

# **EXCHANGE RATES, GROWTH AND UNEMPLOYMENT**

**Prepared by FEASibilitY**

for

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*This firm survey stems from EGDI's broader project on exchange rates and employment, which seeks to understand the impact of current exchange rate fluctuations on employment in South Africa. This is a particular concern, as South Africa needs to expand sustainable employment dramatically, and at the same time raise value-added in its goods and services production. The firm survey component of the project sought to understand how firms have responded to recent movements in the exchange rate. Each of 40 firms from four sector clusters were individually interviewed to better understand how they manage the risk and influences associated with the exchange rate. The study reveals that the exchange rate has been, and continues to be, a key influence on the decisions of firms regarding their employment and growth decisions, as well as their operational strategies.*

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## 1. Executive summary

1. As part of its research into the impact of exchange rates on growth and employment, the *Employment, Growth & Development Initiative* of the HSRC, commissioned this research into the management of exchange rate risk by firms. Each of 40 firms from four sector clusters were individually interviewed in order to better understand how they manage the risk and influences associated with the exchange rate. Moreover, ten financial service providers were interviewed so as to better understand the range of services and uptake associated with financial instrument risk management of the currency. The clusters were Steel and steel products and household appliances; Wood and wood products, including furniture; Construction; and Tourism.
2. Exchange rate risk is clearly one of many risks that firms have to manage. While currency risk is associated with firms that export or rely on imported inputs, firms with a completely domestic focus are also vulnerable to competition from foreign importers. The period studied (2000 – until the present) is one where liberalisation from a previously protected environment was keenly felt, given the unexpected strengthening of the currency after an earlier collapse. For this reason, firms' awareness of the importance of the currency may be heightened.
3. The study reveals that the exchange rate has been, and continues to be, a key influence on the decisions of firms regarding their employment and growth decisions, as well as their operational strategies. While this influence is indirect, through its impact on profitability and competitiveness, it is a truism to say that employment is a derived concept in economics.
4. Ninety-three per cent of firms (37) indicated that their revenue had changed over the last five years due to exchange rate volatility or strength. Twenty-seven firms (68%) indicated that their output had been affected. Fifty per cent of firms indicated there had been some influence on their employment in the past five years.
5. The firms we interviewed were “winners” – i.e. survivors. Almost every firm pointed to at least one competitor, supplier or purchaser that had gone out of business over the period. It is presumed that the real impact on employment could only be discerned from case studies of failed firms.
6. Firms manage exchange rate risk through both operational and financial means. Conditions which appear to influence the firm's management of the exchange rate include:
  - The ability of firms to adjust prices to offset the impact of an unexpected exchange rate change on profit margins – which relates to the speed and extent to which prices can be adjusted;
  - The firm's view on what is acceptable margin for business activity – which may be industry related;



- Anticipation of what competitors will do; and
- Whether or not a firm can change sources for inputs and markets for outputs. This aspect has to do with the diversity of a company's factor and product markets.

Cluster differences and industry specifics contributed to the ability of firms to manage these factors.

7. Firms differed on whether it was the level of the currency (its strength or weakness) or its volatility that concerned them most. The two factors are related, and the influences are conflated in the minds of some interviewees.
8. For firms that are unable to adjust factor and product markets, in particular, exchange rate volatility:
  - Undermines the ability to forecast the level of the currency;
  - Undermines appropriate price setting;
  - Creates problems with stock valuation;
  - Undermines the ability to achieve profit margins;
  - Undermines the ability to undercut margins so as to enter a market or gain market share; and
  - Undermines investment decisions
9. Additionally, a strong currency:
  - Erodes export markets and encourages cheap imports;
  - Undermines viability of local production;
  - Is seldom a boon to manufacturers reliant on “exportable” inputs as these are subject to import parity pricing.
10. While a strong currency makes imported capital goods cheaper, the associated stimulation of investment failed to occur in the firms we interviewed. This is because the strong currency undermined their expectations regarding a buoyant export or domestic market which would've justified such investment.
11. The firms felt that – within some limits – the exchange rate can and should be managed and pointed to ways in which they had improved their operations and become more efficient as the currency had strengthened. In some cases, this resulted in reduction in employment. Firms emphasised the need to ensure competitiveness through differentiation or specialisation. The management of the exchange rate is complicated however, by import parity pricing, anti-dumping protection for previously state owned enterprises, foreign exchange controls and import and export regulations.
12. The consensus view among financial service providers was that while South African firms have become more aware of exchange related risks over the last



decade or so, risk management approaches are generally limited and unsophisticated.

