisation.

My special thanks to Danthanarayana and Dediweera for their support in collecting statistics at CSCL and my fellow country students for their co-operation given during my stay in Malmö.

In the end, I wish to mention my wife Suba, my son Sudam, who have shown a great deal of patience and sacrifice to encourage me to participate in this course in Sweden, far away from them. Therefore, I am greatly indebted to my wife and my son who continuously gives me the encourage and concern and also my parents who take care of my family. Without such support it would be very difficult to devote entirely on the long and hard study.
Abstract

Title of the dissertation: Cost Benefit Analysis regarding the Clearing and Forwarding Business in Ceylon Shipping Corporation Limited.

Degree: MSc.

This dissertation seeks to examine the clearing and forwarding activities towards a better investment for the Ceylon Shipping Corporation Limited (CSCL), with a view to identifying the freight forwarding environment in Sri Lanka. The growing competition in the freight forwarding industry in Sri Lanka as well as in the world has been identified and unless high disciplinary actions and good policies are implemented, there will be no room to survive in the future.

Due to globalisation of shipping policy in Sri Lanka, CSCL has been experiencing severe decline in the market share. CSCL has introduced a freight forwarding business in the mid 90’s as a solution to its long lasting crisis. In other words, freight forwarding is a new business for CSCL. Therefore a brief look is taken at the freight forwarding industry in CSCL, the role of a freight forwarder, the legal framework, government role and existing regulations have been examined. Also the future market forecasting and investment possibilities have been analysed.

The success of CSCL freight forwarding will to a great extent depend on government involvement in the provision and development of the basic infrastructure, establishment of good legal framework to control the freight forwarder’s activities and establishment of strong regional and international relationships.

Finally the study suggests some solutions to the problems identified with the view of promoting the CSCL freight forwarding business. It is the author’s view that this will have a good result on the CSCL business improvement.
Key Words: Ceylon Shipping Corporation Ltd, Cost Benefit Analysis, Freight Forwarding, Investment Appraisal and Time Series Analysis
# Table of Contents

Declaration iii  
Acknowledgements iv  
Abstract vi  
Table of Contents viii  
List of Tables xii  
List of Figures xiii  
List of Abbreviations xiv  

## 1 Introduction  
1.1 Background 1  
1.2 Objectives of the dissertation 2  
1.3 Relevance of the topic to the CSCL 3  
1.4 Research Methodology 3  
1.5 Difficulties Encountered 3  

## 2 The CSCL and its Services 4  
2.1 Historical background of Ceylon Shipping Corporation 4  
2.2 The achievement of the CSC 7  
2.3 Current business activities of CSCL 14  
2.4 Education and training of the employees 16  
2.5 Casual caller agencies 18  
2.6 Multimodal Operations 18  
2.7 Customer Service 18  
2.8 Organisational chart 19  

## 3 An Analysis of the Freight Forwarding industry 20  
3.1 Definition of a freight forwarder 20  
3.2 Typical services provided by a freight forwarder 21  
   3.2.1 Exports Air and Sea freight 21  
   3.2.2 Imports and Airfreight and Ocean Freight 21  
   3.2.3 Prerequisites that a forwarder should possess in order to provide a professional service to the customer 22  
3.3 The role of a freight forwarder 22  
   3.3.1 Economic role of the freight forwarder 23  
      3.3.1.1 The local Freight Forwarder 24  
      3.3.1.2 The international Freight Forwarder 24  
   3.3.2 The Freight Forwarder 24  
   3.3.3 The Freight Forwarder - Agent or Principal? 25  

viii
3.3.4 A Forwarder acting as an Agent 26
3.3.5 A Forwarder as Principal 27
3.4 Why use a forwarder at all? 28
3.5 Freight forwarding industry in Sri Lanka 28
3.6 Future of the industry 33

4 Custom Entry Procedure and the Role of Government 35

4.1 Customs Examinations of Cargo 35
  4.1.1 Examination of F.C.L. Containers 35
  4.1.2 Containers released for Panel examination 36
  4.1.3 Examination of L.C.L. cargo 37
  4.1.4 Bonded Warehouses 37
  4.1.5 Manufacture – in – Bonds 38
  4.1.6 Bill of Sight 38
  4.1.7 Bill of Store 38
  4.1.8 Exports 38

4.2 Custom Valuation 39
  4.2.1 Concept of Value 39
  4.2.2 Elements of Value 40
  4.2.3 Legal basis for the Valuation 40
  4.2.4 What should be the Value? 40
  4.2.5 International systems of Valuation - BDV 7 GATT 40
  4.2.6 Value: Cost, Insurance and Freight 41
  4.2.7 Discounts 41
  4.2.8 Freight charges 41
  4.2.9 Postage 42
  4.2.10 Insurance 42
  4.2.11 Problems of Valuation 42

4.3 Exchange control regulations relating to Exports and Imports 42
  4.3.1 Exports 43
    4.3.1.1 Applications for Exports (Under Delegated Authority) 43
    4.3.1.2 Applications 44
    4.3.1.3 Method of Payment 44
    4.3.1.4 Terms of payment 45
    4.3.1.5 Time allowed for the Realisation of Export Procedure 45
    4.3.1.6 Outward Remittance 45
    4.3.1.7 Facilities extended to Exporters 46

4.3.2 Imports 46
  4.3.2.1 Payments for Imports 46
  4.3.2.2 Requirements 47
  4.3.2.3 Currencies of Payment 47
  4.3.2.4 Buying Commission on Imports 47
  4.3.2.5 BTN Certificate Number 48
  4.3.2.6 Facilities extended to Importers 48
4.4 Port Authority Charges for Import / Export cargo 48
4.5 Delivery Procedures and Documentation for Import Cargo 49
  4.5.1 Legal Provisions 49
  4.5.2 Basic Requirements Relating to the Delivery of Cargo 50
  4.5.3 Principal Documents Used in the Clearance of Cargo 50
  4.5.4 Payment of Port Charges and Clearance from the Port 51
  4.5.5 Special procedures relating to cargo clearance 51
  4.5.6 Search Facilities and Cargo Claims 52
  4.5.7 Bonded warehousing facilities 52
  4.5.8 Common problems affecting the clearance of cargo 52

5 Analysis of CSCL Business 53
  5.1 Forecasting procedure 53
  5.2 Factors affecting the changes 54
  5.3 Market forecast for CSCL C & F business 55
  5.4 Project Appraisal Techniques 58
  5.5 Pay Back Period Method 59
  5.6 Rate of Return Method 60
  5.7 Discounted Cash Flow Method 60
  5.8 Alternative DCF Method 62
  5.9 Risk Factor in Project Financing 63
  5.10 Probability Distribution of IRR 64
  5.11 H – Line 66

6 Conclusion and Recommendations 67
  6.1 Conclusion 67
  6.2 Recommendations 68

References 71

Appendices
Appendix 1 CSCL Organisational Chart 74
Appendix 2 Members of Sri Lanka Freight Forwarders Association 75
Appendix 3 Assessment Notice 77
Appendix 4 Custom Declaration Form 78
Appendix 5 Bill of Lading 80
Appendix 6 Commercial Invoice 81
Appendix 7 Cart Note 82
Appendix 8 SLPA Delivery Order 83
Appendix 9 Delivery Note 84
| Appendix 10 Certication of Quantity and Quality | 85 |
| Appendix 11 CSCL cart note for delivery cargo | 86 |
| Appendix 12 Debit Note | 87 |
| Appendix 13 Voucher | 88 |
| Appendix 14 Time Series Calculation method | 89 |
List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>Foreign exchange savings during 1972-1986</td>
<td>13</td>
</tr>
<tr>
<td>Table 2</td>
<td>Employment statistics</td>
<td>30</td>
</tr>
<tr>
<td>Table 3</td>
<td>Customers market share of the total CSCL business</td>
<td>31</td>
</tr>
<tr>
<td>Table 4</td>
<td>CSCL’s Market share</td>
<td>32</td>
</tr>
<tr>
<td>Table 5</td>
<td>Profit levels of the CSCL C&amp;F business</td>
<td>33</td>
</tr>
<tr>
<td>Table 6</td>
<td>Total weight of the C&amp;F section’s cargo</td>
<td>56</td>
</tr>
<tr>
<td>Table 7</td>
<td>Seasonal Index for the CSCL volumes</td>
<td>56</td>
</tr>
<tr>
<td>Table 8</td>
<td>Trends for the CSCL volumes</td>
<td>56</td>
</tr>
<tr>
<td>Table 9</td>
<td>Forecasting figures for the year 2001</td>
<td>57</td>
</tr>
<tr>
<td>Table 10</td>
<td>Cumulative cash flow</td>
<td>59</td>
</tr>
<tr>
<td>Table 11</td>
<td>Discounted cash flow</td>
<td>61</td>
</tr>
<tr>
<td>Table 12</td>
<td>Profitability Index</td>
<td>62</td>
</tr>
<tr>
<td>Table 13</td>
<td>Outcomes and corresponding probabilities</td>
<td>64</td>
</tr>
</tbody>
</table>
List of Figures

Figure 1  Business improvements for the CSCL C&F business  57
Figure 2  Probability distribution of IRR  65
Figure 3  The H-Line for IRR  66
## LIST OF ABBREVIATION

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACSI</td>
<td>Advanced Cargo Information System</td>
</tr>
<tr>
<td>ACU</td>
<td>Asian Clearing Union</td>
</tr>
<tr>
<td>ADC</td>
<td>Assistant Director of Customs</td>
</tr>
<tr>
<td>ASC</td>
<td>Assistant Superintendent of Customs</td>
</tr>
<tr>
<td>B/L</td>
<td>Bill of Lading</td>
</tr>
<tr>
<td>BOI</td>
<td>Board Of Investment</td>
</tr>
<tr>
<td>BTN</td>
<td>Business Tariff Nomenclature</td>
</tr>
<tr>
<td>C &amp; F</td>
<td>Clearing and Forwarding</td>
</tr>
<tr>
<td>CFB</td>
<td>Ceylon Freight Bureau</td>
</tr>
<tr>
<td>CFR</td>
<td>Cost and Freight</td>
</tr>
<tr>
<td>CFS</td>
<td>Container Freight Station</td>
</tr>
<tr>
<td>CIF</td>
<td>Cost, Insurance and Freight</td>
</tr>
<tr>
<td>CIP</td>
<td>Carriage and Insurance Paid To</td>
</tr>
<tr>
<td>CGM</td>
<td>Compagnie Generale Maritime NV</td>
</tr>
<tr>
<td>CMA</td>
<td>Compagnie Maritime de Affreterment</td>
</tr>
<tr>
<td>CSCL</td>
<td>Ceylon Shipping Corporation Limited</td>
</tr>
<tr>
<td>D/A</td>
<td>Document against Acceptance</td>
</tr>
<tr>
<td>DCF</td>
<td>Discounted Cash Flow</td>
</tr>
<tr>
<td>DDC</td>
<td>Deputy Director of Customs</td>
</tr>
<tr>
<td>D/P</td>
<td>Documents of Payments</td>
</tr>
<tr>
<td>E-Business</td>
<td>Electronic Business</td>
</tr>
<tr>
<td>EDI</td>
<td>Electronic Data Interchange</td>
</tr>
<tr>
<td>EDIFACT</td>
<td>Electronic Data Interchange For Administration Commerce</td>
</tr>
<tr>
<td>ESCAP</td>
<td>United Nations Economic and Social Commission for Asia and the Pacific</td>
</tr>
<tr>
<td>EXW</td>
<td>Ex works</td>
</tr>
<tr>
<td>FCL</td>
<td>Full Container Load</td>
</tr>
<tr>
<td>FF</td>
<td>Freight Forwarder</td>
</tr>
<tr>
<td>FOB</td>
<td>Free On Board</td>
</tr>
<tr>
<td>GATT</td>
<td>The General Agreement on Tariffs and Trade</td>
</tr>
<tr>
<td>HS</td>
<td>Harmonised Commodity Description Loading System</td>
</tr>
<tr>
<td>I&amp;I</td>
<td>Intelligence and Investigation</td>
</tr>
<tr>
<td>ILO</td>
<td>International Labour organisation</td>
</tr>
<tr>
<td>IMO</td>
<td>International Maritime Organisation</td>
</tr>
<tr>
<td>IPBCC</td>
<td>India Pakistan Bangladesh Ceylon Conference</td>
</tr>
<tr>
<td>IRR</td>
<td>Internal Rate of Return</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>L/C</td>
<td>Letter of Credit</td>
</tr>
<tr>
<td>LCL</td>
<td>Less than Container Load</td>
</tr>
<tr>
<td>MOL</td>
<td>Mitsui OSK Line</td>
</tr>
<tr>
<td>MTO</td>
<td>Multimodal Transport Operator</td>
</tr>
<tr>
<td>M.V.</td>
<td>Motor Vessel</td>
</tr>
</tbody>
</table>
NOL  Neptune Orient Line
NPV  Net Present Value
NVOCC  Non Vessel Operating Common Carrier
NVO-MTO  Non Vessel Operating Multimodal Transport Operator
ROR  Rate of Return
SC  Superintendent of Customs
SCI  Shipping Corporation of India
SLFFA  Sri Lanka Freight Forwarder’s Association
SLPA  Sri Lanka Ports Authority
TEU  Twenty Foot Equivalent Unit
UK  United Kingdom
UNCTAD  United Nations Conference on Trade and Development
UN/EDIFACT  United Nations Electronic Data Interchange for Administration, Commerce and Transport
Chapter 1
Introduction

1.1 Background
The policy reversal made with the implementation of the open economy policy in 1977 as well as the onset of the container revolution in the Maritime scene both affected the commercial viability of the Ceylon Shipping Corporation Limited (CSCL) in several ways. Although trade liberalisation with that change of economic policy was not immediately followed by liberalisation of shipping, the CSCL, because of certain inherent weaknesses, could not benefit much from the growth of Colombo’s cargo throughput which compared to the pre-trade liberalisation phase was spectacular. Even though Colombo port cargo throughput has been growing it was not the CSCL that came to benefit but the outsiders as the national carrier with weak financial resources could ill afford to invest in new buildings to cope with that growing trade of Colombo. Non could it depend much on government assistance to increase its fleet strength in any considerable way.

The final onslaught on the policy of developing a national shipping enterprise as a commercially viable entity came in the early 90’s when the cargo reservation policy appeared to be an anachronism in an era of open economy policy. With the acceptance of the recommendation of the Jayalath Commission (1989) the Ceylon Freight Bureau’s monopoly was partially curtailed with effect from January 1990 and in the same month of the following year the monopoly was completely withdrawn. That as consequence, started a to decline of the market share and business of CSCL dramatically.
Up to now CSCL has been attempting remarkable effort to overcome this critical stage. Among the several alterations, one of the most attractive solutions is establishing a clearing and forwarding section in CSCL. Even though this section has limited resources; every financial year the clearing and forwarding business makes a considerable amount of profits. For the first time in seventeen years CSCL made a profit in 1998 and Management believed that the freight forwarding (FF) section’s contribution was also important for this success.

The freight forwarding industry is broad and it covers a wide scope. A FF is an entity/company responsible for undertaking export/import cargo movement on clients or shipper’s behalf at a port, airport and so on. CSCL freight forwarding involves the collection of freight, issuing bills of lading, notification of arrival of vessels, customs import and export documentation including customs declarations, arranging and sorting of cargo, cold storage, warehousing, cargo booking and canvassing and finally transportation to destination including near continent.

The CSCL FF section is presently under the Operations Department. The CSCL FF section and other local FF companies are competing well with internationally established companies such as Eurotrans Express (Pvt) Ltd, Freight Links Int’l (Pvt) Ltd, Euro-Asia air Freight Ltd etc. CSCL and other local FF companies are, however, not working at the same standards as the internationally well established companies. Many reasons can be cited for this unfortunate development. These include lack of adequate training of the FFs, lack of finance, inefficiency in communication and poor transport network in Colombo.

1.2 Objectives of the dissertation
The objective of this dissertation is to analyse the CSCL clearing and forwarding business and forecast its future market behaviour through analysis of the existing market environment and trend. It will also try to find appropriate investment projects for the FF section, which is one of the booming business sections at the CSCL.
1.3 Relevance of the topic to the CSCL
This study discusses all internal and external factors, which have affected the FF business during the last few years. It also analyses the world trend, domestic market and future trend of the CSCL FF business. This paper gives an idea about the whole industry and briefly discusses the possibilities to survive in the highly competitive market. Everybody in the industry realises that there must be some changes in their policies, behaviour, attitudes, marketing strategies and innovations in order to answer to the new challenges and this is equally true for CSCL.

1.4 Research Methodology
This research has been carried out mainly by means of library research, much information gathered during winter vacation in Sri Lanka and various lectures delivered by the resident and visiting professors of the World Maritime University. The field studies were another source of information that enabled us to examine and discuss the freight forwarding industry, its future and new innovations. The seminars held by the university on subjects such as ‘Freight Forwarding’ and ‘Shipping Industry Today’ with the participation of some successful leading freight forwarders have given valuable information about their policies, business strategies, marketing methodology, new innovation activities as well as future market trends and developments. Apart from this I used my econometrics and mathematics knowledge to analyse the market behaviour of the CSCL clearing and forwarding business.

1.5 Difficulties Encountered
The author has found it is very difficult to get information about the market shares and the services offered by other FF companies in Sri Lanka. Sometimes it was also very hard to collect required data from the CSCL FF section because either some information could not be published or could not filed properly in its early stages. Finally the author managed to collect much information about the FF business and the success behind this attempt may be the author’s involvement and participation in this business. However this analysis had to be limited due to lack of information.
Chapter 2
The CSCL and its Services

2.1 Historical background of Ceylon Shipping Corporation
The relative economic prosperity that the country enjoyed in the 1950’s as a result of a Korean boom diminished by the end of the decade. The prices of tea and rubber declined, and despite the increases in yields, foreign exchange earnings reached record low levels. Moreover, the import bill was rising due to soaring world market prices for rice and flour. In order to narrow the gap in the balance of payments, it became imperative to take some corrective measures. These included steps such as cutbacks on welfare, the promotion of import substitution industries, the imposition of trade restrictions, and the development of subsistence agriculture to attain self-sufficiency in rice. At the same time, it also became obvious that it was desirable to take concrete steps to cut the rapidly rising rates of freight. Port congestion of Colombo, which became acute in the early 1960’s, was taken advantages of by conferences to levy surcharges that reached fifty percent by 1964. (ESCAP 1966, 39). But from an export perspective, the most resented practice was the levy of discriminatory rates on Sri Lankan products relative to their competitors. The gap between tea rates from India and Sri Lanka, for instance, which had persisted for years, widened in the early 1960’s. The comparative rates for 1966 indicated that the differential between Colombo and Calcutta was twenty-seven shillings per ton of forty net cubic feet, whereas in the 1930’s it was seventeen shillings. (Gunarathne, 1978, 116-117). Quite apart from that, in the absence of an effective countervailing power, the conferences were also increasing general freight rates on Sri Lankan exports arbitrarily. Freight indices prepared by the Central Bank of Sri Lanka show
that in the 10 years ending in 1971 the general freight index had risen by sixty percent, while it had increased on tea by fifty-five percent and on rubber by more than seventy percent (Central Bank, Ceylon). The appreciation of freight rates in the first place eroded any gains in foreign exchange that might have accrued to the country from improvements in world commodity prices. Second, since freight charges were usually paid in foreign currency, rising rates placed a further burden on the deteriorating balance of payments.

These were developments in Sri Lanka’s economic scenario from the early 1960’s and thus were compelling reasons that eventually led to an evolvement of a national shipping policy. In general the primary objective of that policy seems to be the espousal of the course of national shipping so as to minimize the over dependence on conference liners for the carriage of the country’s sea borne trade. To what extent that objective has been achieved is debatable. Nevertheless, in the context of Sri Lanka’s achievements in the sphere of shipping in the post independence period, it is inescapable that its first experiment in its entry into the realm of maritime economic activity merits analysis in some detail.

The Ceylon Shipping Corporation (CSC) that was created in 1969 to mitigate the negative effects of conference practices was a joint enterprise of the public and private sectors, with respective share ownership of fifty-one and forty nine percent. The new government that assumed power in the following year believed in a central role for the public sector in major economic development and converted the CSC into a statutory corporation fully owned by the state. To make the state owned enterprise commercially viable and financially buoyant, the government not only was preferential in its cargo allocation policy but also widened the CSC’s scope of activity. In terms of the CSC Act its more important activities were: to operate services for the transport of goods, mails and passengers by sea; to carry on business as ship owners, charterers of ships, ship brokers, and shipping agent; and to carry out the building, maintenance, repair and overhaul of ships.
The national carrier commenced business with the purchase of a fourteen thousand-ton general cargo vessel and gradually increased its fleet strength to eleven vessels by 1985. Although the underlying factor for the creation of the CSC was to countervail conference practices, it nevertheless had the wisdom to seek membership in conferences serving Colombo’s traders in order to expand its service to embrace a wider trading area. As a result, by 1985 the services of the national carrier had been expanded to a large number of world ports. In the operation of such services, however, what effectively helped corporation vessels to get economic loads was the government’s reservation policy.

This policy was implemented in two ways. From the beginning, the government directed that all departments; boards, corporations and government-assisted bodies should entrust their entire import- export business to the national carrier. A variety of bulk cargoes, such as wheat flour, rice, sugar, railway equipment and heavy equipment for development projects, thus began to be moved in its vessels. In addition, a greater proportion of Sri Lankan exports was gradually carried in CSC ships.

But the most important instrument of the cargo reservation policy to ensure economic loads to national vessels was the activity of the Central Freight Bureau (CFB), established in 1973. The CFB was founded primarily to receive all space bookings for ports to which lines concerned and their connectors ran and to allocate the cargo for which space had been booked to specific ships. The relevance of the Bureau for the national carrier was that Section XIV of the CFB law stipulated that, among other things, it should foster the development of the national merchant fleet. It is this injunction which helped CSC to get preferential treatment. The legal backing for preferential treatment was reinforced by the fact that Colombo was the homeport for corporation vessels, which also entitled them to receive full loads for their outward voyages. It was also fortunate for CSC that the birth of the CFB was
followed later by the UNCTAD Code of Conduct for Liner Shipping (1982), which reserved a substantial proportion of a country’s trade to its national vessels.

With government backing, coupled with the pursuit of some progressive policies, the CSC not only managed to survive difficult times but also was able to make some commendable contributions to the national economy. During a time when Sri Lanka is celebrating fifty years of independence, the contributions of its first ever-national shipping venture, therefore, deserve a brief analysis.

2.2 The achievement of the CSC

For nearly a century the transport of Sri Lanka’s staple exports was in the hands of conference shipping, a fact which restricted markets and thereby hampered exporters from penetrating more lucrative entrepots. A breakthrough was made in this regard by CSC, when it started operating new services previously untouched by conferences engaged in Sri Lankan trade. In addition, the corporation extended existing services. The penetration into new areas-like the Middle East, North Africa and the Mediterranean and extensions to ports including Felixstowe, Bristol, Birmingham, and Leeds in the U.K., were examples of the efforts made by CSC.

An equally important task was performed by the national carrier in assisting in the diversification of the country’s exports. This was accomplished by supplementing the other methods with promotional freight rates for a large lumber of non-traditional exports. The bulk of the trade in these commodities was in the hands of a large class of small-scale exporters whose survival depended largely on the level of freight rates. By the early 1980’s about forty exports, including cinnamon, nutmeg, cardamom and citronella oil, were granted promotional rates that enabled markets to be developed in the Middle East, Africa and South America. (Central Bank of Sri Lanka, 1975, CFB - 1982).
The strongest argument in favour of conference membership by the national carrier was that it would strengthen its influence on conference policies inimical to the country’s interests. This was particularly the case with respect to unreasonable rate increases. Due to the secrecy maintained by conferences, it is difficult to prove definitively CSC’s impact in this area. Nevertheless, there is evidence that the national carrier, despite the voting powers of foreign lines, has fought against unjustifiable rate increases and supported the demands of exporters for rate reductions. It is beyond question that Sri Lanka’s trade has been extremely sensitive to increased freight rates. Hence, the ability to moderate increases would have had a powerful impact on the country’s trade. Since the national line was a low-cost operator within the conferences in which it operated, in itself this would have helped to some degree to mediate the general freight level. The greater the amount of cargo carried by the national carrier, the more powerful its influence on rates. In this way, the cargo reservation policy also helped to keep freight rates as low as possible. (Abeywickrama, 1978, p.43)

Another way in which the CSC has had a positive impact was in its role in introducing containerisation. When this practice was first inaugurated in Colombo in the early 1970’s, Sri Lanka was unprepared. But the liner operators were not enthusiastic about introducing it to the port, pointing to capital constraints and the lack of infrastructure. Most important was the fact that operators had sunk large amounts of capital into conventional vessels to serve Colombo’s trade. In contrast, as a new entrant to shipping CSC suffered from some of these inhibitions and hence soon adopted the new technology. CSC has been so successful since introducing its first container ship in 1978 that by 1985 eight of its eleven vessels were of this type. Moreover, by the same year CSC was also able to operate six fully containerised liner services to important destinations, such as Europe, the Far East and Australia. And, it was primarily due to the corporation’s progressive policies that Sri Lanka could speed up the containerisation of its exports. By the early 1980’s tea exports to
the UK and the Middle East, for example, were containerised in the proportions of eighty and sixty percent, respectively.

But the greatest beneficiary of the national carrier’s forward steps in containerization was Colombo’s trans-shipment trade, which had been dormant for decades. Partly because of its willingness to carry transshipment boxes on long-distance services and partly because of the operation of branch services from Colombo to regional ports, this branch of Colombo’s trade began to acquire pride of place in South Asia. The inability of the regional ports to handle container traffic, on the other hand, also compelled long-distance liner operators either to commence branch services to such ports by themselves or to make use of the existing services run by the CSC. So great were Colombo’s gains from these services that by 1983, the port handled 142,811 TEU’s compared to 130,698 for Bombay. (Containerization International 1984)

Much of the growth in container throughput at Colombo was attributable to the sharp increase in the containerized trans-shipment trade. From 1979 to 1982, for instance, container throughput at the port rose by 505%, while the proportion of transshipment cargo moved in boxes grew at a rate as high as 2400%. (SLPA 1984).

Nevertheless, the most far reaching outcomes of the CSC’s effort to promote the transshipment trade were in helping to place Colombo in the world league of container ports as well as in elevating it to the role as the pivotal port in South Asia. No doubt other factors also help, but according to the Lloyd’s Shipping Economist, a major factor was CSC’s fleet modernization programme. Half of the two hundred thousand TEU’s that Colombo handled, according to the Economist, were transshipment boxes, the bulk of which came from West Coast Indian ports. And the pull of container traffic to Colombo was enhanced by restricted fleet modernization by Indian liner companies in contrast to the progressive policy of the CSC (Lloyd’s, 1984, p.8).
Despite being somewhat protected by government policies, the national carrier from its very inception took certain precautionary measures against possible risks. In view of the relative smallness of the country’s volume of sea borne trade, as well as the earlier experience of Sri Lankan shipping enterprises, this attitude was sensible. The most important of these measures was to spread its investment activities to other related areas, such as steamer agencies. By 1984 these outside investments numbered nineteen, with the share holding proportions varying between forty and one hundred percent. The total value of shares owned by the corporation in that year was about Rs. 45 million.

The returns on capital invested in these ventures between 1980 and 1985 totalled Rs. 4.6 million, a sum that can not be considered very substantial. Nevertheless, some of the concerns, such as Colombo Dockyards Ltd. and Ceylon Shipping Ltd., remained essentially supportive links to the company’s main interests. At the same time, during periods of financial strain (as in the period 1982-1984), the income generated by these outside investments contributed in some way to the amelioration of overall losses (CSC, Annual Report).

Sri Lanka, which has had a long-term structural unemployment problem since independence, has always treated job creation as one of the fundamental requirements of a public enterprise. The national shipping line in this respect not only generated a significant amount of employment opportunities, but also more importantly, created a large number of employment avenues through its downstream economic activities. An equally valuable service was the training of a significant number of persons annually in skills in which Sri Lanka was badly lacking. Corporation records indicate that the number of persons employed directly increased to 1742 (ashore and afloat) in 1985 from 366 in 1973. In addition, under its manpower development programme as many as 166 persons were trained in various skills from 1980 to 1985.
The serious balance of payments problem that developed in the 1960’s was the basic factor behind most of the economic ills in post-independence Sri Lanka. In evaluating the national carrier’s contribution to easing the problem, account has to be taken, in the first place, of freight earnings of imports and exports minus expenses incurred abroad by its vessels. In addition, the quantity of money spent overseas by the crew together with stores, fuel and services purchased and capital inputs paid abroad also have to be considered. The national carrier in this regard had been doing its utmost to conserve foreign exchange in two ways. First, it has increased the manning of vessels by local personnel; second it has expanded in the local fuel market and developed storage facilities. The government’s cargo reservation policy (discussed above) also worked towards the same goal by guaranteeing economic loads to the corporation’s vessels. Thus, the foreign exchange savings accruing to the country through CSC’s efforts increased from Rs. 40.9 million in 1974 to Rs. 225.4 million in 1980. Thereafter, there was a drop due to an increase in foreign exchange expenditure, but with the revival that took place, it reached an all time high record of Rs. 403.2 million in 1985.

During the first few years of the corporation’s operations, the financial performance was most encouraging for a developing country like Sri Lanka. By 1981, for example, its operational surplus increased to Rs. 80.2 million from Rs. 10.4 million in 1973, the year in which the CFB started to function. From 1982 onwards, CSC began to suffer severe setbacks, which resulted in record operational losses, totaling Rs. 242.8 million in 1983 and Rs. 424.8 million the next year. Although the picture improved slightly in 1984, losses began to rise again the following year. The operational losses after 1981 occurred in spite of the increase in fleet strength and the growth in cargo lifted inwards and outwards. Fundamentally, the poor financial performance of the CSC after 1981 was largely due to extraneous factors: the declining liner rates and disastrous charter market in the early 1980’s and the steady increase in expenditure due mostly to a rise in voyage expenses. Moreover, the appreciation of world currencies relative to the Sri Lankan rupee also helped to boost
costs, since repayments for new buildings were paid in foreign currencies, especially in yen. (The achievements of CSCL, Dharmasena, K.) Thus, despite some of its commendable achievements, the CSC by the mid 1980’s was no different from some of the other ailing Sri Lankan corporations. The national carrier, like many corporations, came to depend heavily on government advances, which totaled Rs. 672.27 million for the years 1982 to 1985. (CSC 1982-1985)

With the expansion of the company it could obtain membership in the following shipping conferences:

1. India - Pakistan Bangladesh Ceylon European Conference. (IPBCC)
   Areas
   a. Eastbound from the United Kingdom of Great Britain and Northern Ireland, and the Republic of Ireland, Norway, Sweden, Finland, Denmark, Poland, Germany, Holland, Belgium, France, Portugal, Spain, Italy and Croatia / Yugoslavia to ports in India, Pakistan, Bangladesh and Sri Lanka.
   b. Westbound from ports in India, Pakistan, Bangladesh and Sri Lanka to the United Kingdom of Great Britain and Northern Ireland, and the Republic of Ireland, Norway, Sweden, Finland, Denmark, Poland, Germany, Holland, Belgium, France, Portugal, Spain, Italy and Croatia / Yugoslavia.

Others members are:

i. Bangladesh Shipping Corporation.
ii. Compagnie General Maritime NV.
iii. Compagnie Maritime d’Affretement.
iv. Compagnie Maritime Belge SA.
v. Contship Containerlines LTD.
vi. DSR / Senator Lines GmbH.
vii. Ellerman (Andrew Weir Shipping).
viii. Hapag - Lloyd AG.
ix. Himalaya Express.
x. Maersk Line.
xi. Pakistan National Shipping Corporation LTD.
xii. P & O Nedlloyd BV.
xiii. Sea - Land service Inc.
xiv. Shipping Corporation of India.
xv. United Arab Shipping Co. SAG.
xvi. Yang Ming Line.

2. Langa-Singapore Straits / Hong Kong-Japan Agreement.
4. Hong Kong / Sri Lanka Agreement.
5. Sri Lanka / Middle East Conference.
6. Sri Lanka / Australia Agreement.
9. Langa Continent West Conference.
10. Langa Continent East Conference.


The following table illustrates the foreign exchange saved by CSCL during the period of 1972 to 1986.


<table>
<thead>
<tr>
<th>Year</th>
<th>Rs. (Million)</th>
<th>Year</th>
<th>Rs. (Million)</th>
<th>Year</th>
<th>Rs. (Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972</td>
<td>8.23</td>
<td>1977</td>
<td>96.57</td>
<td>1982</td>
<td>246.09</td>
</tr>
<tr>
<td>1973</td>
<td>9.17</td>
<td>1978</td>
<td>130.44</td>
<td>1983</td>
<td>143.3</td>
</tr>
<tr>
<td>1974</td>
<td>45.82</td>
<td>1979</td>
<td>156.87</td>
<td>1984</td>
<td>292.16</td>
</tr>
<tr>
<td>1975</td>
<td>67.1</td>
<td>1980</td>
<td>225.31</td>
<td>1985</td>
<td>403.88</td>
</tr>
<tr>
<td>1976</td>
<td>60.42</td>
<td>1981</td>
<td>217.18</td>
<td>1986</td>
<td>325.77</td>
</tr>
</tbody>
</table>

(Source: CSC Annual Report 1986 / 1987)
2.3 Current business activities of CSCL

Before 1997 the South Asia / Europe Liner Service was the main route of operation of CSCL. It was operated with five time chartered vessels and those were deployed in this trade as a weekly service. The main calling ports of those services were Colombo, Mumbai, and Karachi on the Indian sub continent and Fujairah in the Middle East. The European ports were Hamburg, Rotterdam and Felixstowe. Due to poor performance of the South Asia / Europe line, CSCL decided in 1997 to off-hire all five chartered vessels. After that CSCL made an agreement with Shipping Corporation Of India (SCI) and ZIM Israel line in order to continue their service at the most experienced and attractive route. From 1997 up to now CSCL has been providing the service to its customers on the particular route as a Non-Vessel Operating Common Carrier (NVOCC) basis. CSCL also provides a service on the Far East route on a slot charter arrangement basis with some dominating operators of that line, such as Compaigne Maritime de Affreightment (CMA), Neptune Orient Line (NOL), and Norasia. CSCL also performs a service with a space charter arrangement with MOL in the car carrier business.

Under different kinds of agreements the following vessels are operating on two main routes:

1. South Asia / Europe
   i) SCI
      Indira Gandhi - 1640 TEU
      Lal Bahdur Shastri - 1640 TEU
      Rajiv Gandhi - 1640 TEU
   ii) ZIM
      ZIM India - 1400 TEU
      Zim Shanghai - 1400 TEU

2. South Asia / Far East
   i) Villeda Libra - 2975 TEU
   ii) Villeda Capella - 3538 TEU
iii) Sagith - 3538 TEU  
iv) CGM Pascal - 2900 TEU  
v) Some Vessels deployed by Norasia, NOL, and MOL lines.

The Far East service has brought low profits to the corporation because of the poor market share of this route.

CSCL has two small container vessels called MV Lanka Muditha and MV Lanka Mahapola, which were built in 1982 and 1983 respectively. Lanka Mahapola is deployed in an Indian Subcontinent feeder service. She starts from Colombo and during her way to Karachi she calls Mumbai port on the Indian West Coast. Lanka Muditha has been chartered out to the Commissioner General of Essential Services because of the ethnic problem in the North - East regions. Currently, Lanka Muditha carries out passenger ferrying from Trincomalee to Jaffna. It undertakes voyages from Trincomalee to Jaffna and back, at the rate of two voyages for every 45 days. Lanka Muditha is essentially a cargo ship, commuting between Colombo and Jaffna carrying goods. Once cargo is discharged in Jaffna, it does these two voyages before returning to Colombo. Lanka Muditha can carry 1,200 passengers, but takes 20 hours to do the Kankasanthurai - Trincomalee run. It has neither seating facilities, nor proper toilet facilities. But it takes two to three days to sail from Colombo to Jaffna.

As a solution to this matter, CSCL has recently purchased two luxury catamarans. Civilians travelling from Jaffna to Trincomalee and back by ship will be able to do this trip once every other day and with a shorter sailing time, when the Ceylon Shipping Corporation commissions the two brand new catamarans for this purpose towards the beginning of April. The ship named ‘Lanka Rani’, was built at a cost of US $ 5.4 million and rolled out from the Norwegian owned Kvaerner Fjellstrand Shipbuilding Yard in Singapore. This is shuttling between Trincomalee to Jaffna seven days a week. Servicing and maintenance work would be done at night,
because a ship idle even for a day erodes the corporation’s profit. Lanka Rani can carry 300 passengers and a cargo load of 30 Kilos per passenger. The vessel has a top speed of 30 knots and would be able to do the Trincomalee to Jaffna sailing in six to seven hours. As a government security regulation, the catamaran would have to keep a minimum distance of 50 miles from the shore. The similar passenger vessel, named ‘Lanka Devi’, is expected to team up with Lanka Rani from the beginning of May. The Corporation named these vessels Lanka Rani and Lanka Devi because CSC’s first two cargo vessels also carried the same names.

A Clearing and Forwarding business was established in 1997 and it has been doing its activities successfully and profitably. Actually this was proposed by the top management in the mid 90’s to overcome the crisis situation. Further details and some analysis of the clearing and forwarding business will be discussed later.

2.4 Education and training of the employees

Human Resource Development is one of the major tasks of CSCL’s objectives. She has given priority to personnel development. Every year the corporation gets several foreign scholarships and workshops to achieve this objective and also some local opportunities. On the one hand this training has helped to motivate the employees and on the other hand it helps to improve the productivity. Most of the employees have benefited from these on-the-job-training programmes, which have been allocated according to seniority and qualification. This is well organised by the personnel department, which publishes all scholarship circulars for everybody’s awareness. The person who wants to apply for those scholarships can submit his/her application through the head of department. Some of the major foreign scholarships can be listed as follows:

i. MSc in Shipping Management and MSc in Maritime Safety and Environment Protection - World Maritime University, Sweden.

ii. MSc in Shipping Management - United Kingdom Universities.
iii. MSc in Shipping Law – International Maritime Law Institute, Malta.
iv. MSc in Computer Science - University of Colombo, Sri Lanka.
v. Post Graduate Diploma in Computer Science - University of Colombo, Sri Lanka.
vi. Diploma in Shipping Management - Norwegian Shipping Academy, Norway.
viii. Diploma in Shipping - University of Cairo, Egypt.
ix. Infrastructure Management - Yokohama National University, Japan.

Apart from the above courses CSCL has been providing some financial assistance to improve her employee’s academic background from some of the recognised professional courses. For example, employees who want to do the shipbroker’s exam, which is in the Institute of Charted Shipbrokers, can claim their examination fee from the corporation. In addition, the membership fee of the Institute of Chartered Shipbrokers has been paid by CSCL on behalf of her employees in order to improve and update their knowledge. CSCL is paying all the charges in different educational fields such as the examination fee of the Institute of Chartered Accountancy exam, course fees of short time local management courses, course fees for short time computer courses for the entire cadre, and course fees for International language skills improving programmes for junior management. The CSCL is offering a one-year on the job-training programme for every newly joining junior executive with a given schedule in each department. CSCL has provided assistance with these kinds of activities but it has also provided a very useful library facility, which consists of all sorts of marine, engineering, economics, computer, legal and insurance books and many shipping related articles, magazines, and reports.