13. While it is true that not all firms make use of the most appropriate instruments, and some seem uninformed as to what is available, the instruments do have limited application. In some cases, this is because of the limitations imposed by exchange controls. In other cases, it is the very nature of the contracts involved that such instruments are inapplicable.
14. The size of the firm – or at least the value of its foreign exchange transactions - influences both the level of the service offered by financial service providers and the firm's ability to obtain special dispensations – though its financial services provider - from the exchange control authorities.

## **2. Introduction to the study**

The HSRC is currently exploring the impact of exchange rates on growth and employment as the exchange rate is likely to be a key factor in the operation of most firms, whether in relation to exports, imports or the general competitive environment.

This paper analyses the impact of the exchange rate on growth and employment and specifically how companies manage a strong (or weak) currency and a volatile exchange rate.

There are differing views on the economic impact of the recent volatility and sustained strength of the Rand. Some argue that as an importer of capital and intermediate goods, the strong Rand may benefit South African private and public sector investment. Others suggest that the strength of the Rand has restricted growth and employment, particularly in the export and import-substitution industries of both manufacturing and services. Yet others suggest that the volatility of the currency inhibits investment decisions.

The study provides insights into these matters by researching the impact of the exchange rate on the growth and employment on 40 firms. Each of the firms were individually interviewed in order to better understand their views how they manage the risk and influences associated with the exchange rate.

Key management staff at each firm were required to complete a questionnaire and discuss the canvassed questions. The interview process took between one two hours to complete, depending on the willingness and level of knowledge of the interviewee, as well as time constraints<sup>1</sup>.

Over and above this, ten financial service providers were interviewed – in order to better understand the range of services and uptake associated with financial instrument risk management of the currency.

The selection of the firms for the research initially centred around selecting those sectors or sub sectors that were significant contributors to employment and that appeared to be sensitive to the exchange rate. An analysis of the export-output, import-output and import-domestic demand ratios may be seen to reflect sensitivity to the exchange rate. These as well as contribution to employment are discussed in section 4 (Methodology and profile of firms).

The data analysis of the manufacturing sectors suggested that firms from metal and metal products and from the wood and wood products, including furniture, be

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<sup>1</sup> Note the case studies developed from the interviews do not form part of this public document – as these are bound by confidentiality undertakings.



selected. Two service sectors, construction and tourism were also selected – since they make a considerable contribution to employment.

Given that the participation of the firms was by its nature somewhat uncertain, as the process was entirely optional, and given that the sample of firms was small, it seemed best to attempt to focus on what may be termed “clusters” of firms.

The World Bank defines an industry cluster as:

*... a grouping of related industries and institutions in an area or region. The industries are inter-linked and connected in many different ways. Some industries in the cluster will be suppliers to others; some will be buyers from others; some will share labour or resources. The important thing about a cluster is that the industries within the cluster are economically linked, they both collaborate and compete and are, to some degree, dependant upon each other; and ideally, they take advantage of synergies.*

In practice, we interviewed primary manufacturers as well as downstream manufacturers in the metal and metal products cluster. A similar approach was adopted for the selection of firms in the forestry and wood products cluster.

This has allowed us to develop insights into the structural and competitive dynamics of the industries concerned, not merely because this may be of general interest – but because these dynamics may influence firms’ ability to manage the exchange rate.

Selection of manufacturing firms was from the following sub-sectors:

- Forestry and logging
- Wood and wood products
- Furniture

which will be treated as a cluster, and

- Metals and metal products (in practice, the firms participating were involved in steel production and manufacture)
- Household appliances.

The selection of service firms is from the sub-sectors of:

- Construction
- Tourism.

The complete list of interviews conducted is included in section 11 of the report, and the profile of the firms is discussed in section 4. Analysis of the questions is provided in section 5 and of the sectors in section 6.

The financial service providers interviewed include banks and other non-bank financial intermediaries. These firms are discussed in section 7.

Based on the literature review process which followed the selection of the appropriate sectors and discussions with the Reference Group, a structured questionnaire was designed which has formed the basis of the interviews with all firms except the financial services companies. The questionnaire is included as an Appendix.

In order to develop the case studies, we invited interviewees to express their views over and above the questions set out in the questionnaire. In particular, the interviewees were invited to relate their experience in terms of:

- The history of their management of the exchange rate.
- The influence of Rand volatility and strength on their company's perceived future employment and investment needs.
- Difficulties experienced in hedging against the exchange rate and the nature of their relationship with their financial services provider.
- Rating of the severity of the level of the Rand and its volatility on growth and employment relative to other risk factors.