Considering all said facilities, which are offered to her employees, most shipping experts believe that CSCL is the only organisation, which provides excellent
education opportunities in Sri Lanka. During the last 30 years, CSCL has created quite a number of shipping professionals for the shipping industry.

2.5 Casual caller agencies
CSCL is still continuing its service as a casual caller agency and represents the interests of the Commissioner General of Essential Services Department and the Sri Lanka Armed Forces.

2.6 Multimodal Operations
Multimodal Transport is the future trend of transportation. Due to the globalisation and industrialisation most shippers expect to have their requirements fulfilled from the Multimodal Transport Operator. CSCL provides such a service to above mentioned trade areas using combined transport through Bills of Lading. CSCL has a comprehensive transport network covering all inland depots in Sri Lanka, India, Pakistan, United Kingdom, Germany and the Netherlands to enhance its service area and customer service. In Europe, CSCL has arranged her services through trucks bearing the Corporation’s trademark or through third party contractors.

2.7 Customer Service
The importance of customer service activities was identified by CSCL a long time ago and it is one of the main objectives in her services. It was the reason for establishing a modified customer service department, with sophisticated communication and service equipment in 1996. All the necessary officers from each department are represented and work together in this section. They are dealing with customer problems and requirements very closely. CSCL provides EDI linkage to the customers and it is also possible to book cargo through the Internet. The customers can also communicate with the email facilities and can observe all vessels schedules through the Internet. The Value Added Network is another service, which helps to facilitate cost-effective ways of communication.
Apart from the above services, the CSCL has a reasonable container fleet, which consists of various kinds of container types like general purpose, reefer, open top, flat rack, hangertainers, super ventilation, smooth side, and high cube containers in order to satisfy the customers. Cargo consolidation is another service provided by CSCL to satisfy the small shippers who want to transport LCL cargoes. CSCL has also accepted to transport hazardous and awkward cargo to any destination in the world. The Legal and Insurance Department is dealing with all the cargo claims and the present manager is also bearing the General Manager position of CSCL.

2.8 Organisational chart

Ceylon Shipping Corporation Ltd must have a board of directors consisting of five members appointed by the Minister, one of whom shall be an officer of the Ministry of Finance. The Minister may appoint one of the Directors as the chairperson of the Board of Directors (Sri Lanka government gazette, 1971). The Organisational chart on the Appendix 1 shows an outline sketch of the corporation’s structure. All the other departments consist of similar levels but are identified by different designations depending on the job category.
Chapter 3
An Analysis of the Freight Forwarding industry

3.1 Definition of a freight forwarder

The traditional definition of a freight forwarder is that it is an entity that acts as an intermediary between the actual shipper / importer and the carrier. Simply, its role can be illustrated as follows:

Shipper/Importer --------------- Freight Forwarder --------------- Air line/Ship Operator
Books Freight
Prepares Documentation
Arranges Warehousing
Custom Clearance

Due to the dramatic changes in the world trade pattern and its services offered, the role and definition of a freight forwarder also changed according to the new environment. With advances in international trade and communications the role of the freight forwarder has become multi-faceted. It involves:

1. Third party logistics on behalf of the final buyer or seller involving receiving, sorting, basic processing, pick and pack, long / short term storage, distribution and even third party invoicing and cash collection on behalf of the final buyer or seller.

2. Functioning as a carrier by contracting for block space with the airlines or shipping lines or railways.

3. Door to door delivery involving multiple modes of transport but under one document of carriage and responsibility.
The freight forwarders operate under a variety of titles such as “logistic / distribution specialists” or “international freight management” or “Multimodal Transport Operator (MTO)” or “Non Vessel Operating Common Carrier (NVOCC)”.

3.2 Typical services provided by a freight forwarder
A freight forwarder, who offers a service to the customer, can be divided into three main areas. Those are export air and sea freight, imports and airfreight and ocean freight, and professional service to the customer.

3.2.1 Exports Air and Sea freight
1. Preparation and processing of Customs Declaration.
2. Channel of information to all parties involved in the shipment.
3. Cargo pick up and hand over to the Port / CFS / Airport.
4. Checking carton numbers / marks and numbers prior to processing Customs / Board Of Investment (BOI).
5. Checking and ensuring timely despatch of original documents.
6. Consolidate several shippers’ cargo into one container for a single buyer.
7. Despatch of goods by air or sea.
8. Prepare House Airway Bill or House Bill of Lading according to shipper’s Letter of Credit.
9. Pre - Advise destination buyer on final details of the shipment.
10. Post shipment tracking and tracing right up to the point of final delivery.

3.2.2 Imports and Airfreight and Ocean Freight
1. Consolidate various suppliers’ freight and forward at one time thereby reducing cost of freight and clearing charges.
2. Follow up shipment status and keep the importer updated.
3. Enable local payment of freight charges.
5. Short / long term storage.
6. Arrange insurance surveys for demand cargo.
7. Other specialised areas of services linked to import that a forwarder should be in a position to provide would be pick and pack, sorting, grading, labelling, physical distribution of goods to the final party based on the customers’ instruction.

3.2.3 Prerequisites that a forwarder should possess in order to provide a professional service to the customer
1. High quality of staff that are honest, committed and competent.
2. Strong international network of freight forwarding offices either as a collection of independent forwarding agents or as part of a single network.
3. Versatile information technology system.
4. Adequate working capital finance to meet the peak demand periods linked with a tight control on trade debtors and creditors.
5. Liability insurance against errors / omissions / misdirection / delays / damage / and losses.

3.3 The role of a freight forwarder
To understand the role of a freight forwarder, firstly it is important to give a brief introduction to the method of carriage of goods internationally by multimodal carriage and then consider an entirely different aspect of the carriage of goods internationally. An understanding of multimodal transport is necessary, I believe, as the freight forwarder, uses this method of carriage in performing his duties.

A contract for the multimodal carriage of goods contains an undertaking by a carrier, who is called the multimodal transport operator, to perform carriage of goods by at least two different modes of transport from the place where the goods are taken in charge to a place designated for delivery. The essence of the definition given lies in the fact that the carrier accepts responsibility for the whole carriage, from the moment that the goods were taken over from the consignor until the moment that they are delivered to the consignee, even though the carrier himself may actually
perform only part of the carriage, or even none at all. Such carriage also leads to considerable document simplification for cargo interests. Normally they will receive only one multimodal transport document for the whole carriage.

The so-called container revolution has also altered the transport of goods enormously. The use of cargo containers has caused three kinds of problems: technical, economical and legal. The technical and economic aspects will be discussed later. It should, however, be noted that the concept of multimodal transport and container transport has in principle nothing to do with each other. Multimodal transport is a legal concept and container transport is a technical concept. Whereas containers are widely used in carriage in multimodal transport, because they greatly facilitate the transfer of goods from one form of transport to another, it is from a legal point of view perfectly feasible to organise a multimodal transport in which no containers are used.

Ideally one person would be acting as carrier for the whole carriage and accepting responsibility for the goods throughout. This is the so-called multimodal transport operator or combined transport operator. He may be a non-participant in the original transportation chain, a newcomer, such as a freight forwarder who has made the transition to carrier. The freight forwarder may organise the whole carriage. He will act as a carrier and often perform part of the carriage himself. In an ideal situation he will accept responsibility and liability for the carriage end to end. (Jaysundera, C. - Role of a freight forwarder.)

3.3.1 Economic role of the freight forwarder

The economic role of the freight forwarder is depending on the size and the scope of works that he performs. According to information read on the Internet, more than 120,000 freight forwarders have a Website; it means that the number of freight forwarders in the world is probably more than 200,000 if we take into account the fact that many local freight forwarders have no Website. (Francou, B)
3.3.1.1 The local Freight Forwarder
The local FF works on a local basis and performs only routine tasks such as custom clearance, local or regional delivery and storage. The FF’s economic importance is relative to the cost and the quality of service in the port where it operates exclusively. These FF’s efficiency is depending on the transit time and port cost.

3.3.1.2 The international Freight Forwarder
The international FF has a very high influence on the trade according to the decisions it takes as far as the port and fleets are concerned because it is in charge of the whole logistic of the cargo. Sometimes it may be part of it. (Francou, B.)

3.3.2 The Freight Forwarder
A multimodal or combined transport operator must be clearly distinguished from the freight forwarder. A freight forwarder is in most situations not a carrier, but an auxiliary person, a professional intermediary between the cargo interest and the carrier, who arranges and organises the carriage of goods from departure to destination, but who does not undertake to carry himself and who does not accept liability as a carrier. The freight forwarder’s position in the chain of transport is humorously summarised as “we forward all you want, but we will not carry it”.

The services of freight forwarders are, however, of great value to those engaged in the export trade, and particularly to small firms, which do not posses their own export and shipping departments. Forwarders have a specialised knowledge of the intricacies of carriage by sea or air and are, in particular, acquainted with the constantly changing customs formalities both at home and abroad, the rates and rebates of freight, the practices of sea and air ports, the groupage of sea or air cargo in container transport and the package and handling of export goods.
3.3.3 The Freight Forwarder - Agent or Principal?
Traditionally the freight forwarder acts as an agent and contracts only to arrange carriage, acting on behalf of the cargo interests. The practice has, however, changed and in modern circumstances they often carry out other services, such as packing, warehousing, lighterage, insurance or in container transport, the groupage and consolidation of parcels of various customers in one container. Often they act as carriers.

The fact that a person describes himself as a forwarding agent or a freight forwarder will not preclude him from being treated in law as a principal with the liability of a carrier, even if the carriage is not performed by him personally.

It follows that, in law, they qualify more often as principals than as agents. Nevertheless, it has to be ascertained in every individual case, in which legal capacity the forwarder acted. The answer depends on the construction of the contract between the forwarder and his customer and the facts of the particular case.

The capacity of the forwarder is particularly difficult to determine when he is instructed to arrange for carriage of goods, and this is obviously the most frequent practical problem. The question is here whether the forwarder has acted as carrier; i.e. as principal, or as a forwarding agent whose duty was only to procure carriage on behalf of the customer. The difficulty is enhanced by the distinction drawn in modern international transport conventions between the contractual carrier and the actual carrier. The contractual carrier is a person who has contracted to move the goods from one place to another, although he does not carry out the transportation himself but leaves this task to the actual carrier with whom he has contracted.

The Convention on the Contract for the International Carriage of Goods by Road (CRM), which deals with the international carriage of goods by road provides that, where a carriage governed by a single contract is performed by successive carriers,
each of them shall be responsible for the performance of the whole operation, and it has been held that a forwarder who merely contracted to move the goods from one country to another, was a carrier within the meaning of the convention. (Ulster-Swift Ltd. Vs Tounton Meat Haulage Ltd. – 1972) But in other cases, the courts have held that the forwarder has acted as agent.

In summary, in arriving at a distinction whether a forwarder is acting as an agent or principal the following should be taken into consideration:

a. The terms of the contract are important to determine the intention of the parties.
b. Terms of payment are also an important consideration. Freight forwarders as agents, traditionally charge a commission to their customers based upon the total cost of the arrangements made by them on behalf of the customer. If, however, an all in - charge is agreed upon, thus creating an impression that the freight is being charged, the conclusion may be that the forwarder acted as a principal.
c. The documents used in the performance of the contract may also be a decisive factor in the distinction as between freight forwarder and carrier.
d. Other criteria which have been taken into account are: the nature of previous dealings with the forwarder, the extent to which the customer is kept informed of the carriage arrangements, the forwarder’s relationship with the actual carrier, the performance of groupage operations and the type of insurance taken out by the forwarder.

### 3.3.4 A Forwarder acting as an Agent

The duties of a forwarder acting in the capacity of an agent only cannot be laid down in general terms, since they depend in each case on the terms of the contract with the shipper, which may be collected from the terms of the booking notes, receipts, invoices etc., or implied by custom or a course of dealing.

The forwarder has, however, been said to have a duty “to do all that he reasonably can to further the safe arrival of the goods to the consignee at destination”. (Langley,
Beldon and Gaunt Ltd. Vs. Morley – 1965) This may involve exercising reasonable care in employing the person who is to actually perform the carriage. He may be liable for the delay due to his negligence, or for failing to pass instructions concerning the goods to the actual carrier. While the goods are in his possession he has the liability of a bailee.

A forwarding agent that employs an agent abroad to perform his functions may be vicariously liable for the negligence of that agent. (Landauer & Co. vs. Smits & Co. – 1921)

3.3.5 A Forwarder as Principal
The position of a forwarding agent acting as a principal with the liability of a carrier is in many respects similar to that of a carrier issuing a through bill of lading. The forwarder usually has the right to employ sub-contractors to perform all parts of the carriage; the right may be implied by custom or as a necessary implication in the case of a forwarding agent who does not operate his own ship or other facilities.

“Through bill of lading” is an expression loosely used to mean a document containing a contract for the carriage of goods from one place to another in separate stages, of which at least one stage is a conventional sea transit. The sea transit may itself be divided into separate stages to be performed by different ship owners by a process of transhipment. The sea transit is often coupled with a stage of transit by some other means, e.g. by road, rail or air, in which case the through bill of lading is sometimes called a “combined transport bill of lading”.

The multiplicity of different types of through bills of lading makes it difficult to lay down hard and fast principles governing the liabilities and relationships of the various parties involved. Most of the relevant authorities turn on the constructions of particular clauses in the bills of lading and are not of general application.
Where the company issuing the through bill of lading is responsible for the whole transit the other companies involved are usually to be treated as sub-contractors to that company and not as parties to the through bill of lading.

3.4 Why use a forwarder at all?
The choice open to a shipper is to “do it himself” by carrying out some activities in-house and using independent contractors such as customs agents and transport companies and contracting warehousing.

While this is possible and indeed happens in many companies in Sri Lanka the following factors would demonstrate the advantages of using a freight forwarder.
1. Economies arising out of consolidation.
2. Able to secure more competitive freights rates and space.
3. Credit facilities for airfreight charges.
4. Information flow between all concerned parties when the shipment is facilitated and managed by one party.
5. Flexible and can provide tailor made solutions.
6. Most shippers do not have the resources, infrastructure, knowledge and staff to perform these services.
7. Management time and resources (Staff / office space / equipment) could be utilised for the core business of a shipper.

3.5 Freight forwarding industry in Sri Lanka
The freight forwarding industry in Sri Lanka saw its earliest origins in the late 70’s. At that time there were 5 active companies Ace cargo, Euroasia, Whitall Bousead air cargo department, Harrison & Crossfield and Hill & Delamain.

Around 1979 saw the emergence of the orientel influence in the Sri Lanka freight forwarding industry, no doubt directly co-related with the flood of Hong Kong based garments manufacture investments in the free trade zones and the attractive
profitability of the forwarding business. The first five forwarders of such multinationals to enter this market were Concord Express, Air-Link Global, World Express, Dart Express and Hecny.

Needless to say all this development provoked the interest of several locally established companies to venture into this field with agency partnerships with well established forwarding companies like MSAS, AEI, Schenker being actively promoted in the Sri Lanka forwarding industry.

Considering freight forwarding industry in airfreight, the active airlines that are providing cargo services are Air Lanka, Singapore Airlines, Thai Airways, Air France, Saudi Airways, Kuwait Airways and British Airways. Forwarders were judged primarily on their capability to obtain space from the airlines. The primary objective was to get the shipment out of Colombo and hope for delivery within 7-8 days to USA and 4-5 days to Europe.

Air cargo policies were changed in the late 80’s and it was liberalised in 1989. Alongside the open skies policy the forwarding industry through Sri Lanka Freight Forwarder’s Association were successful in convincing the government authorities of the need to enhance the air port facilities and a new cargo warehouse was a good example of this.

Until the opening up of sea freight the forwarder’s main role in sea freight had been in providing a sea/air service through Dubai. Despite the opening up of sea freight services in Sri Lanka the established forwarders were somewhat slow to fully capitalise on the opportunities offered. Those who did so, had good initial progress. Many foreign forwarders specialised in ocean freight services established their presence during 1992-1993 with the primary objective of establishing LCL/FCL groupage and NVOCC services. Likewise, plenty of not so well established NVOCCs operating as single room or brief case NVOCCs and established traditional
shipping companies have been offering NVOCC services while sporting the traditional cap of an established steamship company agent. This poses a serious challenge to the forwarding industry and calls for a decision on the level of standards to be established together with the means and extent of ensuring compliance of same.

According to the latest statistics, it reveals that about 140 freight forwarding companies exist in Sri Lanka. But only 55 companies have membership in SLFFA (See Appendix 2) and they are the companies who are engaging in worldwide freight forwarding business. (SLFFA statistics) Almost 80 percent of the total airfreight imports / exports and 30 percent of the total sea freight exports are moved by forwarders. There are many forwarders who possess the above pre-requisites. There are as many who claim to be forwarders but who do not possess such capabilities. As a shipper it is important to be able to distinguish the “reliable from the dubious”.

In CSCL the freight forwarding industry is less than five years old. The CSCL possesses a license issued by the SLPA and Sri Lanka Customs to operate as a Customs House/ Brokering agent. This activity is manned by experienced staff and wharf personnel who possess the ability to handle imports/exports of containers, loose cargo, break bulk cargo, project cargo etc. The following table illustrates the number of staff in different ranks who are involved in clearing and forwarding activities and their experience at CSCL.

<table>
<thead>
<tr>
<th>Rank</th>
<th>1-5 Years</th>
<th>6-10 Y.</th>
<th>11-15 Y.</th>
<th>16-20 Y.</th>
<th>Over 20 Y.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deputy Manager</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Assistant Manager</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Staff Assistant</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerks</td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Office Assistant</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Source: CSCL statistics
The table shows us that the average service experience of CSCL clearing and forwarding staff is between 16-20 years. This will help to do their business more confidently in a very competitive market.

There is a big competition between freight forwarders in Sri Lanka. Therefore, innovation has become a more and more relevant concept in freight forwarding. In this sense the CSCL must attempt to exploit its competitive advantage over the competitors. The point then is to inject a concentration of resources into a particular area where the company sees an opportunity to gain the most strategic advantage over competitors. This is called Disectation of the market. When we examine the position with regard to market share of CSCL it is nearly 3% (CSCL statistics) of the total market. As a small freight forwarding company and sub-business of the company the current performance is acceptable. Table 3.1 given below shows the most important customers of the CSCL C&F business during the past period.

<table>
<thead>
<tr>
<th>Customer</th>
<th>Market share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka Railways</td>
<td>56%</td>
</tr>
<tr>
<td>Medical Suppliers Division</td>
<td>17%</td>
</tr>
<tr>
<td>Sri Lanka Broadcasting Corporation</td>
<td>9%</td>
</tr>
<tr>
<td>United Nations Children’s Fund</td>
<td>6%</td>
</tr>
<tr>
<td>University of Kelaniya</td>
<td>3%</td>
</tr>
<tr>
<td>Lanka Mineral Sand</td>
<td>1%</td>
</tr>
<tr>
<td>National Lottery Board</td>
<td>0.9%</td>
</tr>
<tr>
<td>Sri Lanka Air Force</td>
<td>0.6%</td>
</tr>
<tr>
<td>University of Sri Jayawardena</td>
<td>0.6%</td>
</tr>
<tr>
<td>Department of Agriculture</td>
<td>0.6%</td>
</tr>
<tr>
<td>Others</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: CSCL statistics

The Government sector is the main contributor of the CSCL C&F business and it has contributed approximately 99% of total CSCL business. The reason behind this unusual trend is not either political influence or government policy. Actually, on the one hand CSCL is highly concentrated into government cargo and on the other hand
CSCL offers more competitive charges for cargo clearance because it has some advantages over its main competitors. Those are:

1. Highly skilled and highly qualified labour.
2. FF section can share their mother company’s resources, infrastructure.
4. Low cost- low labour cost, low charges for mother company’s resources etc.
5. Modern communication facilities.
6. Strong link with other sectors – SLPA, customs, banks, other shipping companies etc.
7. Reliability – most customers believe that as a government company CSCL has more reliability than its competitors.