### 3. Key findings

This report analyses the impact of the exchange rate on employment and growth decisions of firms. The key findings presented here are a composite of the questionnaire and interview responses of the 40 firms in the wood, steel, construction and tourism clusters, as well as that of the 10 financial services providers.

Although some of the firm responses indicate industry-specific issues, others pointed to themes which cut across the sectors. It appears that a firm's management of the exchange rate relate to its ability to pass on exchange rate risks to buyers; to source inputs from different suppliers; locate different markets, and ultimately, make operational changes which aid its survival.

This section sets out the key general themes as well as some of the industry-specific issues that emerge from the study.

#### 3.1 Defining exchange rate risk

The management of foreign exchange risk needs to be understood against the background of the overall risk management strategy adopted by the firm, as clearly exchange rate risk is but one risk that firms face. The theory of firms and their management of exchange rate risk suggest that there are three categories of risk that firms may attempt to manage. These include translation exposure, transaction exposure and economic exposure (Giddy and Dufey, 1992).

**Translation or accounting exposure** arises from the need to translate accounts denominated in a foreign currency into the home currency of the reporting entity, and has been referred to as a problem of location of assets. It also affects firms when they undertake forward cover, and the currency takes an unexpected turn. In this case they will have windfall profits or unexpected losses, which appear below the line.

**Transactions' exposure** is measured by the effect of exchange rate changes on home currency values of foreign currency receivables and payables. Exposure arises from the possibility that future incomes (or costs) from a contract denominated in foreign currency change between the date when a firm commits to a transaction and the actual transaction date. This can undermine profit margins and targets, as currency earnings, for example, may be lower than anticipated. Firms tend to identify and manage transaction exposure most often as they consider this type of exposure as the most problematic.

**Economic exposure** may be seen as strategic exchange risk and is the result of large, persistent shifts in exchange rates, which are in excess of the changes in relative prices or costs. These may alter relative prices and may also affect local economic conditions such as business and consumer incomes and, therefore, levels of demand in different countries. It is in this category that operational management of exchange rate exposure – such as acquiring a source of inputs – rather than financial management – in terms of taking forward cover – emerges.

It is apparent from the case studies that elements of these risks underpin each firm's management of the exchange rate. However, it is also apparent that firms do not necessarily categorise their exposures in this way, although their responses indicate an intuitive awareness of transaction *vs.* economic exposure through their management thereof.

### 3.2 Impact of the exchange rate on growth and employment decisions

The nature of the study meant that we could only interview successful firms – those that had adjusted their business model or operating strategies to such an extent that they could be categorised as survivors. Hence, our study does not capture those for whom these challenges proved too daunting<sup>2</sup>.

Indeed, in spite of liberalisation, a strong currency, increasing openness of the economy to imported goods and services and so on, many of the firms appeared to be successful. The study was not an attempt to evaluate their profitability, but an attempt to isolate the exchange rate as an influence on their growth and employment decisions.

Most firms saw the influence of the exchange rate on their growth and employment decisions as indirect rather than direct, as the exchange rate has the capacity to influence their profitability and competitiveness. By its very nature, of course, employment can be viewed as a derived demand.

When asked about the importance of exchange rate risk relative to other risks, firms indicated that the exchange rate is an important risk factor in terms of growth and employment. Forty per cent (16 firms) ranked it as “very important”, while 52% (21 firms) saw exchange rate risk as “somewhat important”. Only three firms said exchange rate risk was unimportant.

Firms also indicated that exchange rate awareness and management has become more important. This may well be because even where firm trading (in terms of exports or imports) may have shifted, the openness of the economy and reduction in tariff protection in some instances has made them more vulnerable to foreign competition.

The impact on competitiveness was a key feature of all of the sector responses, but was particularly so in the tourism industry, where the *level* of the currency affected margins at two levels. The first had to do with South Africa's competitiveness as an international tourism destination. If the Rand strengthens, South Africa becomes a less attractive destination in comparison to other long-haul competitor markets. The high cost of the long-haul air travel in particular was noted. In order to address this barrier, local accommodation and related services and attractions must be perceived to

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<sup>2</sup> The exception to this was one firm in the wood cluster that was in the process of liquidation as we undertook the interview.

offer value for money for international tourists. In some niche markets the sensitivity to increased prices as result of exchange rates is less critical, but for the majority of budget and VFR (“visiting friends and relatives”) travellers these are uppermost concerns.

The second impact is that while foreign tourists may still come to South Africa in the face of a strong Rand or appreciating currency, the consequence is reduced overall expenditure. Simply put, tourists will typically downgrade accommodation, eat at less expensive establishments and limit their tours and shopping. The overall impact is that total revenues in the sector are reduced.