CSCL has a low market share compared to the other private sector companies, but its market share is expanding gradually. Table 3.2 shows the growth rate of the CSCL business in terms of number of jobs.

<table>
<thead>
<tr>
<th>Year</th>
<th>No of jobs</th>
<th>Growth rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>121</td>
<td>72%</td>
</tr>
<tr>
<td>1998</td>
<td>275</td>
<td>108%</td>
</tr>
<tr>
<td>1999</td>
<td>142</td>
<td>(48)%</td>
</tr>
<tr>
<td>2000 (first quarter only)</td>
<td>56</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: CSCL statistics

According to the above statistics CSCL had a considerable growth rate in its first two years. In 1997 it was 72% and 1998 it was 108%. But in 1999 the number of such jobs actually fell by 48% because CSCL had lost its main customer after the first quarter of 1999. However in the year 2000, CSCL has start its business with railway department again and hopefully, this will help to increase their business again in this year. Despite the loss of railway department’s business in CSCL the profit of the FF section has been maintained at quite a successful level. Table 3.3 illustrates the profit levels of the CSCL C&F business.
<table>
<thead>
<tr>
<th>Period</th>
<th>Income</th>
<th>Cost</th>
<th>Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4/97 to 31/03/98</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1/4/98 to 31/3/99</td>
<td>2,507,414.21</td>
<td>1,336,484.18</td>
<td>1,1709,930.03</td>
</tr>
<tr>
<td>1/4/99 to 31/3/00</td>
<td>1,519,227.31</td>
<td>610,480.20</td>
<td>908,747.11</td>
</tr>
</tbody>
</table>

Source: CSCL statistics

These profit levels are quite impressive for the company because comparatively this is better than the core business profits and this contribution is quite substantial for the company profit.

### 3.6 Future of the industry

According to Kevin M. Walsh of Seattle-based Expeditors International, “exporters are no longer satisfied with a forwarder who does not embrace the full range of logistics services.” (Bowmen, R.I.)

The development and expansion of containerisation and multimodalism have introduced significant chances not only in various segments of the transport chain as related above, but in managerial style and in the size of transport service providers as well. Very early, some freight forwarding companies seized the opportunities offered by containers to diversify their range of services. Then consolidators and door-to-door service providers emerged.

New world trends like globalisation and open market concepts and vast developments in the technological and communication fields have brought about tremendous changes in all sectors of international transport: revolutions in different modes of transport, in ports and terminals, in packing systems, in communication and documentation. The freight forwarding business is also undergoing significant changes of new managerial philosophies: the internationalisation of services; the combination of highly-skilled staff and advanced technology (e.g.: IT and E-business) for better control over the target market; trends toward pooling, merging and diversification. It is needless to stress that the challenges are becoming sharper and sharper for most forwarders from developing countries.
The vision is to expand the scope of the freight forwarding section as the commercial arm of CSCL and develop the projects in areas such as EDI, training, ocean freight handling that would be for the common use and benefit of the whole freight forwarding industry.

CSCL’s objective is to make their facility a cargo centre for forwarders, integrators and consignees. CSCL has plans for a 24 hour customer service with the introduction of banking and Customs facilitation on a round the clock basis. The introduction of these facilities is imminent.

As the CSCL freight forwarding business strides along into the future some of the crucial questions that need to be addressed are:

1. Are inconsistencies in vital areas such as documentation liability, insurance standard trading conditions, and settlement of claims in the best interests of the trade? If not should the industry be regulated?
2. Does the forwarder have adequate teeth for recovery of his rightful dues from the importers and exporters?
3. Is it being adequately remunerated and protected by the airlines and shipping lines? (Keeping in mind the volume of business it generates and pays them for.)
4. Is it geared up to meet the demands of an electronic trading environment?
5. Is it willing to be a change leader as opposed to being a passive follower in the development of the international transportation business?
Chapter 4
Custom Entry Procedure and the Role of Government

4.1 Customs Examinations of Cargo
The reasons for the examination of cargo could be:
1. To answer queries raised in the Long Room.
2. To send samples to the Valuation Branch.
3. To send samples for technical advice.
4. For detection of illegal imports, frauds, and smuggling of goods.
5. For ensuring that goods are correctly classified and correct rates of duties are entered.
6. For enforcing quarantine and health requirements.

4.1.1 Examination of F.C.L. Containers
1. All F.C.L. containers are examined by the Intelligence and Investigation Branch or by Panels appointed by the Intelligence and Investigations Branch.
2. When F.C.L. containers are to be cleared, the importer should make an application requesting their examination. This application should accompany the Delivery copy of the Import Bill of entry, Duty paid receipt, invoices etc., together with a packing list in respect of the cargo in the container.
3. If the importer wishes to make an application for inspection of the container/s in his premises he should make an application accompanied by the documents mentioned above to the Deputy Director (Imports and Tariff) giving any special reasons for his request for examination of the container outside the Port. Such
requests are allowed only in exceptional cases (e.g. Heavy Machinery which are difficult to unload and load into the container at the examination bays, cargo which are fragile and could be damaged while loading and unloading etc.) When such requests are allowed the documents are presented at the Intelligence and Investigation Branch for release of the containers.

4. The importer or his representative should produce the documents referred to at (2) to the Intelligence Branch. At the Intelligence Branch the application would be registered and a serial number given.

5. After registration the application together with the register should be submitted to the Deputy Director of Customs (DDC) or Assistant Director of Custom (ADC) Intelligence. He will determine whether the container should be examined by the staff of the Intelligence Branch or released for Panel examination.

6. When a container is detained for examination by the staff of the Intelligence Branch, the detention stamp will indicate the examination point.

7. Such detained containers will have to be brought to the respective examination points. At the examination point a Superintendent of Customs (SC) will appoint such examination to the Assistant Superintendent of Customs (ASC) concerned who will examine them.

8. After the examination a detailed report should be submitted to the ADC Intelligence and Investigation Branch for the release of the container. Action taken should be indicated against the respective registration.

4.1.2 Containers released for Panel examination

1. All containers released for panel examination should be taken to the panel examination points as indicated by the S.C. (I &I) on the application.

2. The panel officers will be nominated by the DDC (I & I) or ADC (I& I) and it will be done at the time when container examination applications are registered.

3. In respect of containers subject to panel examination the charges currently in force will be recovered. In addition to the examination fees an overtime fee for 4 hours will be recovered.
4. After examination, the container will be sealed with a customs security seal and released on a gate pass issued by the Intelligence Branch.

4.1.3 Examination of L.C.L. cargo

Less than Container Load (L.C.L.) cargoes are examined at the quays or warehouses where they are landed. These quays and warehouses are grouped into four (4) areas in port and an Assistant Director of Customs is in charge of each of these four areas, and under them are one Superintendent of Customs and two Appraisers.

Importers or their representatives present Delivery copies of entries together with the invoices, bank receipt, packing list and the letter of credit to the Assistant Director of Customs in charge of the warehouse or quay where the goods are landed. The delivery copy is then registered and a registration number is given on the entry. The documents are then submitted to the Superintendent of Customs who will scrutinise the delivery copy to see whether the entry is satisfied, duty and other levies have been correctly paid, any queries have been raised in the Long Room and classifications description of the goods and rates of duties have been correctly entered. If the delivery copy is in order, he or the ADC assigns the entry to an Appraiser for examination of the goods and reporting. The ADC, if he feels a detailed or 100% examination is necessary, instructs the appraiser to do such an examination. The appraiser will do the examination and make a detailed report regarding the classification rate of duty and quantity to the ADC who will, if satisfied, release the goods for delivery by placing the rubber stamp “Passed for Delivery” on the delivery copy.

4.1.4 Bonded Warehouses

When importers require bonding facilities they should pass bonding entries which are similar to ordinary entries but in blue colour forms in the Bonding Division. Importers can bond the goods without payment of duty and pass ex-bond entries and
clear the goods as and when they require the goods on payment of duty and other charges.

4.1.5 Manufacture – in – Bonds
These warehouses are established for the convenience of industrialists for getting the raw materials required for their industries without payment of duty and bonding them in their bonds for manufacture of finished products for export. These bonds are checked periodically to see whether the raw materials bonded are duly converted into finished products and are exported. Garment manufacturers avail themselves of this bonding facility and it is a great benefit to their industry.

4.1.6 Bill of Sight
When an importer does not have invoices or other documents in respect of an import consignment he will have to get a Bill of Sight approved by the Director of Customs for examination of the goods for description and value and rate of duty and pay the necessary duty.

4.1.7 Bill of Store
This document is passed when exports from Sri Lanka are returned by buyer for some reason. The goods are examined for identification and are released duty free.

4.1.8 Exports
Exporters submit Export entries in the prescribed forms to the Exports Division of the Customs when goods are to be exported. The export entries should indicate particulars of the export concerned such as name and orders of the exporter, name, and address of the forwarding agents, name of the vessel, port of discharge, port of loading, name of agents, country of origin, country of discharge, rate of exchange, marks and numbers of packages, number of packages, description of the goods, HS code, FOB price, gross weight and net weight and the entry should be signed by the exporter and his agent.
The export entry should be accompanied with the Exchange Control permit, Export control permits and any other permits required. When the entries are finalised, they are screened by a Superintendent of Customs to check what kinds of examinations are required of the cargo entered in each entry.

When the cargo is to be examined in the Port the ASC attached to the export warehouse will check the cargo when it is brought for shipment. When a Panel is appointed, the Panel will do the examination at the exporter’s premises. In case of goods, other than garments, the Panel will examine the goods for description, rate of duty, classification, quantity, freight and for any restricted goods.

4.2 Custom Valuation

One of the primary functions of the Customs Department is the collection of customs revenue. Customs revenue is both import and export duties and other levies. Customs duties and other levies are imposed from time to time to collect this revenue. It is also a significant element in a variety of other aspects of international trade such as statistics, quotas, licenses, taxes and other charges levied at importation.

4.2.1 Concept of Value

There are different concepts of value. An importer has his own value. When he is the buyer, his concept of value is what those goods are worth to him having regard to the price at which competing goods are being offered. When he sells, it is his estimate of what he can get for the goods. The relations between the buyer and the seller may influence the agreed price. It is here that the customs intervene as an impartial third party to the transaction in order to determine any special relationship, which may exist between them, so as to avoid discrimination between importers.
4.2.2 Elements of Value

The principal elements of value are price, time, place, quantity and level. By price is meant the invoice value (cost, insurance and freight) or the normal price the goods would fetch; Time is the time of importation of goods; Place is the place of importation; Quantity - there is no standard quantity but the quantity should be the quantity imported; Level will be the level at which goods were bought, i.e. wholesale, retail or consumer level. The basic document for determination of value is the invoice sent by the supplier through a bank to the importer.

4.2.3 Legal basis for the Valuation

There is provision in the Customs Ordinance to determine value for duty purposes. Section 47 states that entries should be submitted and correct values should be declared. According to Section 51, that value has to be determined according to Schedule Section 52 empowers an officer to forfeit goods where the value declared is not accordance with the custom tariff publications.

4.2.4 What should be the Value?

The acceptable value is the normal price of an article determined in accordance with the schedule even though the actual price paid by the importer may be less than the normal price determined by the Customs.

4.2.5 International systems of Valuation - BDV 7 GATT

Our system of valuation is based on the international system known as the Brussels Definition of Value - the normal price that the goods would fetch. As against this, there is the GATT valuation system under Article 7 of the GATT Agreement. Under this system the basis of customs value is the transaction value, that is the price actually paid or payable for the goods imported when the sale meets certain specified conditions.
4.2.6 Value: Cost, Insurance and Freight

Invoice: The basic document for determination of value is a bank stamped invoice sent by the supplier to the importer. When goods are purchased outright an invoice reflects the contract price either CIP or EXW. This may not necessarily be the correct value for duty purposes. Certain adjustments by way of additional freight charges, insurance charges, disallowed discounts may have to be added back or the value may not be the freely available normal price because there is a special relationship between the supplier and importer.

4.2.7 Discounts

A discount is a deduction from the gross invoice price considerate on the fulfilment of certain conditions. It should be genuine and be freely available to all importers. However, the quantum of discount is limited to a maximum of 10% of the value. Some of the discounts, which are allowable/not allowable, are given below.

- An Agents-discount is not allowed. This is a discount given to an appointed agent of goods, which he imports into the area of the agency.

- A Breakage allowance is allowed. Certain suppliers in respect of fragile items such as glassware and pottery give this.

- A cash discount is a discount available for each payment for settlement of an invoice within a limited period. This is allowed.

- A late shipment allowance is not allowed. This is given when goods are shipped after and agreed date.

- A quantity discount is a method of charging a lesser price for ordering a large quantity of goods. This is allowed.

4.2.8 Freight charges

In determining the value for duty purposes, freight charges or the cost of bringing the goods to the Port of importation should also be included. Where the supplier’s prices are less than the CIF value (FOB or ex-work) the extra freight charges must be added to bring the price to a CIF one.
In the case of Air Freight paid by the importer the full air freight charge is to be included in the dutiable value except where the goods are of little value (e.g. tender documents, samples, medicines) and distortions might result if the full charges were added. A reduction of two thirds may be allowed. The dutiable value could even be appraised depending on the nature of the cargo.

4.2.9 Postage
Postal charges are to be included in duty values for all commercial transactions.

4.2.10 Insurance
The “normal price” is one, which includes an insurance charge to cover non-arrival or damage to goods. The insurance may be included in the price paid or the goods may be separately insured by the exporter or covered by the importer himself. If goods are not insured, or if the insurance amount is not shown, 1% of the value CFR or CPT may be added to the invoice value.

4.2.11 Problems of Valuation
In all valuation systems there will be those who will try to obtain illicit commercial advantage and thereby thwart fair business competition through the use of false or misleading information. Such practices not only contribute to considerable loss of revenue but also create situations of unfair competitive advantages, which are contrary to the interests of international trade.

Customs valuation is a controversial matter between the importer and the Customs and whatever system we adopt the parties will never be able to reach any harmonious agreement.

4.3 Exchange control regulations relating to Exports and Imports
In terms of section 106(2) of the MIA the central bank may act as agent of the government for the propose of any matters or transactions if it is authorised to do so
by the minister in charge of the subject of finance after consultation with the Monetary Board. One of the important functions entrusted to the Central Bank under this provision is the administration of the Exchange Control.

After the establishment of the Central Bank of Sri Lanka in 1950, the Exchange Control act No. 24 of 1953 was introduced to empower the bank to administer exchange controls. The provisions of this act cover transactions relating to gold, foreign currency, payments out of Sri Lanka securities with non-residents in foreign currency, settlements of foreign debts, payments for imports and exports, payments on foreign contractors, transfer and settlement of property involving foreign currency etc. For the administration of the act, the Central Bank established the Department of Exchange Control.

4.3.1 Exports
The Minister of Finance, acting under the power vested in him under section 22(3) of the Exchange Control Act, made an order on 1975.10.23 that no goods shall be exported to any territory outside Sri Lanka, except with the permission of the Central Bank. This order was published in the Gazette Extra Ordinary of the Republic of Sri Lanka No. 187 / 2 of 1975.10.27. This permission should be obtained in addition to compliance with any other requirements under other laws, such as the Imports and Export Control Act.

4.3.1.1 Applications for Exports (Under Delegated Authority)
Under the provisions of Section 4 of the Exchange Control Act, Commercial Banks in Sri Lanka have been designated as Authorised Dealers in Foreign Exchange. The Authorised Dealers have been delegated authority to approve, on behalf of the Controller of Exchange, applications for exports made by their constituents, provided they conform to certain instructions, which are issued to them from time to time.
4.3.1.2 Applications

In order to minimise inconvenience to exports there is an agreement with the Controller of Imports and Exports to have a common form of application on which the two departments could grant their license. This form is EC /EXP /1. Where an exporter wants to apply to a bank to obtain an export license, he has to fill in four (04) copies of the EC / EXP /1 forms.

Where the goods that are to be exported are subject to an export control license under the Import and Export Act, or any other regulations, the applications would be first made to the appropriate authority licensing the export under the provisions of the relevant regulations and then submitted to the bank.

4.3.1.3 Method of Payment

Payment for exports from Sri Lanka should be received in the following manner:

1. For exports to any destination excluding
   i. Exports made according to the provisions of a Trade and Payments Agreement to a country with which Sri Lanka has concluded such an agreement or
   ii. Exports made to a member country of the Asian Clearing Union in terms of the agreements provided for trade between member countries.

   Payment should be received in the following authorities.
   a. The account of a foreign bank maintained with an Authorised Dealer; or
   b. Such account of any other person resident outside Sri Lanka, as is approved by the Central Bank

2. For exports, to a member country of the Asian Clearing Union such as Pakistan, Bangladesh, India, Iran, Nepal and Myanmar the payment should be received either in the manner outlined at (a) above or in the manner prescribed for settlement of payments resulting from the trade between member countries.
4.3.1.4 Terms of payment
Exporters are permitted to ship the goods on several kinks of payments. Those are Advance Payments, Letter of Credit, Documents of Payment (D/P), and Document against acceptance (D/A).

4.3.1.5 Time allowed for the Realisation of Export Procedure
Payments for the goods exported should be received in Sri Lanka not later than 6 months from the date of export, leaving the exporter’s discretion to reduce, extend the period or even insist on advance payments.

The Exchange Control Department has issued instructions to all Authorised Dealers to ensure that exporters obtain export proceeds within the following time periods:
1. Letter of Credit (Sight Terms) - Not later than 21 days from the date of presentation of Documents
2. L/C (Deferred Payments) – Not later than 21 days from the date of maturity.
3. D / P Bills (Sign Bills without L / C) - Not later than 21 days from the date of presentation of documents.
4. Usance Bills (D /A) -Not later than 180 days from the date of shipment.

4.3.1.6 Outward Remittance
a. Commission: Where there is a commitment to a commission to a foreign agent, as stated, an exporter can remit that commission through his bank provided he has declared the commission payable in the EC/EXP/1 permit at the time of obtaining permission to export. For commission up to 5% prior approval of the Exchange Control has to be obtained.

b. Claims: Where an exporter has accepted a claim from an overseas buyer on a short shipment or on a quality defect, permission is granted to remit a percentage of the invoice value to cover the amount claimed.
4.3.1.7 Facilities extended to Exporters

1. Exporters are permitted to credit 5% of the annual increment of their export earnings to a Resident Foreign Currency Account. Funds in the account may be used for any purpose and are free of tax.

2. Exporters are permitted to borrow foreign currencies from offshore units of Commercial Banks for the purpose of financing the imports of foreign inputs required to execute export orders up to 70% of the total value of confirmed orders.

3. Exporters are allowed to engage in entrepot trade.

4. Export of commercial samples valued up to Rs.10,000 is permitted.

5. Advance remittance relating to repair charges is permitted up to 75% of the invoice value.

4.3.2 Imports

Under imports, there are two categories of imports, viz;

1. Imports subject to individual licenses and

2. Imports under “Special Import License” Regulations no. 1 of 1977 published in the gazette No. 201/7 of 15.11.1977.

In the case of imports subject to individual license, an importer should submit a specific license issued by the Controller of Imports and Exports to the authorised dealers prior to the opening of the L/C. Under the “Special Import License” goods could be imported into the country by individuals who are citizens of Sri Lanka or bodies corporate where Sri Lanka holds more than 51% of the share capital.

4.3.2.1 Payments for Imports

Payments for all imports, whether subject to individual import license or under Special Import Licensee, could be made only against Letter of Credit providing for drafts payable at sight- D/P terms and valid for shipment for a period not more than 180 days. Importation of goods for personal use, raw materials for industry and
separators for machinery (not in commercial quantities) where the value does not exceed US $ 1,000/= is permitted without opening a Letter of Credit. Remittances on payment for such imports are allowed in any manner required by an importer on production of required documentary evidence.

4.3.2.2 Requirements
In terms of Special Import License (SIL) regulations all imports excluding those specifically exempted from L/C requirements are required to furnish to the Authorised Dealer their business turnover tax numbers assigned to them by the Commissioner of Inland Revenue, when making applications for the establishment of Letters of Credits. The business Turnover Tax Number will serve as a unique number by which an importer may be identified.

4.3.2.3 Currencies of Payment
Payments for imports may be made in the following currencies for goods imported:

i. From countries which are parties to Trade and Payments Agreements with Sri Lanka- As laid down in the instructions relating to each agreement

ii. From member countries of the Asian Clearing Union - As laid down in the instructions relating to the transactions with the A.C.U.

iii. Union Loan/Credit Agreement- As laid down in the instructions relating to each agreement.

iv. From any other source – In any foreign currency or Sri Lankan Rupees.

4.3.2.4 Buying Commission on Imports
Where imports are made through buying houses abroad, Authorised Dealers may approve the remittance of buying commissions provided:

a. The buying commission is shown on the invoice;

b. The application for the remittances of the invoice value is otherwise in order and,
c. The importer is in possession of a valid Imports license in the case of an import subject to license and the balance available on the license is adequate to cover the remittance.

4.3.2.5 BTN Certificate Number

It is very important that in respect of all imports the importers should furnish to the Authorised Dealers a specific description of the goods, which are sought to be imported together with the relevant BTN Classification Numbers. (BTN - Business Tariff Nomenclature published by the Customs Co-operation Council and Sri Lanka Customs Tariff.)

4.3.2.6 Facilities extended to Importers

1. The import of goods on FOB or CIP basis, which was to be carried only by the National Carrier, was removed and the carriage of goods is now allowed on any vessel or aircraft.
2. The import of gold by exporters of gold jewellery is permitted up to 120 percent of the FOB value of the manufactured jewellery exported in respect of each consignment, free of import duty and turnover tax.
3. Commercial exporters and local sales of gems and jewellery to foreigners for foreign exchange are permitted to be credited with 15% of the value of their exports/sales to a “Foreign Exchange Retention Account” for importing essential inputs, provided their export earnings exceed Rs. 400,000/= per annum.
4. Commercial Banks are permitted to sell foreign exchange forward to cover all imports, excluding imports, which require a 100% cash margin for the establishment of Letters of Credit and service payments.

4.4 Port Authority Charges for Import / Export cargo

The Sri Lanka Port Authority is a Statutory Body set up by an Act of Parliament, i.e. the SLPA Act No. 51 of 1979 and was formally established on 01.08.1979. The Act has also provided for the imposition of Ports Authority charges for services rendered
and the tariff is issued with the approval of the Minister in charge with the concurrence of the Minister of Finance. Cargo moving through the port is subject to Ports Authority charges such as Stevedoring Charges, Wharf Charges, Navigational Charges as per the official Tariff.

Stevedoring is recovered from the Shipping Agents who in turn recover it from the Consignee / Consignor through the freight charges. The advantage in recovering the stevedorage from the Shipping Agent is that such charges are obtained in foreign exchange thus benefiting the national economy. The charges are based on the weight of the cargo or the measurement thereof, whichever is higher. Charges were simplified in recent years when imported / exported in containers for which consolidated Box Rates are now charged.

The Wharfage, on the other hand, is recovered from the consignee / consignor and the payment is in local currency. Cargo is again charged on the basis of weight or measurement, whichever is higher. In addition to the wharfage consignees / consignors are required to pay rent on import / export cargo if such cargo is allowed to remain in the Port beyond the rent - free period. As a means of discouraging the consignees / consignors from keeping cargo for unduly long periods a penal rent is also charged on such cargo. There are also such charges as double handling transport etc., which are of penal nature.

A concession is also available in the form of a rebate for cargo imported / exported in full containers. Thus all such cargo is stuffed / de-stuffed outside the port are entitled to this rebate.

4.5 Delivery Procedures and Documentation for Import Cargo

4.5.1 Legal Provisions
The legal framework for all port activity in Sri Lanka is provided primarily by two major legislative enactment’s, namely the Customs Ordinance and the Sri Lanka Port
Authority Act. The Customs Department, which enforces the provisions of the Customs Ordinance, is a Government Department functioning under the Ministry of Finance.

4.5.2 Basic Requirements Relating to the Delivery of Cargo
Section 43 (1) of the Sri Lanka Ports Authority Act reads as “The Port Authority shall not deliver any cargo to the consignee or his agent, or ship any cargo, until Customs Clearance documents in respect of such cargo are produced”

Hence, any importer who has cargo to be cleared from the Port would be required to first process his clearance documents with the Customs. The principal document to be presented to the Customs Department by each importer would be the Customs Entry (for payment of duty) or in its absence a Special Application, together with the documents of title. This processing is handled in the Customs Long Room. After attending to the customs documents, the importer is required to process his Delivery Order with the Port Authority and pay all charges due to the Ports Authority before removal is authorised. This Delivery Order should carry the authorisation stamp of the Customs, when it is ultimately presented at the cargo - delivery point.

4.5.3 Principal Documents Used in the Clearance of Cargo
Ships Manifests, Bills of Lading, Shipping Agents’ Delivery Orders, Customs Entries/Applications, Imports Licences, SLPA Delivery Orders (Cash or Credit), Invoices, Packing Lists, Container (FCL/LCL) Lists, Boat Notes, Landing Tallies, Container De-stuffing Tallies, Survey Report (when cargo is short or damaged), Gate Passes (Cart Notes), Internal Passes, Port Entry Permits, and Wharf Clerks’ Identity Cards are the principal documents used in Sri Lankan Ports in the process of handling and clearing goods. (See Appendix 3-13 for sample document set for clearance of a package)
4.5.4 Payment of Port Changes and Clearance from the Port

The charges payable by the port user for the services provided by the Ports Authority are stipulated in the Port Authority’s Tariff. In order to assist the Port Authority in ensuring that its charges according to the approved tariff are recovered correctly in respect of each consignment to be cleared, importers are required to furnish an accurate declaration relating to the description, measurement, weight etc. of each consignment in the Delivery Order form submitted to the Port Authority.

Since the charges, which can be levied by the Ports Authority are determined in Section 37(1) of the Sri Lanka Port Authority Act, any attempt to underpay such charges would result in penalties being imposed. Importers would be able to avoid unnecessary delays in the clearance of cargo, by submitting comprehensive declarations and paying up all charges to the Ports Authority, including Handling Charges and Storage Rent at the initial stage itself.

Only the authorised representatives of importers would be permitted to negotiate clearance documents. The Ministry in charge of Ports stipulates the rules relating to the registration of Wharf Representatives and the licensing of Clearing Agencies in the Regulations in 1984.

4.5.5 Special procedures relating to cargo clearance

There are special procedures relating to cargo clearance, for which special permission would have to be obtained in advance from the Customs. Those categories are Direct Delivery from vessels, Overtime Deliveries, Applications for Removal pending Customs examination, Bill of Sight Applications, Removal of Dangerous Goods (Under Police escort), Wrong / Nil mark Applications, Over carried Cargo Applications, FCL Container Deliveries.
4.5.6 Search Facilities and Cargo Claims
When Importers or their representatives are unable to locate their cargoes in the Warehouses / Yards declared as the ‘Sufferance’ and Part Cargo from each vessel, the Ports Authority provides search facilities on request.

Any claim submitted by an importer in respect of any item of cargo found to be short or damaged would be dealt with by the Commercial Division of the Ports Authority according to the provisions of the Sri Lanka Ports Authority Act. Sections 45 to 53 of the Sri Lanka Ports Authority Act relate specifically to the subject of the Port Authority’s liability with regard to loss and damage.

4.5.7 Bonded warehousing facilities
The Ports Authority provides a streamlined bonded warehousing service to assist importers who wish to keep their cargoes in bond for specific periods pending the payment of Custom Duty, or pending re-exportation. Storage of cargo in bond would also be advantageous financially for the importer since the storage charges in bond are minimal when compared with the storage charges in transit warehouses.

4.5.8 Common problems affecting the clearance of cargo
Delays in the receipt of documents from overseas sources, non-unitisation of packages, insufficient packing, insufficient marking of packages, abandoning of doubtful or damaged consignments and deterioration of un-cleared goods are the common problems which can be identified in the Sri Lankan imports market.
Chapter 5
Analysis of CSCL Business

5.1 Forecasting procedure
Prediction of future events and conditions are called forecasts, and the act of making such predictions is called forecasting. Forecasting is very important in type of organisations since predictions of future events must be incorporated into the decision making process. In particular, business firms require forecasts of many events and conditions in all phases of their operations. Normally company like CSCL must be able to forecast such things as cargo volumes, market share, revenue, expenditure and profit in order to formulate its policies.

In forecasting events that will occur in the future, a forecaster must rely on information concerning events that have occurred that have occurred in the past. That is, in order to prepare a forecast, the forecaster must analyse past data and must base the forecast on the results on this analysis. Forecasters use past data in the following ways. First, the forecaster analyse this data in order to identify a pattern that can be used to describe it. Then this pattern is extrapolated, or extended, into the future in order to prepare a forecast. This basic strategy is employed in most forecasting techniques and rests on the assumption that the pattern that has been identified will continue in the future. A forecasting technique cannot be expected to give good predictions unless this assumption is valid. If the data pattern that has been identified does not persist in the future, the forecasting technique being used will likely produce inaccurate predictions. A forecaster should not be surprised by
such a situation, but rather must try to anticipate when such a change in pattern will take place so that appropriate changes in the forecasting system can be made before the predictions become too inaccurate.

In this research work I will use time series data analysis to prepare forecasts. A time series is a chronological sequence of observations on a particular variable. Time series analysis consists of a set of techniques for decomposing time series data into its constituent parts, which can help in interpreting the data and predicting its future course.

For minor investments, a review of the business forecast is advisable to check on the revenue expected; a simplified procedure is reasonable. The objective of time series analysis is not merely to work out a general trend line, it is also to consider how different factors, which influence the trend, are related to each other and explain the past behaviour of the data in order to predict its future pattern.

5.2 Factors affecting the changes
Time series data are often examined in hopes of discovering a historical pattern that can be exploited in the preparation of a forecast. In order to identify this pattern, it is often convenient to think of a time series as consisting of several components. The components of a time series are:
1. General Trend (T) - this refers to the upward and downward movement that characterises a time series over a period of time.
2. The Seasonal factor (S) - these are regular functions which take place within one complete period: if the data are daily, then the fluctuations associations with each day. Holidays are an example.
3. The Cyclical factor (C) - this longer-term regular fluctuation, which may take several years to complete. An economic cycle is an example of the cyclical factor.
4. The Random factor (R) – this is what is left over after the above factors have been taken into account. By definition it can not be predicted. Weather is an example.

Denoting cargo volume in year t by $X_t$ we may write.

$$X_t = T + S + C + R$$

Cargo volume is thus composed additive of the trend together with the seasonal, cyclical and random components. An alternative model is one where $X_t$ is made up multiplicatively of the four components, i.e.

$$X_t = T \times S \times C \times R$$

**5.3 Market forecast for CSCL C & F business**

Any forecast of future trade is uncertain. A forecast will depend on the past data and several assumptions. CSCL business is vulnerable in view of its long planning time scale and limited ability to influence demand. Forecasting of CSCL business should be linked with the overall national development because it is still a fully government owned company.

The following table shows us the cargo volume handled by the clearing & forwarding business of CSCL during its first five years. The unit of the figures is in tons and the last seven months of year 2000 are estimated values. The majority of CSCL’s volume comes from the clearing business because it is the main targeted area of CSCL. Comparing both clearing and forwarding business in CSCL, we can figure out that 98% of its business is coming through the clearing activities. However the following analysis is based on the total cargo volumes of CSCL’s clearing and forwarding business.
Total weight of the cargo

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>315</td>
<td>272</td>
<td>275</td>
<td>252</td>
<td>230</td>
<td>215</td>
<td>225</td>
<td>250</td>
<td>270</td>
<td>300</td>
<td>320</td>
<td>350</td>
</tr>
<tr>
<td>1999</td>
<td>380</td>
<td>350</td>
<td>340</td>
<td>310</td>
<td>290</td>
<td>275</td>
<td>285</td>
<td>300</td>
<td>325</td>
<td>365</td>
<td>390</td>
<td>415</td>
</tr>
<tr>
<td>2000</td>
<td>420</td>
<td>375</td>
<td>370</td>
<td>330</td>
<td>315</td>
<td>300</td>
<td>305</td>
<td>325</td>
<td>355</td>
<td>400</td>
<td>420</td>
<td>450</td>
</tr>
</tbody>
</table>

Table 5.1 (Source: Author Compilation from CSCL statistics)

Having obtained the trend, the original trade may be divided by the trend values to have only the seasonal and random components. Least Square Methods can be used for calculating the Seasonal Indexes (SI). The following table illustrates the SI for CSCL cargo volumes.

Seasonal Index for CSCL volumes

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>121.4</td>
<td>104.1</td>
<td>104.4</td>
<td>95.0</td>
<td>86.1</td>
<td>79.9</td>
<td>83.1</td>
<td>91.6</td>
<td>98.3</td>
<td>108.5</td>
<td>114.9</td>
<td>124.8</td>
</tr>
<tr>
<td>1997</td>
<td>124.0</td>
<td>108.7</td>
<td>104.2</td>
<td>90.3</td>
<td>84.5</td>
<td>80.5</td>
<td>83.4</td>
<td>86.3</td>
<td>95.8</td>
<td>107.2</td>
<td>116.2</td>
<td>120.4</td>
</tr>
<tr>
<td>1998</td>
<td>117.0</td>
<td>105.9</td>
<td>105.2</td>
<td>91.7</td>
<td>81.5</td>
<td>79.5</td>
<td>82.1</td>
<td>89.5</td>
<td>96.2</td>
<td>108.6</td>
<td>112.6</td>
<td>119.6</td>
</tr>
<tr>
<td>1999</td>
<td>115.9</td>
<td>106.1</td>
<td>102.6</td>
<td>92.9</td>
<td>86.4</td>
<td>81.5</td>
<td>84.0</td>
<td>87.9</td>
<td>94.7</td>
<td>105.8</td>
<td>112.4</td>
<td>119.0</td>
</tr>
<tr>
<td>2000</td>
<td>119.8</td>
<td>106.4</td>
<td>104.4</td>
<td>92.6</td>
<td>87.9</td>
<td>83.3</td>
<td>84.2</td>
<td>89.3</td>
<td>7.0</td>
<td>108.8</td>
<td>113.6</td>
<td>121.1</td>
</tr>
<tr>
<td>SI(Median)</td>
<td>119.8</td>
<td>106.1</td>
<td>104.4</td>
<td>92.6</td>
<td>86.1</td>
<td>80.5</td>
<td>83.4</td>
<td>89.3</td>
<td>96.2</td>
<td>108.5</td>
<td>113.6</td>
<td>120.4</td>
</tr>
</tbody>
</table>

Table 5.2

The trend should be isolated from the original data by the method of Central Moving Averages (see Appendix. 3). The cyclical component will be removed from the data by the moving average method, only with the trend; otherwise it will be assumed to be absent or unimportant. The following table illustrates the trend figures of CSCL cargo volumes.

Trends for the CSCL volumes

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Trend (2000)</td>
<td>350.0</td>
<td>351.9</td>
<td>354.2</td>
<td>356.9</td>
<td>359.6</td>
<td>362.3</td>
<td>364.4</td>
<td>366.5</td>
<td>368.5</td>
<td>370.6</td>
<td>372.7</td>
<td>374.8</td>
</tr>
<tr>
<td>Trend (2001)</td>
<td>376.9</td>
<td>378.9</td>
<td>381.0</td>
<td>383.1</td>
<td>385.1</td>
<td>387.2</td>
<td>389.3</td>
<td>391.4</td>
<td>393.5</td>
<td>395.5</td>
<td>397.6</td>
<td>399.7</td>
</tr>
</tbody>
</table>

Table 5.3

It is estimate that the multiplication of the cyclic and random factors is roughly equal to one (C.I = 100% =1). It means those forecasting figures will rely on the other two
factors the trend and seasonal factors. Even above calculation has based on the several assumptions, it is clear that the estimate figures have not differ than 3% of the actual figures. CSCL forecasting figures will be shown in table 5.4.

Forecasting figures for the year 2001

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Trends(00)</td>
<td>350</td>
<td>351.9</td>
<td>354.2</td>
<td>356.9</td>
<td>359.6</td>
<td>362.3</td>
<td>364.4</td>
<td>366.5</td>
<td>368.5</td>
<td>370.6</td>
<td>372.7</td>
<td>374.8</td>
</tr>
<tr>
<td>Trends(01)</td>
<td>376.9</td>
<td>378.9</td>
<td>381</td>
<td>383.1</td>
<td>385.1</td>
<td>387.2</td>
<td>389.3</td>
<td>391.4</td>
<td>393.5</td>
<td>395.5</td>
<td>397.6</td>
<td>399.7</td>
</tr>
<tr>
<td>SI</td>
<td>119.8</td>
<td>106.8</td>
<td>104.2</td>
<td>92.5</td>
<td>85.8</td>
<td>81.5</td>
<td>83.2</td>
<td>89.3</td>
<td>96.4</td>
<td>107.2</td>
<td>113.5</td>
<td>120.8</td>
</tr>
<tr>
<td>Forecast(01)</td>
<td>449</td>
<td>405</td>
<td>397</td>
<td>354</td>
<td>331</td>
<td>316</td>
<td>324</td>
<td>350</td>
<td>379</td>
<td>424</td>
<td>451</td>
<td>483</td>
</tr>
</tbody>
</table>

Table 5.4

The CSCL forecasted figures show that the clearing and forwarding section has a quite interesting development in freight forwarding business in spite of it being a little bit far from the CSCL’s core business. Furthermore, the above table shows that the cargo volume of CSCL clearing and forwarding business has been gradually increasing. The following graph will describe this situation more clearly.

Graph 5.1

Let’s take the years 1996 to 2000. There has been steady growth in CSCL cargo volumes over the past four and half years. As you can see, the yearly average change in CSCL cargo volumes declined from around 7.5% in 1997, to just under 6.7% in 1998, to increase again to 7.2% in 1999 and to continue its growth to something like
8.5% in 2000. Our forecasting shows that it will probably increase considerably next year.

Even if the growth rate will be just drop (compared with the year 2000) at the forecasting year such as 6.8%, it is quite clear that the cargo volume has been growing by 7.5% during the period under consideration. It means clearing and forwarding section’s cargo volume has been growing continuously. If CSCL want to continue this improvement proper investment may be the key factor for such kind of thing. And also some investments of its clearing and forwarding section may be useful for the company to maintain its healthy growth rate. Therefore it will be very useful to analyse their investment using project appraisal techniques to find most suitable project for the CSCL clearing and forwarding section.

5.4 Project Appraisal Techniques

Having considered the CSCL clearing and forwarding business the investment in a transport or warehouse is quite substantial for the future development. In case of investment we must be aware of the factors that are relevant to the profitability of the projects in the freight forwarding business. And also we must be able to properly identify potentially profitable projects for the CSCL.

When considering how a project is financed it is important that to move on to the methods of evaluating a project. In all methods the common feature is the estimation of future cash flows and the foundation of all the techniques is the same. Shipping is a global and highly volatile business venture in the ever-changing world. It is very sensitive to the world trade. Therefore the estimate of the future cash flows with reasonable certainly should be done with utmost care and due professional diligence is the key to success. Though we consider only the financial considerations in evaluation of a project the decision on making investment is not purely on financially considerations.
There are basically three methods of evaluating a shipping project. They are Pay Back Period method, Return on Capital Investment method and Discounted Cash Flow method. Let us now examine each of these methods.

5.5 Pay Back Period Method

This forms more a measure of liquidity than profitability. As the name suggests it is simply the number of years required to recover the initial capital investment on the project. Let us consider two investment projects, which are buying two vehicles and purchasing a warehouse for the CSCL’s clearing and forwarding section to illustrate this method.