Over and above this, the *volatility* of the currency was seen to undermine expected profit margins and seen to affect the balance sheets of firms. This was a familiar theme throughout all the sectors, although perhaps it came out most strongly in the construction industry. For construction firms exporting services, the length of the contracts and the unpredictability of start, invoicing and payment dates undermine the usefulness of forward contracts, leaving them particularly exposed to the vagaries of a volatile currency.

### 3.3 Impact of the exchange rate on firm strategy

Key to firm responses and their attitude to the exchange rate risk in general is their tolerance to the exchange rate eroding their margins. Sector or cluster differences regarding what is generally regarded as an acceptable margin appear to be important here. Construction firms appear to accept the achievement of a net margin of around 5% on contracts. For the steel and household appliance cluster, the acceptable margin appeared to be far higher, with 15% seen as a relatively low threshold<sup>3</sup>.

Hence, construction firms operating in Africa indicated that exchange rate risk was less substantial than the other risks associated with operating there (including non-payment). While they attempted to price for these associated risks, it is possible they may be more tolerant of having their expected margins – even on these “high” risk projects – being eroded.

Manufacturers with a different sense of what is an acceptable margin, may find erosion of their margins through exchange rate risk less acceptable and move out of manufacturing into distribution, and so on.

Firms were asked to what extent the firm had experienced a change in revenue, output and employment levels over the last five years due to the exchange rate volatility or strength. The responses varied for each of these categories, with 93% (37 firms) indicating that the exchange rate had had an impact on their revenues. Twenty-seven

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<sup>3</sup> Retailers and banks often indicate that a 25%-20% margin is required – but they are not the object of our study here.



firms (68%) indicated that their output had been affected<sup>4</sup>. Fifty per cent of firms indicated there had been some influence on their employment in the past five years.

In the case of employment, firms indicated that exchange rate strength had had a direct impact on their competitiveness and hence their employment decisions.

### **3.4 Management of exchange rate impact**

Conditions which appear to influence the firm's financial and operational management of the exchange rate include:

- The ability of firms to adjust prices to offset the impact of an unexpected exchange rate change on profit margins – which relates to the speed and extent to which prices can be adjusted;
- Anticipation of what competitors will do; and
- Whether or not a firm can change sources for inputs and markets for outputs. This aspect has to do with the diversity of a company's factor and product markets.

Most firms are able to adjust their prices within a year, but clearly those that are able simply to pass the whole increase on to purchasers without delay, have the advantage. Market conditions and market position clearly have an influence on this ability. Some providers spoke of their ability to pass on price increases with ease, as they saw themselves as protected through global distribution agreements and premium brands, for which prices are more elastic. In other cases, South Africa's geographic location affords protection from bulky imports, which are too expensive to transport.

The firm's anticipation of what competitors might do emerged as a dominant theme in the interviews. Firms pointed out that the decision regarding taking forward cover, for example, was related to how their competitors would react to the same market conditions. The costs associated with forward cover can become more exaggerated when a firm takes cover and competitors do not. For example, if the currency value goes against the firm's cover position, competitors will be able to undercut the firm's pricing more easily.

The forward cover requirements of set dates for the resale of currency may not always be met, as in the case of construction contracts in Africa. In these cases, forward cover is simply not an appropriate instrument.

The argument that volatility is irrelevant as it can be managed through forward cover has been hotly contested by firms. Their responses indicate that the process is expensive and that it constrains them. Firms sometimes not only pay a fee for the service (as well as a mark-up on the spot price), but in addition they have to sacrifice

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<sup>4</sup> This may be artificially low as more than one service sector firm wasn't sure how to respond to the notion of output.

part of their overdraft – generally up to 10% of the value of the cover. Although the firm pays for the full value of the overdraft, only 90% of it is accessible to them. This clearly has cash-flow implications for some firms. Some of the comments from interviews are:

*...forward cover costs you money, and it can cost you dearly operationally. This is partially because one needs to outguess one's competitors. If they don't take cover and the value of the Rand shifts in their favour – then you've carried the cost and they are more competitive. This makes the activity of forward cover a bit like a casino or a beauty contest (a la Keynes). You don't just pick the winning exchange rate – you have to pick what others will choose as the appropriate exchange rate.*

*Steel Manufacturer*

*More specifically, this risk arises even with forward cover, as it is dependant on the behaviour of our competitors. For instance, while we may hedge a specific transaction, a competitor may choose not to do so. Should the currency shift not be an adverse one we will have incurred a higher cost for the goods reducing our competitiveness and margin.*