Suppose two vehicles are purchased for USD 56,000. They will generate an inflow of USD 7,000 per annum for ten years after which the second hand value of the vehicles will be USD 12,000. The cost for a warehouse is similar to the two vehicles, but this project will generate different inflows per annum. It is assumed that they are sold at the end of year 10. After the same period, the value of the warehouse will be USD 14,000. We can set out a table (5.5) showing the cumulative cash flow. When the cumulative cash flow equals to zero the pay pack period is reached.

<table>
<thead>
<tr>
<th>Year</th>
<th>Net cash flow (Project 1)</th>
<th>Cumulative cash flow (Project 1)</th>
<th>Net cash flow (Project 2)</th>
<th>Cumulative cash flow (Project 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-56,000</td>
<td>-56,000</td>
<td>-56,000</td>
<td>-56,000</td>
</tr>
<tr>
<td>1</td>
<td>7,000</td>
<td>-49,000</td>
<td>4,000</td>
<td>-52,000</td>
</tr>
<tr>
<td>2</td>
<td>7,000</td>
<td>-42,000</td>
<td>5,000</td>
<td>-47,000</td>
</tr>
<tr>
<td>3</td>
<td>7,000</td>
<td>-35,000</td>
<td>6,000</td>
<td>-41,000</td>
</tr>
<tr>
<td>4</td>
<td>7,000</td>
<td>-28,000</td>
<td>7,000</td>
<td>-34,000</td>
</tr>
<tr>
<td>5</td>
<td>7,000</td>
<td>-21,000</td>
<td>7,500</td>
<td>-26,500</td>
</tr>
<tr>
<td>6</td>
<td>7,000</td>
<td>-14,000</td>
<td>8,500</td>
<td>-18,000</td>
</tr>
<tr>
<td>7</td>
<td>7,000</td>
<td>-7,000</td>
<td>9,000</td>
<td>9,000</td>
</tr>
<tr>
<td>8</td>
<td>7,000</td>
<td>0</td>
<td>9,000</td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td>7,000</td>
<td>7,000</td>
<td>8,000</td>
<td>8,000</td>
</tr>
<tr>
<td>10</td>
<td>7,000</td>
<td>26,000</td>
<td>8,000</td>
<td>30,000</td>
</tr>
</tbody>
</table>

Table 5.5
Thus the pay back period of both projects is eight years. The drawback here is that
knows due consideration is given to the cash flow after the pay back period nor
profitability and time value of money.

5.6 Rate of Return Method
The ratio of average income to the total cost is considered as Rate of Return. This
measures profitability of the project. This method of evaluation suffers certain
drawbacks just as Pay Back Period method, such as lack of consideration of time
value of money. Obviously no consideration is given on pay back of capital
invested. The rates of return on the above two projects are 11.8 and 14.3
respectively. The following calculation shows how we can reach the above figures.

CSCL Project 1
Average Investment for Project 1 = (56,000-12,000)/2 = 44,000/2 = $ 22,000
Average Profit per annum for the project 1 = (7,000*10 – 44,000)/10 = $2,600
Rate of Return = Avg. profit per annum / Avg. Investment
= (2,600/22,000)*100 = 11.8%

CSCL Project 2
Average Investment for Project 2 = (56,000-14000)/2 = 42,000/2 = $ 21,000
Average Profit per annum for the project 2 = (72,000-42,000)/10 = $ 3,000
Rate of Return = (3,000/21,000)*100 = 14.3%

According to the calculation above the Rate of return of project 2 is higher than for
project 1. It reveals that the financial point of view the CSCL’s project 2 is more
suitable for the investment because it has a stronger ROR value than project 1.

5.7 Discounted Cash Flow Method
Among the many tools that are available to the financial analyst for the evaluation of
a shipping project are those that usually come under the title of Discounted Cash
Flow (DCF) techniques and more particularly the criteria of NPV and IRR. It is
necessary to consider a cost of money factor and to reduce the cash flow for a future year to make it relevant to present values. This procedure is called “discounting” and the cost of money factor used can be referred to as the discount rate.

The important thing here is the timing of cash flows. The meaning behind the time value is that money received today by an investor is worth more than the same amount received at some time in the future. Hence the future cash flows are discounted into present values, the grand total of which is known as Net Present Value. In the event the net present value of the future cash flows of a particular project is positive, that project is said to be viable. In this sense we can select the most feasible project which gives the maximum positive net present value.

To analyse the above concept it is useful to consider the two projects of CSCL’s freight forwarding business. The projects are the same as the above mentioned. For simplicity, the number of years has been reduced and discount rate is considered as 12% for both projects.

<table>
<thead>
<tr>
<th>Year</th>
<th>Net cash flow (Project 1)</th>
<th>Discount value (Project 1)</th>
<th>Net cash flow (Project 2)</th>
<th>Discounted value (Pro.2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-56,000</td>
<td></td>
<td>-56,000</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>7,000</td>
<td>6250.88</td>
<td>10,000</td>
<td>8928.57</td>
</tr>
<tr>
<td>2</td>
<td>20,000</td>
<td>15943.88</td>
<td>15,000</td>
<td>11957.91</td>
</tr>
<tr>
<td>3</td>
<td>38,000</td>
<td>27047.65</td>
<td>24,000</td>
<td>17082.73</td>
</tr>
<tr>
<td>4</td>
<td>25,000</td>
<td>15887.95</td>
<td>35,000</td>
<td>22243.13</td>
</tr>
<tr>
<td>5</td>
<td>30,000</td>
<td>17022.81</td>
<td>45,000</td>
<td>25534.21</td>
</tr>
<tr>
<td>PV</td>
<td></td>
<td>82152.28</td>
<td></td>
<td>85746.55</td>
</tr>
<tr>
<td>NPV</td>
<td></td>
<td>26152.28</td>
<td></td>
<td>29746.55</td>
</tr>
<tr>
<td>IRR</td>
<td></td>
<td>26%</td>
<td></td>
<td>27%</td>
</tr>
</tbody>
</table>

Table 5.6
The CSCL project’s cost of capital, a positive NPV means that the NPV of expected net income exceeds the initial capital outlay and the project in question is worth undertaking since its implementation automatically increases the CSCL’s wealth. According to the above calculation, purchasing a warehouse for CSCL has higher Net Present Value than buying two vehicles. It means, purchasing a warehouse is shown to be the best project though both projects have positive NPV, provided the discount rate used is acceptable to the CSCL.

If projects with differing initial investment are compared, the NPV’s will clearly depend on the size of the investment. Therefore ranking of the projects could be done by the profitability index. Dividing the NPV of the cash inflows by the NPV of the cash outflows the profitability index will be calculated.

<table>
<thead>
<tr>
<th>Project</th>
<th>Profitability (Index)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchasing Vehicles</td>
<td>2.03</td>
</tr>
<tr>
<td>Purchasing Warehouse</td>
<td>1.93</td>
</tr>
</tbody>
</table>

Table 5.7

### 5.8 Alternative DCF Method
The alternative way of DCF’s is Internal Rate of Return (IRR) method. A project IRR is the rate of return on capital tied up in the project, while it is tied-up and after allowing for the recoupment of the initial outlay. This is used to find the actual rate of interest on the money invested rather than determining whether this rate is below or above the standard rate. The actual rate of return earned on the money actually invested in the project is called Internal Rate of Return. This approach is referred to as Internal Rate of Return method. This method is fairly easy to understand because it provides the margin available in the project over the minimum return required. This margin reflects the risk attached to the particular project. For instance, the IRR of CSCL’s project 1 is 26% and the return on risk free investment is found to be 23%. The margin to cover the risk in the project is readily seen.
The basic advantage of IRR over the NPV criterion is that it provides the evaluator with a very tangible and understandable percentage figure, which is directly comparable with the investor’s cost of capital. In the CSCL’s two projects IRR values are higher than the investor’s cost of capital. Therefore, the two projects of CSCL should be undertaken.

IRR may give a distorted picture where there are cash outflows at a later stage in the project. This situation in shipping is fairly unusual because usually the investment is made right at the beginning.

5.9 Risk Factor in Project Financing

The appraisal methods referred to above are based traditionally on a single estimate where the investor assigns a unique value as his best estimate, to the possible yearly outcomes. This approach gives only a single IRR or NPV value and does not provide an estimate of, how safe and confident the investor feels with the result. This is a rather important consideration in terms of shipping, which is risky business. Therefore, the risk factor must be taken into account. As such, rather than considering just one outcome, a range of possible outcomes for every year has to be estimated. In order to reflect the risk associated with each possible outcome a certain subjective probability should be assigned according to the investors’ prior experience end expertise. Let us explore this idea further with the use of the following case study. (Sensitivity Analysis of risk in Ship Finance - Haralambides, H.E.)

In order to understand the above theory it is important to consider CSCL’s priority project like buying two vehicles for the company. For simplicity, let us assume that the CSCL considers the acquisition of two vehicles for $ 100 and is planning to use them for four years and the values after four years is zero. The cost of capital is assumed to be 10%. Instead of one outcome we can consider seven possible outcomes. For each one of them a probability of occurrence is assigned as per our
experience and expertise. These outcomes and the corresponding probabilities appear in the following table.

<table>
<thead>
<tr>
<th>Possible outcome (Year 1)</th>
<th>Possible outcome (Year 2)</th>
<th>Possible outcome (Year 3)</th>
<th>Probability %</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>5</td>
<td>0</td>
<td>5%</td>
</tr>
<tr>
<td>20</td>
<td>25</td>
<td>35</td>
<td>10%</td>
</tr>
<tr>
<td>30</td>
<td>40</td>
<td>45</td>
<td>20%</td>
</tr>
<tr>
<td>40</td>
<td>55</td>
<td>60</td>
<td>30%</td>
</tr>
<tr>
<td>50</td>
<td>65</td>
<td>75</td>
<td>20%</td>
</tr>
<tr>
<td>60</td>
<td>70</td>
<td>85</td>
<td>10%</td>
</tr>
<tr>
<td>70</td>
<td>80</td>
<td>90</td>
<td>5%</td>
</tr>
</tbody>
</table>

Table 5.8

According to the above table we can calculate our Expected Mean Value, Project Risk and Coefficient of Variation as follows:

**Expected Mean Present Value**

\[
PV = \frac{n}{\sum_{i=1}^{n}(X_i)(1+i)}
\]

\[\overline{X} = 154.15\]

**Project Risk**

\[\sigma = 29.21\]

**Co-efficient of Variation**

\[\frac{\sigma}{\overline{CV}} = 0.19\]

5.10 Probability Distribution of IRR

As the table indicates the CSCL can consider a range of possible outcomes. The range of outcomes for the first year starts with a very pessimistic $10, with low probability of 5% and ends with a very optimistic estimate of $70 also with a low probability of occurrence of 5%. The CSCL is most likely outcome is in the middle, i.e. $40 in this case. The probability of occurrence here is 30%. In the traditional approach this $40 is used as the single outcome for the year. The outcome ranges for the year 2 and 3 indicate the uncertainty of the CSCL and the associated
subjective probability distribution become flatter from one year to the other. As per the table, the CSCL traditionally focuses on only one value for each year and this would be $30 for the first year, $65 for the second year and $85 for the third year. We could calculate our IRR as 30%. In the real world CSCL can not rely on this approach where the uncertainty is the major issue which induces the CSCL to think about several outcomes for each year. Hence, seven outcomes for each year are considered in this vehicle project. Now we can imagine how many possibilities can occur. For example, one possibility could be 20, 40, and 90. Like wise there can be 743(7^3) possible outcomes and to each of them corresponding IRRs. The sample mean and the standard deviation can be calculated. The standard deviation provides a measure of risk. A smaller standard deviation means that the bulk of possible IRRs are scattered relatively closely around the expected IRR (Mean IRR). Thus the smaller the standard deviation the more confident the CSCL is about the things that can go wrong. The risk element can be illustrated in Cumulative Probability Distribution of IRR.

Graph 5.2

This distribution provides useful, additional information to the CSCL for their investment. Point B in the graph gives the probability of realising a return of at least 25% as being 60% while point A gives 20% probability that the CSCL will realise a return less than their cost of capital (i.e. 10%). The latter probability can be used as
an alternative measure of the project’s risk in the sense the probability of selecting a project that proves to be unprofitable.

5.11 H - Line

The H - Line shown in graph 5.3 indicates the relationship between the risk and the CSCL cost of capital. The initial investment (c) is 100 and cost of capital (i) is equal to 12% in the CSCL’s project. The first step of construction of H - Line is to recognise the values of IRRs with value less than 10%. This sum should be expressed as a percentage of the sample size. In this project, 40 IRRs out of a total of 200 were found to be less than 10%. So, the risk of the project, meaning the probability of earning a return less than the cost of capital was 40/200 or 20% (point A of the graph 5.2) this process of calculation should be repeated a great number of times each for a different cost of capital. The graph 5.3 indicates the plotted risk values calculated accordingly. Finally the regressed risk values on the corresponding cost of capital gives the regression line of figure 5.3 which is the H - Line for IRRs.

Graph 5.3

The H-Line for IRRs shown above can be interpreted in such a way that if the CSCL has a cost of capital of 25% for their project, they run a risk of 60% of not getting their own money back.
Chapter 6
Conclusion and Recommendations

6.1 Conclusion
The primary message of this study is to reveal the importance of the Freight Forwarding Section (FFS) for the CSCL as well as the FF industry. From the foregoing analysis of CSCL’s Clearing and Forwarding Section (C&FS), it has been found that the FF business is one of sections, which makes profits and develops. Also it is important in the distribution of resources and that it is part of the success in CSCL’s business development. Even though CSCL’s core business is liner trade, the FF section’s contribution has opened a new era for the company. It is important therefore, that the logistics of employees who are involved in CSCL C&F business be collectively put together to have an optimal cost. It then becomes obvious that the success or failure of the CSCL FFS greatly affects the level of profit and success of the CSCL business.

Due to globalisation and deregulation of the shipping industry, the core business of CSCL has been declining dramatically. Like most of the shipping companies, CSCL also faced a difficult situation due to the above reasons. In the mid 90’s CSCL management believed that introducing a clearing forwarding business might be the solution to overcome these difficulties. Considering CSCL’s C&F business as a whole, it has been growing steadily. Maintaining the growth rate is an essential factor and this is the main challenge for the company. This can be solved by investment. CSCL should be aware of the right investment at the correct time.
In terms of profit and employment, the FF business is a very important area, which must not be neglected in the CSCL. In considering the development, one must be aware that more and more investments will be the driving force for maintaining a healthy growth rate. “The global logistic implies the optimal combination of resources on a world wide basis. Clearly, this means resources will be moved increasingly between distant places in order to result in the minimal total cost.” (Shou Ma, 1999, Logistics)

Some CSCL FF employees are not so committed to their duties. The result has been poor service, characterised by delays and small cargo damage. This has reduced cargo quality at delivery. “The problems associated with delays are many, ranging from damaged image of the forwarder to subsequent loss of employment.” (Nielson, E) No one wants to use a delaying forwarder as this brings a lot of inconvenience to both the consignee and consignor.

As a result of proper investment into appropriate projects, no doubt the CSCL can recover its past glories.

6.2 Recommendations
Co-operation should be developed between the CSCL and other forwarders (e.g.: setting up joint ventures or pooling capital, establishing regional associations of freight forwarders), or between CSCL and other operators like trucking companies.

The CSCL FFS should seek ways and means to introduce existing computerised communication systems such as ACIS or UN/EDIFACT into CSCL’s operations (invoicing, accounting, documentation and communication), so as to increase productivity and competitiveness, and to reduce operational errors and staffing charges.
Communication is part and parcel of the shipping industry. Also, shipping is one of the most globalised industries in the world. The external environment, which is most complicated and critical, has to be tackled with utmost care while improving internal communication. It means the communication is very essential for a company and it must be treated as a strategic element. As such a dependable communication system is essential. My suggestion is to implement a better computer system, therefore providing several computers for the C&FS so as to be able to access on line information.

The CSCL FFS should develop vocational training programmes on a continuous basis, taking into account the whole range of operations associated with the modern transportation system: multimodalism, commercial and transportation documentation, international regulatory frameworks and custom procedures and computerised information technology. Particular emphasis should be put on field studies abroad so as to gain further experience and expertise from other similar but more well known companies.

At the international level, the CSCL FFS, with the support of national authorities, may make better use of the valuable technical and financial assistance provided by specialised intergovernmental bodies namely the IMO, UNCTAD, and ILO.

At the government level the CSCL FFS should try to find, in consultation with other local bodies involved in the forwarding sector, namely the shippers’ council, the chamber of commerce, and SLFFA, the licensing authority, sound criteria for assessing the business in CSCL. Through better control of the CSCL FF business higher professional standards can be achieved.

Deregulation of the shipping industry in Sri Lanka created fierce competition. Market orientation is going to be the key factor. The marketing effort of the
competitors is amazing. Therefore, a communication system should be established
where the customer must always be made aware of the changes taking place.
References


Appendix 2

Member of the Sri Lanka Freight Forwarders Association (1999)

1. ABC Freight Services (Pvt) Ltd.
2. ACE Cargo (Pte) Ltd.
3. ACE Distriparks (Pvt) Ltd.
4. Airlink Global (CMB) Ltd.
5. Air Trans (Pvt) Ltd.
6. ACE Freight Management (Pvt) Ltd.
8. Aramex Airborne Freight Corporation Lanka (Pvt) Ltd.
9. Cargo Boat Co. Ltd.
10. Cargocare Lanka (Pvt) Ltd.
11. Capitol Air Express Int’l (Pvt) Ltd.
12. Ceylinco Freight International (Pvt) Ltd.
13. Concord Express (Lanka) Ltd.
14. Dart Express Lanka (Pvt) Ltd.
15. Dartrans (Pvt) Ltd.
16. Delair Ltd.
17. Euro – Asia Air Freight Ltd.
18. Eurotrans Express (Pvt) Ltd.
19. Expolanka Freight Ltd.
20. Expeditors Lanka (Pvt) Ltd.
21. Forwardair (Pvt) Ltd.
22. Freight Links Int’l (Pvt) Ltd.
23. Freight Masters (Pvt) Ltd.
24. Freightplan (Pvt) Ltd.
25. Fritz Companies Inc.
26. Fritz Transportation International (Pvt) Ltd.
27. Freight Int’l (Pvt) Ltd.
28. Harrisons (Colombo) Ltd.
29. Hency Transportaion (Pvt) Ltd.
30. Hemas International (Pvt) Ltd.
31. Kuehne & Nagel Lanka (Pvt) Ltd.
32. Lanka Cargo Ltd.
33. Mack International Freight (Pvt) Ltd.
34. Mag Consultants 6 Agents (Pvt) Ltd.
35. Marine Transpot Services (Pvt) Ltd.
36. Marine & Air Consolidation (Pvt) Ltd.
37. MTT Cargo (Pvt) Ltd.
38. Mercantile Cargo Consolidators Lanka (Pvt) Ltd.
40. Nafets International Freight Forwarding (Pvt) Ltd.
41. Pership Clearing & Forwarding (Pvt) Ltd.
42. Rical Express Lanka (Pvt) Ltd.
43. Roton-Vander (Freighting) Ltd.
44. Scanwell Freight Express Colombo (Pvt) Ltd.
45. Star Trans International Colombo (Pvt) Ltd.
46. Speedmark Transportation Lanka (Pvt) Ltd.
47. Transcargo (Private) Limited.
48. Transglobal Freighters Colombo (Pvt) Ltd.
49. Union Air Transport (Pvt) Ltd.
50. Union Cargo (Pvt) Ltd.
51. Universal Freighters International (Pvt) Ltd.
52. Whittall Boustead Ltd.
53. World express (CMB) Ltd.
54. World Gate Freighters (Pvt) Ltd.

- Ceylon Shipping Corporation Ltd. (not a member in above association)
### Appendix 3

**SRI LANKA CUSTOMS ACCESS, ASSESSMENT NOTICE**

<table>
<thead>
<tr>
<th>Identification of the declaration</th>
<th>Model</th>
<th>Customs reference</th>
<th>No &amp; date of assessment</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IM4</td>
<td>2000 I 37432</td>
<td>07/04/2000</td>
<td>24</td>
</tr>
<tr>
<td>Declarent:</td>
<td>29401212</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference:</td>
<td>2000/#29</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company:</td>
<td>4090346405000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C EYLON SHIPPING CORPORATION LTD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 SIR BARON JAYATILKA HW</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COLOMBO-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GENERAL MANAGER SRI LANKA RAILWAY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUP OF RAILWAY STORES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PO BOX 1347 COLOMBO 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mode of payment ACCOUNT PAYMENT</th>
<th>No and date receipt</th>
<th>Account number: VT/4090346405000</th>
<th>Statement number and date</th>
</tr>
</thead>
<tbody>
<tr>
<td>CID Customs Import Duty</td>
<td></td>
<td>435538</td>
<td></td>
</tr>
<tr>
<td>STD Stamp Duty</td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>DFL Defence levy</td>
<td></td>
<td>238366</td>
<td></td>
</tr>
<tr>
<td>GST Goods Services Tax</td>
<td></td>
<td>872331</td>
<td></td>
</tr>
</tbody>
</table>

| EXN Customs Inspection Fee    |                     |                                  |                           |
| COM Computer fee              |                     |                                  |                           |

**Total items taxes**

| 1546235 |

**Total global taxes**

| 200 |

**Total assessed amount for the declaration**

| 1546735 |

**Amount currently to be paid**

| 1546735 |

Valuations

Moore
## Appendix 4

### DELIVERY

**CUSDEC - 1**

**SRI LANKA CUSTOMS - GOODS DECLARATION**

**CUSMUS - 93**

**CUSTOMS - 53**

**VOTE**

### 1. DECLARATION

- **Declaration Number:** 37432
- **Date:** 04/06/2008
- **Time:** 00:00

### 2. Exports

- **Shipper:** HEINRICH HOFMANN
  - **Address:** BERNHARD SCHENK, PFAFFERTZ
  - **City:** 018122 BREMEN, GERMANY

### 3. Recipient

- **Shipper:** SRI LANKA RAILWAYS
  - **Address:** SUPERINTENDENT OF RAILWAY STORES, P.O. BOX 1347, COLOMBO 10.

### 4. Carrier

- **Carrier:** CEPOLN SHIPPING CORPORATION LTD
  - **Address:** P.O. BOX 1718
  - **City:** COLOMBO 35.
  - **Country:** SRI LANKA

### 5. Voyage No./Date

- **Voyage No.:** 0300
- **Date:** 04/06/2008

### 6. Mode of Transport

- **Mode of Transport:** Q.S.E.
- **Place of Loading:** COLOMBO
- **Place of Discharge:** HAMBURG

### 7. Office of Entry

- **Office of Entry:** COLOMBO

### 8. Marks & Numbers

- **Marks & Numbers:** No. 02/06-3C
- **Description:** 02/06-3C, SRI LANKA ORDER NO.: SRI/F/100

### 9. License No.

- **License No.:** 048-761-8098-91-001

### 10. A.C.I. Number

- **A.C.I. Number:** 048-2640-10

### 11. Accounting Details

- **Accounting Details:**
  - **Month of Payment:** 06/2008
  - **Assessment Number:** 10821
  - **Guarantee:** 10821

### 12. Signature & Date

- **Signature:** CEPOLN SHIPPING CORPORATION LTD
  - **Date:** 04/06/2008

---

**Note:** The document includes details of the goods declared, shipment details, and various declarations for customs purposes.
<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
<th>Total Amount</th>
<th>Type</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>3. Tires</td>
<td>400</td>
<td>124.8</td>
<td>27945.25</td>
<td>3.36</td>
<td>356.61</td>
<td>2.00</td>
<td>125.00</td>
</tr>
<tr>
<td>41</td>
<td>4. Tires</td>
<td>400</td>
<td>147.8</td>
<td>27945.25</td>
<td>3.51</td>
<td>510.39</td>
<td>2.00</td>
<td>125.00</td>
</tr>
<tr>
<td>42</td>
<td>5. Tires</td>
<td>400</td>
<td>170.8</td>
<td>27945.25</td>
<td>3.66</td>
<td>600.00</td>
<td>2.00</td>
<td>125.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Remarks</th>
<th>Summary</th>
<th>23.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>154795.00</td>
</tr>
</tbody>
</table>

Signature & Date: 154795.00
Appendix 5
COMBINED TRANSPORT
BILL OF LADING

B/L No. 2003

CEYLON SHIPPING CORPORATION LTD.

Received in apparent good order and condition except as otherwise noted. The total number of containers or other packages or units enumerated below for transportation from the place of receipt to the place of delivery subject to the terms hereof.

The holder of this Bill of Lading expressly accepts and agrees to all its stipulations, exceptions and conditions whether written, typed, stamped or printed or otherwise incorporated on the face or back hereto as it signed by such person.

In witness thereof the number of original Bills of Lading stated below all of the same date and number have been signed, if not otherwise stated below one of which has been accomplished to the order(s) stated.

GROSS WEIGHT/KG 2 CASES 580.00 KGS
NET WEIGHT/KG SPARES FOR UNDER FLOOR WHEEL LATHE MACHINE
MEASUREMENT/CM SHIPMENT TERMS - C I F
ADDRESS: PEOPLE'S BANK
O/A SUPERINTENDENT OF RAILWAY STORES
P.O. BOX 1347,
COLOMBO 10,
SRI LANKA
ORDER NO. SRS/T 4708
WHEEL LATHE

LCL/LCL

stuffed into Container No.
SRIU124939-2

ORIGINAL

Freight and Charges
Revenue Tons
Rate
Prepaid
Collect

Prepaid at
Payable at
BREMEN
BREMEN

Place and date of issue
BREMEN 13.02.2000

Date
13.02.2000

Unimar
Linienagentur
Gesellschaft m.b.H.
An Agent for the Carrier
CEYLON SHIPPING CORPORATION

Unimar
Linienagentur
Gesellschaft m.b.H.
An Agent for the Carrier
CEYLON SHIPPING CORPORATION LTD.
Appendix 6

The General Manager  
Sri Lanka Railways  
P O Box 1347,  
Colombo 10 – Sri Lanka

-lin.

Commercial Invoice 2001470

Order No. SRS(F) 4708 Wheel Lathe  
Our ref. 300.172

Shipment by seafreight C I F Colombo

Import Licence No. SIL NO 1/77 BTN No. 84.58.

We certify that the spares have their origin in the European Community

Spares for Under Floor Wheel lathe Machine  
Shipment terms – C I F

Credit number: 99/GT/05750  
Date of Credit: 04.08.99  
Name of bank: People’s Bank, Colombo

<table>
<thead>
<tr>
<th>Description</th>
<th>DEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>total value ex works Erkelenz</td>
<td>180.035.90</td>
</tr>
<tr>
<td>+ FCA charges, and packing charges</td>
<td>780.20</td>
</tr>
<tr>
<td>FCA German seaport</td>
<td>180.816.10</td>
</tr>
<tr>
<td>+ freight charges</td>
<td>1.440.00</td>
</tr>
<tr>
<td>C &amp; F Colombo</td>
<td>182.256.10</td>
</tr>
<tr>
<td>+ insurance charges</td>
<td>125.00</td>
</tr>
<tr>
<td>by seafreight C I F Colombo, Sri Lanka</td>
<td>182.381.10</td>
</tr>
</tbody>
</table>

We certify that goods conform in all respects to supplier’s order no. SRS(F) 4708 Wheel Lathe

HEGENSHEIDT-MFD GmbH  
i.Vollm.  
Lintzen

27.01.2000

EXCHANGE GRANTED

Permit No. PB1 2.4.7 IMP. 2.1.2.7

PEOPLE'S BANK  
INTERNATIONAL DIVISION  
Corporation 1  

Authorized officer  

[Signature]

Commersbank AG Erkelenz  
Konto 4 501 003  
BIZ 330 400 15  

LEI-Id No. DE 122 389 252

Hegenscheidt MFD GmbH  
Bernhard Schwardt-Platz  
D-44882 Erkelenz  
Tel. (0 24 31) 86-0  
Fax (0 24 31) 86-470

Sitz der Gesellschaft ist Erkelenz  
Aamsgericht Erkelenz HRB 15  
Geschäftsführer:  
Dr. Ing. Georg Hruschel  
Dipl. Kfm. Maria Noltehart

81
Appendix 7

<table>
<thead>
<tr>
<th>No.</th>
<th>793506</th>
</tr>
</thead>
</table>

**CART NOTE**

SRI LANKA PORTS AUTHORITY

**Cargo Details**

- **Date:** 29.11.2001
- **Description:**
  - **Shipment:**
    - **Bill No.:** 1234
    - **Weight:** 567 kg
    - **Volume:** 12.3 m³
    - **Rate:** 23.45

**Details**

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Fruits</td>
</tr>
</tbody>
</table>

**Signatures**

- **S.L.P.A. Representative:**
- **Importor or his Representative:**
- **Addl. Supdt. of Customs:**
- **Assistant Manager - In-charge at the Enquiry:**

**CONSIGNEE'S COPY**

Lanka Mining

Sewel Ld.
# S. L. P. A. Delivery Order

**Office Use**

**Credit**

<table>
<thead>
<tr>
<th>Description of Charges</th>
<th>Activity Co-No</th>
<th>Item No</th>
<th>Rate US $</th>
<th>Amount</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wharf handling</td>
<td>85 x 1</td>
<td></td>
<td>62</td>
<td>39</td>
<td>62</td>
</tr>
<tr>
<td>Garden</td>
<td></td>
<td></td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td></td>
<td></td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stacking</td>
<td>110 x 1</td>
<td></td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D/C Surcharge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Descilling 20/40 Over 40'</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F.C.L. (on Q/T) Discharging</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stuffing 20/40 Over 40'</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F.C.L. (on Q/T) De Mounting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Charges / O/T Grillie</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fork Lift - Heavy Lift</td>
<td>33 x 1</td>
<td>3/5 - 4/28</td>
<td>1189 65</td>
<td>1189 65</td>
<td></td>
</tr>
<tr>
<td>Basic Rent</td>
<td>29/3/1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8th - 14th</td>
<td>15 days</td>
<td></td>
<td>609 83</td>
<td>609 83</td>
<td></td>
</tr>
<tr>
<td>15th - 21st</td>
<td>7 days</td>
<td></td>
<td>231 84</td>
<td>231 84</td>
<td></td>
</tr>
<tr>
<td>21st day onwards</td>
<td>8 days</td>
<td></td>
<td>399 35</td>
<td>399 35</td>
<td></td>
</tr>
<tr>
<td>Wharfage</td>
<td>22 x 1</td>
<td></td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Penalty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative charges</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Amount**

- G. S. T. 12.5%
- Reg. No. 409000061-5000

**Total Amount in Words**

*One Thousand Six Hundred and Sixty-Five Thousand Seven Hundred Fifty One Rupees Only*

**Rating Clerk / Date**

**Checking Clerk / Date**

**Ledger Clerk Initial**

---

*Signature / Date & Seal of Account / Ass Account*

---

**SRI LANKA PORTS AUTHORITY**

*Notice to Skipper / Consignee*

*Please hand over this document to the security personnel at the Gate upon the delivery of Export/Import Cargo/Containers*
Appendix 9

G.S.T. REG. NO. 124010009 5000

SRILANKAN AIRLINES LIMITED
CARGO SERVICES

DLN - DELIVERY NOTE
DNBR...: 596377
FAN NBR...: 447902
NBR NBR...: 000406

AWB NUMBER...: 618-922309038
FLT REF: 80402/19APR
 PIECES...: 1
HAWB NUMBER..: DESCRIP: SHIPS PARTS
 WEIGHT....: 8.0 KG
CONSIGNEE....: CEY. SHIPPING CO
CHGABLE WGT: 8.0

ISSUE DATE: 24APR00
ARRIVAL: 20APR00

GATE PASS NBR:

REMARKS AND/OR INSTRUCTIONS:

COLLECT CHARGES CALCULATION

CURRENCY....: LKR

AWB WEIGHT CHARGES.: DOC 250.00
DUE CARRIER CHARGES:
OTHER CHARGES....:
G.S.T.............: 31.25
NATL. SECURITY LEVY: 15.47
TOTAL CHARGES.....: 297.00

NOTE: TOTAL CHARGES HAVE BEEN ROUNDED UP.
TWO HUNDRED AND NINETY SEVEN RUPEES AND XX/100

PAYMENT AMOUNT 1...: 297.00 CUR: LKR METHOD: CASH REF:

RECEIVED IN GOOD ORDER

CONSIGNEE CASHIER COUNTER-4 STAFF
I/D NUMBER: 603170652V
NAME......: KARUNARATHNA/CEYLON

SIGNATURE SIGNATURE SIGNATURE

DATE: 2/4/18
PCS.: 01

84
CERTIFICATE OF QUANTITY AND QUALITY

MANUFACTURERS: G E TRANSPORTATION SYSTEMS
BUILDING 12-2, 2901 EAST LAKE ROAD
ERIE PA 16531

CREDIT NUMBER: 2000 GT 05051
ADVICE NUMBER: H-155004

GOODS: SPARES FOR LOCOMOTIVES
SHIPMENT TERMS C FR COLOMBO

IMPORT LICENCE NO. SIL NO. 1/77
BTN NO. 86.09
APPLICANT’S ORDER NO.SRS (C) RLI 3044/99

WE HEREBY CERTIFY THAT THE MATERIAL FURNISHED BY G E TRANSPORTATION SYSTEMS TO SRI LANKA RAILWAYS HAS BEEN TESTED AND INSPECTED PURSUANT TO THE STANDARD PRACTICES OF THE MANUFACTURER AND HAS BEEN FOUND SATISFACTORY AND CONFORMS WITH THE COMMERCIAL SPECIFICATIONS, AS TO QUALITY AND QUANTITY. IN ADDITION, THE MATERIAL DELIVERED AGAINST THIS ORDER IS NEW, UNUSED AND CONFORMS TO THE MANUFACTURING STANDARDS APPLICABLE TO THIS TYPE OF MATERIAL.

REGARDS,

Kimberly Paris

AUTHORIZED REPRESENTATIVE OF
G E TRANSPORTATION SYSTEMS

MAR 06 2000
DATE
CEYLON SHIPPING CORPORATION LTD
NO. 06, SRI BARON JAYATILLAKE MAWATHA,
COLOMBO 01

PHONE: 422606, 328772 / 3
FAX: 449483, 447647.

CART NOTE FOR DELIVERY CARGO

<table>
<thead>
<tr>
<th>Mark &amp; Nos.</th>
<th>Rly. No.</th>
<th>No. of Pkgs.</th>
<th>Description Of Cargo</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

P (u) CD / No. ........................................... Customs entry No .............. Rly. entry No ..............

Drivers Name: ........................................... D / L No.: ...............................

Name and Sig. of Rly. Security Officer: ..................................................

Name and Sig. of Rly. Officer Accompanying Vehicle: ...........................................

Destination to Which Cargo has to be Delivered: ............................................

Signature: ........................................... W S ........................................... LKS

Name & Sig. of delivery contractor's Representative: ..........................................

I certify that the above deliveries have been made and that the delivery contractor has full obligation in
term of the contract: ............................................

Sig of receiving officer: ........................................... Name of receiving officer: ...........................................

Designation of receiving officer: .............................................
# Appendix 12

**Ceylon Shipping Corporation Ltd.**

<table>
<thead>
<tr>
<th>Particulars</th>
<th>NO OF ITEMS</th>
<th>WT. &amp; CBM.</th>
<th>Delivered to</th>
<th>Amount Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charges for Entry, Framing and passing.</td>
<td>1</td>
<td>8275.0KGS</td>
<td>Dematagod</td>
<td>750.00</td>
</tr>
<tr>
<td>Transport</td>
<td></td>
<td></td>
<td></td>
<td>14800.00</td>
</tr>
<tr>
<td>Add, Over Time 35%</td>
<td></td>
<td></td>
<td></td>
<td>5180.00</td>
</tr>
<tr>
<td>Add, G &amp; S Tax 12.5%</td>
<td></td>
<td></td>
<td></td>
<td>2591.25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>23321.25</strong></td>
</tr>
</tbody>
</table>

Amount Rs: Twenty Three Thousand Three Hundred And Twenty One And Cents Twenty Five Only.

Date: 19/06/98

G.S.T. NO. 294001212 5000

**Please return a copy of this bill when making payment. A surcharge at 5% per month will accrue on the amount outstanding beyond 28 days. Any dispute on the bill should be addressed to the Accountant Ceylon Shipping Corporation Ltd. within 28 days of the date of the bill. Cheque should be drawn in favour of CEYLON SHIPPING CORPORATION LTD.**

CC: ACCT (R)
CC: FILE (CSCL)
Appendix 14

Cargo Volumes (Tons)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>315</td>
<td>272</td>
<td>275</td>
<td>252</td>
<td>230</td>
<td>215</td>
<td>225</td>
<td>250</td>
<td>270</td>
<td>300</td>
<td>320</td>
<td>350</td>
</tr>
<tr>
<td>1999</td>
<td>380</td>
<td>350</td>
<td>340</td>
<td>310</td>
<td>290</td>
<td>275</td>
<td>285</td>
<td>300</td>
<td>325</td>
<td>365</td>
<td>390</td>
<td>415</td>
</tr>
<tr>
<td>2000</td>
<td>420</td>
<td>375</td>
<td>370</td>
<td>330</td>
<td>315</td>
<td>300</td>
<td>305</td>
<td>325</td>
<td>355</td>
<td>400</td>
<td>420</td>
<td>450</td>
</tr>
</tbody>
</table>

Monthly Average

<table>
<thead>
<tr>
<th>Year</th>
<th>Totals</th>
<th>1996</th>
<th>1997</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3274</td>
<td>3518</td>
<td>3755</td>
<td>4025</td>
<td>4365</td>
<td></td>
</tr>
<tr>
<td>Monthly Average</td>
<td>272.8</td>
<td>293.2</td>
<td>312.9</td>
<td>335.4</td>
<td>363.8</td>
<td></td>
</tr>
</tbody>
</table>

Seasonal index (Monthly Volume / Monthly Average)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>115.5</td>
<td>99.7</td>
<td>100.8</td>
<td>92.4</td>
<td>84.3</td>
<td>78.8</td>
<td>82.5</td>
<td>91.6</td>
<td>99.0</td>
<td>110.0</td>
<td>117.3</td>
<td>128.3</td>
</tr>
<tr>
<td>1997</td>
<td>119.4</td>
<td>105.4</td>
<td>101.6</td>
<td>88.7</td>
<td>83.6</td>
<td>80.2</td>
<td>83.6</td>
<td>87.0</td>
<td>97.2</td>
<td>109.5</td>
<td>119.4</td>
<td>124.5</td>
</tr>
<tr>
<td>1998</td>
<td>114.1</td>
<td>103.9</td>
<td>91.1</td>
<td>81.5</td>
<td>79.9</td>
<td>83.1</td>
<td>91.1</td>
<td>98.4</td>
<td>111.9</td>
<td>116.7</td>
<td>116.7</td>
<td>124.6</td>
</tr>
<tr>
<td>1999</td>
<td>113.3</td>
<td>104.4</td>
<td>101.4</td>
<td>92.4</td>
<td>86.5</td>
<td>82.0</td>
<td>85.0</td>
<td>89.4</td>
<td>96.9</td>
<td>108.8</td>
<td>116.3</td>
<td>123.7</td>
</tr>
<tr>
<td>2000</td>
<td>115.4</td>
<td>103.1</td>
<td>101.7</td>
<td>90.7</td>
<td>86.6</td>
<td>82.5</td>
<td>83.8</td>
<td>89.3</td>
<td>97.6</td>
<td>110.0</td>
<td>115.4</td>
<td>123.7</td>
</tr>
<tr>
<td>Total</td>
<td>577.7</td>
<td>516.5</td>
<td>509.4</td>
<td>455.3</td>
<td>422.5</td>
<td>403.4</td>
<td>418.0</td>
<td>448.4</td>
<td>489.1</td>
<td>550.2</td>
<td>585.1</td>
<td>624.8</td>
</tr>
<tr>
<td>Mean</td>
<td>115.5</td>
<td>103.3</td>
<td>101.9</td>
<td>91.1</td>
<td>84.5</td>
<td>80.7</td>
<td>83.6</td>
<td>89.7</td>
<td>97.8</td>
<td>110.0</td>
<td>117.0</td>
<td>125.0</td>
</tr>
</tbody>
</table>

Using our Monthly Average for calculating Long Term Trend Line.

\[
\hat{Y} = \bar{Y} + \left( \frac{\sum XY}{\sum X^2} \right) X
\]

<table>
<thead>
<tr>
<th>Year</th>
<th>X</th>
<th>Y</th>
<th>X^2</th>
<th>XY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>-2</td>
<td>272.8</td>
<td>4</td>
<td>-545.6</td>
</tr>
<tr>
<td>1997</td>
<td>-1</td>
<td>293.2</td>
<td>1</td>
<td>-293.2</td>
</tr>
<tr>
<td>1998</td>
<td>0</td>
<td>312.9</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1999</td>
<td>1</td>
<td>335.4</td>
<td>1</td>
<td>335.4</td>
</tr>
<tr>
<td>2000</td>
<td>2</td>
<td>363.8</td>
<td>4</td>
<td>727.6</td>
</tr>
<tr>
<td>Totals</td>
<td>1578</td>
<td>10</td>
<td>224.2</td>
<td></td>
</tr>
</tbody>
</table>

According to above data the Least Square Line is: \( \hat{Y} = \bar{Y} + \left( \frac{\sum XY}{\sum X^2} \right) X = 315.6 + 22.42 X \)

Monthly Trend Figures (T)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>259.5</td>
<td>261.4</td>
<td>263.2</td>
<td>265.1</td>
<td>267.1</td>
<td>269.0</td>
<td>270.9</td>
<td>272.8</td>
<td>274.7</td>
<td>276.6</td>
<td>278.5</td>
<td>280.4</td>
</tr>
<tr>
<td>1997</td>
<td>282.3</td>
<td>284.2</td>
<td>286.1</td>
<td>288.0</td>
<td>289.9</td>
<td>291.8</td>
<td>293.7</td>
<td>295.6</td>
<td>297.5</td>
<td>299.4</td>
<td>301.3</td>
<td>303.2</td>
</tr>
<tr>
<td>1998</td>
<td>305.1</td>
<td>307.0</td>
<td>308.8</td>
<td>310.8</td>
<td>312.7</td>
<td>314.6</td>
<td>316.5</td>
<td>318.4</td>
<td>320.3</td>
<td>322.2</td>
<td>324.1</td>
<td>326.0</td>
</tr>
<tr>
<td>1999</td>
<td>327.9</td>
<td>329.8</td>
<td>331.7</td>
<td>333.6</td>
<td>335.4</td>
<td>337.4</td>
<td>339.3</td>
<td>341.2</td>
<td>343.1</td>
<td>345.0</td>
<td>346.9</td>
<td>348.8</td>
</tr>
<tr>
<td>2000</td>
<td>350.7</td>
<td>352.6</td>
<td>354.4</td>
<td>356.3</td>
<td>358.3</td>
<td>360.2</td>
<td>362.1</td>
<td>364.0</td>
<td>365.9</td>
<td>367.8</td>
<td>369.7</td>
<td>371.6</td>
</tr>
</tbody>
</table>
Y / T = S.C.I

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>121.4</td>
<td>104.1</td>
<td>104.4</td>
<td>95.0</td>
<td>86.1</td>
<td>79.9</td>
<td>83.1</td>
<td>91.6</td>
<td>98.3</td>
<td>108.5</td>
<td>114.9</td>
<td>124.8</td>
</tr>
<tr>
<td>1997</td>
<td>124.0</td>
<td>108.7</td>
<td>104.2</td>
<td>90.3</td>
<td>84.5</td>
<td>80.5</td>
<td>83.4</td>
<td>86.3</td>
<td>95.8</td>
<td>107.2</td>
<td>116.2</td>
<td>120.4</td>
</tr>
<tr>
<td>1998</td>
<td>117.0</td>
<td>105.9</td>
<td>105.2</td>
<td>91.7</td>
<td>81.5</td>
<td>79.5</td>
<td>82.1</td>
<td>89.5</td>
<td>96.2</td>
<td>108.6</td>
<td>112.6</td>
<td>119.6</td>
</tr>
<tr>
<td>1999</td>
<td>115.9</td>
<td>106.1</td>
<td>102.6</td>
<td>92.9</td>
<td>86.4</td>
<td>81.5</td>
<td>84.0</td>
<td>87.9</td>
<td>94.7</td>
<td>105.8</td>
<td>112.4</td>
<td>119.0</td>
</tr>
<tr>
<td>2000</td>
<td>119.8</td>
<td>106.4</td>
<td>104.4</td>
<td>92.6</td>
<td>87.9</td>
<td>83.3</td>
<td>84.2</td>
<td>89.3</td>
<td>7.0</td>
<td>108.8</td>
<td>113.6</td>
<td>121.1</td>
</tr>
</tbody>
</table>

S (Median) 119.8 106.1 104.4 92.6 86.1 80.5 83.4 89.3 96.2 108.5 113.6 120.4

Central Moving Averages

<table>
<thead>
<tr>
<th>Year</th>
<th>Cargo Volume (Tons)</th>
<th>Moving total (12 month)</th>
<th>Moving total (2 month)</th>
<th>Central moving Avg. for 12 month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan-96</td>
<td>315</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb-96</td>
<td>272</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar-96</td>
<td>275</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apr-96</td>
<td>252</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May-96</td>
<td>230</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jun-96</td>
<td>215</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul-96</td>
<td>225</td>
<td>3274</td>
<td>6583</td>
<td>274.3</td>
</tr>
<tr>
<td>Aug-96</td>
<td>250</td>
<td>3309</td>
<td>6655</td>
<td>277.3</td>
</tr>
<tr>
<td>Sep-96</td>
<td>270</td>
<td>3346</td>
<td>6715</td>
<td>279.8</td>
</tr>
<tr>
<td>Oct-96</td>
<td>300</td>
<td>3369</td>
<td>6746</td>
<td>281.1</td>
</tr>
<tr>
<td>Nov-96</td>
<td>320</td>
<td>3377</td>
<td>6769</td>
<td>282.0</td>
</tr>
<tr>
<td>Dec-96</td>
<td>350</td>
<td>3392</td>
<td>6804</td>
<td>283.5</td>
</tr>
<tr>
<td>Jan-97</td>
<td>350</td>
<td>3412</td>
<td>6844</td>
<td>285.2</td>
</tr>
<tr>
<td>Feb-97</td>
<td>309</td>
<td>3432</td>
<td>6869</td>
<td>286.2</td>
</tr>
<tr>
<td>Mar-97</td>
<td>298</td>
<td>3437</td>
<td>6889</td>
<td>287.0</td>
</tr>
<tr>
<td>Apr-97</td>
<td>260</td>
<td>3452</td>
<td>6925</td>
<td>288.5</td>
</tr>
<tr>
<td>May-97</td>
<td>245</td>
<td>3473</td>
<td>6976</td>
<td>290.7</td>
</tr>
<tr>
<td>Jun-97</td>
<td>235</td>
<td>3503</td>
<td>7021</td>
<td>292.5</td>
</tr>
<tr>
<td>Jul-77</td>
<td>245</td>
<td>3518</td>
<td>7043</td>
<td>293.5</td>
</tr>
<tr>
<td>Aug-97</td>
<td>255</td>
<td>3525</td>
<td>7066</td>
<td>294.4</td>
</tr>
<tr>
<td>Sep-97</td>
<td>285</td>
<td>3541</td>
<td>7109</td>
<td>296.2</td>
</tr>
<tr>
<td>Oct-97</td>
<td>321</td>
<td>3568</td>
<td>7161</td>
<td>298.4</td>
</tr>
<tr>
<td>Nov-97</td>
<td>350</td>
<td>3593</td>
<td>7196</td>
<td>299.8</td>
</tr>
<tr>
<td>Dec-97</td>
<td>365</td>
<td>3603</td>
<td>7221</td>
<td>300.9</td>
</tr>
<tr>
<td>Jan-98</td>
<td>357</td>
<td>3618</td>
<td>7251</td>
<td>302.1</td>
</tr>
<tr>
<td>Feb-98</td>
<td>325</td>
<td>3633</td>
<td>7296</td>
<td>304.0</td>
</tr>
<tr>
<td>Mar-98</td>
<td>325</td>
<td>3663</td>
<td>7349</td>
<td>306.2</td>
</tr>
<tr>
<td>Apr-98</td>
<td>285</td>
<td>3686</td>
<td>7401</td>
<td>308.4</td>
</tr>
<tr>
<td>May-98</td>
<td>255</td>
<td>3715</td>
<td>7445</td>
<td>310.2</td>
</tr>
<tr>
<td>Jun-98</td>
<td>250</td>
<td>3730</td>
<td>7485</td>
<td>311.9</td>
</tr>
<tr>
<td>Jul-98</td>
<td>260</td>
<td>3755</td>
<td>7533</td>
<td>313.9</td>
</tr>
<tr>
<td>Aug-98</td>
<td>285</td>
<td>3778</td>
<td>7581</td>
<td>315.9</td>
</tr>
<tr>
<td>Sep-98</td>
<td>308</td>
<td>3803</td>
<td>7621</td>
<td>317.5</td>
</tr>
<tr>
<td>Oct-98</td>
<td>350</td>
<td>3818</td>
<td>7661</td>
<td>319.2</td>
</tr>
<tr>
<td>Nov-98</td>
<td>365</td>
<td>3843</td>
<td>7721</td>
<td>321.7</td>
</tr>
<tr>
<td>Dec-98</td>
<td>390</td>
<td>3878</td>
<td>7781</td>
<td>324.2</td>
</tr>
<tr>
<td>Jan-99</td>
<td>380</td>
<td>3903</td>
<td>7831</td>
<td>326.3</td>
</tr>
<tr>
<td>Feb-99</td>
<td>350</td>
<td>3928</td>
<td>7871</td>
<td>328.0</td>
</tr>
<tr>
<td>Mar-99</td>
<td>340</td>
<td>3943</td>
<td>7903</td>
<td>329.3</td>
</tr>
<tr>
<td>Apr-99</td>
<td>310</td>
<td>3960</td>
<td>7935</td>
<td>330.6</td>
</tr>
<tr>
<td>-------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>May-99</td>
<td>290</td>
<td>3975</td>
<td>7975</td>
<td>332.3</td>
</tr>
<tr>
<td>Jun-99</td>
<td>275</td>
<td>4000</td>
<td>8025</td>
<td>334.4</td>
</tr>
<tr>
<td>Jul-99</td>
<td>285</td>
<td>4025</td>
<td>8090</td>
<td>337.1</td>
</tr>
<tr>
<td>Aug-99</td>
<td>300</td>
<td>4065</td>
<td>8155</td>
<td>339.8</td>
</tr>
<tr>
<td>Sep-99</td>
<td>325</td>
<td>4090</td>
<td>8210</td>
<td>342.1</td>
</tr>
<tr>
<td>Oct-99</td>
<td>365</td>
<td>4120</td>
<td>8260</td>
<td>344.2</td>
</tr>
<tr>
<td>Nov-99</td>
<td>390</td>
<td>4140</td>
<td>8305</td>
<td>346.0</td>
</tr>
<tr>
<td>Dec-99</td>
<td>415</td>
<td>4165</td>
<td>8355</td>
<td>348.1</td>
</tr>
<tr>
<td>Jan-00</td>
<td>420</td>
<td>4190</td>
<td>8400</td>
<td>350.0</td>
</tr>
<tr>
<td>Feb-00</td>
<td>375</td>
<td>4210</td>
<td>8445</td>
<td>351.9</td>
</tr>
<tr>
<td>Mar-00</td>
<td>370</td>
<td>4235</td>
<td>8500</td>
<td>354.2</td>
</tr>
<tr>
<td>Apr-00</td>
<td>330</td>
<td>4265</td>
<td>8565</td>
<td>356.9</td>
</tr>
<tr>
<td>May-00</td>
<td>315</td>
<td>4300</td>
<td>8630</td>
<td>359.6</td>
</tr>
<tr>
<td>Jun-00</td>
<td>300</td>
<td>4330</td>
<td>8695</td>
<td>362.3</td>
</tr>
<tr>
<td>Jul-00</td>
<td>305</td>
<td>4365</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug-00</td>
<td>325</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sep-00</td>
<td>355</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct-00</td>
<td>400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nov-00</td>
<td>420</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dec-00</td>
<td>450</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Monthly Volumes / Central Moving Average

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>82.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>90.2</td>
<td>96.5</td>
<td>106.7</td>
<td>113.5</td>
<td>123.5</td>
</tr>
<tr>
<td>1997</td>
<td>122.7</td>
<td>108.0</td>
<td>103.8</td>
<td>90.1</td>
<td>84.3</td>
<td>80.3</td>
<td>83.5</td>
<td>86.6</td>
<td>96.2</td>
<td>107.6</td>
<td>116.7</td>
<td>121.3</td>
</tr>
<tr>
<td>1998</td>
<td>118.2</td>
<td>106.9</td>
<td>106.1</td>
<td>92.4</td>
<td>82.2</td>
<td>80.2</td>
<td>82.8</td>
<td>90.2</td>
<td>97.0</td>
<td>109.6</td>
<td>113.5</td>
<td>120.3</td>
</tr>
<tr>
<td>1999</td>
<td>116.5</td>
<td>106.7</td>
<td>103.2</td>
<td>93.8</td>
<td>87.3</td>
<td>82.2</td>
<td>84.5</td>
<td>88.3</td>
<td>95.0</td>
<td>106.0</td>
<td>112.7</td>
<td>119.2</td>
</tr>
<tr>
<td>2000</td>
<td>120.0</td>
<td>106.6</td>
<td>104.6</td>
<td>92.5</td>
<td>87.6</td>
<td>82.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Median

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>119.1</td>
<td>106.8</td>
<td>104.2</td>
<td>92.5</td>
<td>85.8</td>
<td>81.5</td>
<td>83.2</td>
<td>89.3</td>
<td>96.4</td>
<td>107.2</td>
<td>113.5</td>
<td>120.8</td>
</tr>
</tbody>
</table>

### Seasonal Moving Data

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>264</td>
<td>255</td>
<td>264</td>
<td>272</td>
<td>268</td>
<td>264</td>
<td>270</td>
<td>280</td>
<td>280</td>
<td>280</td>
<td>282</td>
<td>290</td>
</tr>
<tr>
<td>1997</td>
<td>294</td>
<td>289</td>
<td>286</td>
<td>281</td>
<td>286</td>
<td>288</td>
<td>294</td>
<td>286</td>
<td>296</td>
<td>299</td>
<td>308</td>
<td>302</td>
</tr>
<tr>
<td>1998</td>
<td>300</td>
<td>304</td>
<td>312</td>
<td>308</td>
<td>297</td>
<td>307</td>
<td>313</td>
<td>319</td>
<td>320</td>
<td>326</td>
<td>322</td>
<td>323</td>
</tr>
<tr>
<td>1999</td>
<td>319</td>
<td>328</td>
<td>326</td>
<td>335</td>
<td>338</td>
<td>337</td>
<td>343</td>
<td>336</td>
<td>337</td>
<td>340</td>
<td>344</td>
<td>344</td>
</tr>
<tr>
<td>2000</td>
<td>353</td>
<td>351</td>
<td>355</td>
<td>357</td>
<td>367</td>
<td>368</td>
<td>367</td>
<td>364</td>
<td>368</td>
<td>373</td>
<td>370</td>
<td>373</td>
</tr>
</tbody>
</table>

### SCI / Central Moving Average

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>98.4</td>
<td></td>
<td></td>
<td></td>
<td>101.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>103.1</td>
<td>100.9</td>
<td>99.7</td>
<td>97.4</td>
<td>98.4</td>
<td>98.5</td>
<td>100.2</td>
<td>97.1</td>
<td>99.9</td>
<td>100.2</td>
<td>102.7</td>
<td>100.4</td>
</tr>
<tr>
<td>1998</td>
<td>99.3</td>
<td>100.0</td>
<td>101.9</td>
<td>99.9</td>
<td>95.7</td>
<td>98.4</td>
<td>99.7</td>
<td>101.0</td>
<td>100.8</td>
<td>102.1</td>
<td>100.1</td>
<td>99.6</td>
</tr>
<tr>
<td>1999</td>
<td>97.8</td>
<td>100.0</td>
<td>99.0</td>
<td>101.3</td>
<td>101.7</td>
<td>100.8</td>
<td>101.8</td>
<td>98.9</td>
<td>98.5</td>
<td>98.8</td>
<td>99.4</td>
<td>98.8</td>
</tr>
<tr>
<td>2000</td>
<td>100.9</td>
<td>99.7</td>
<td>100.2</td>
<td>100.0</td>
<td>102.1</td>
<td>101.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Half Average Method

<p>| | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul-98</td>
<td>313.9</td>
<td>Jul-99</td>
<td>337.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug-98</td>
<td>315.9</td>
<td>Aug-99</td>
<td>339.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sep-98</td>
<td>317.5</td>
<td>Sep-99</td>
<td>342.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct-98</td>
<td>319.2</td>
<td>Oct-99</td>
<td>344.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nov-98</td>
<td>321.7</td>
<td>Nov-99</td>
<td>346.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dec-98</td>
<td>324.2</td>
<td>Dec-99</td>
<td>348.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan-99</td>
<td>326.3</td>
<td>Jan-00</td>
<td>350.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb-99</td>
<td>328.0</td>
<td>Feb-00</td>
<td>351.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar-99</td>
<td>329.3</td>
<td>Mar-00</td>
<td>354.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apr-99</td>
<td>330.6</td>
<td>Apr-00</td>
<td>356.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May-99</td>
<td>332.3</td>
<td>May-00</td>
<td>359.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jun-99</td>
<td>334.4</td>
<td>Jun-00</td>
<td>362.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3893.3</td>
<td>Total</td>
<td>4192.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>324.4</td>
<td>Mean</td>
<td>349.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Forecasting Figures

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Trends(00)</td>
<td>350</td>
<td>351.9</td>
<td>354.2</td>
<td>356.9</td>
<td>359.6</td>
<td>362.3</td>
<td>364.4</td>
<td>366.5</td>
<td>368.5</td>
<td>370.6</td>
<td>372.7</td>
<td>374.8</td>
</tr>
<tr>
<td>Trends(01)</td>
<td>376.9</td>
<td>378.9</td>
<td>381</td>
<td>383.1</td>
<td>385.1</td>
<td>387.2</td>
<td>389.3</td>
<td>391.4</td>
<td>393.5</td>
<td>395.5</td>
<td>397.6</td>
<td>399.7</td>
</tr>
<tr>
<td>SI</td>
<td>191.1</td>
<td>106.8</td>
<td>104.2</td>
<td>92.5</td>
<td>85.8</td>
<td>81.5</td>
<td>83.2</td>
<td>89.3</td>
<td>96.4</td>
<td>107.2</td>
<td>113.5</td>
<td>120.8</td>
</tr>
<tr>
<td>Forecast(01)</td>
<td>449</td>
<td>405</td>
<td>397</td>
<td>354</td>
<td>331</td>
<td>316</td>
<td>324</td>
<td>350</td>
<td>379</td>
<td>424</td>
<td>451</td>
<td>483</td>
</tr>
</tbody>
</table>