*Household Appliance Manufacturer*

The ability to source inputs into the process of production from alternative sources is a recurrent theme in interviews. Clearly this depends on the nature of the firm's supplier relationships. One steel manufacturer, for example, pointed to the ability to source inputs from sister companies within a global holding company:

*When the currency was as strong as R6.05 to the US Dollar, we imported steel from one of our sister companies in Spain. The company rule is that sister firms are obliged to sell to each other at full cost plus 10%, which meant that steel could be delivered to our East Rand site at a 15% discount to the local price at the time.*

*Steel Manufacturer*

As a consequence of the volume and value of their inputs, smaller firms were less able to source inputs abroad or negotiate volume discounts from local producers and had to deal with middlemen who also had their mark-ups.

The volatility and level of a currency does not simply disrupt input costs, it may also disrupt the availability of an input. As the currency changes, suppliers may now have incentives to export key input resources that were previously readily available. This theme emerged in the case of timber and scrap metal, for example. In more than one case, the strategy of ensuring inputs led to a strategy of acquisition. Here, firms acquired upstream operations in order to ensure both manageable costs and a predictable supply of inputs.

### 3.5 The relative importance of level or volatility

Firms differed on whether it was the level of the currency (its strength or weakness) or its volatility that concerned them most. The two factors are related, and the influences are conflated in the minds of some interviewees. Clearly, a discussion about volatility also relates to the level of the currency.

Those that pointed to volatility as their chief concern indicated that it:

- Undermines the ability to forecast the level of the currency;
- Undermines appropriate price setting;
- Creates problems with stock valuation;
- Undermines the ability to achieve profit margins;
- Undermines the ability to undercut margins so as to enter a market or gain market share; and
- Undermines investment decisions.

Those firms that indicated they had little ability to pass on exchange rate risk (via price increases) emphasised the importance of volatility. In most cases, producers can set prices only once a year, as the market power of buyers precludes frequent (or even regular) price increases. The need to maintain market share in foreign or local markets also constrains price increases.

Those firms that are relatively constrained in terms of finding alternative factor markets may feel the burden of the volatility of the currency, particularly where they are reliant on imported inputs or on exportable commodities that are priced in international prices.

The steel manufacturing industry is a case in point, where small producers feel disadvantaged not only because of the import parity pricing associated with steel and aluminium, but also because their low volumes require them to deal with intermediaries who pass on these costs with a high margin.

Stock valuation is also of concern when the currency is volatile. This is the experience of a manufacturer of household appliances:

*We import a significant amount of goods at a specific price which we must hold until delivered and paid for by our customers. As such we always run the risk of a significant price shift due to currency movements.*

*Household Appliance Manufacturer*

A number of firms indicate that because of exchange rate volatility, they are unable to price keenly in certain markets – for example, one firm that no longer manufactures for export markets locally, stated:

*The absence of currency risk now enables us to take a margin squeeze where necessary, in order to enter new markets. Sometimes we cut our margin to as low as 10%-15% – something we could never do when they were facing exchange rate risk.*

*Steel Manufacturer*

In situations where firms feel particularly exposed to the vagaries of currency volatility, their pricing is affected. If exchange rate risk is deemed to be particularly high, firms work this into their margins. Hence they price at a level at which they “cannot lose”, hoping that these margins will buffer them against potential currency loss. Where the risk does not eventuate, this strategy delivers “windfall profits”.

The firms indicated that volatility – especially associated with rapid change – undermines the sustainability of investment activity. More than one firm spoke of the problems inherent in relying on a weak currency to maintain the sustainability of plant expansion.

Where interviewees indicated that the level of the currency was the most critical exchange rate impact on their firms, they often referred to the strength of the currency. Most of them indicated that between 2003 to early 2006, the currency was strong. A common remark was that at R6 to the US\$, South African production is simply not competitive. Most firms thought that from R7.50-R9.00 to the US\$, the currency was competitive. This comment came from across all the sub-sectors interviewed.

In the words of interviewees, a strong currency:

- Erodes export markets and encourages cheap imports;
- Undermines viability of local production;
- Is seldom a boon to manufacturers reliant on “exportable” inputs as these are subject to import parity pricing; and
- Undermines incentives to purchase imported capital goods and equipment as even though prices are relatively low, expectations regarding domestic market production are subdued.

The firms indicated how their export market had eroded since the end of the 1990s. Some manufacturers had moved from being exporting manufacturers to importing distributors. Some interviewees spoke of how some imports were “cheap”, poor quality and not to local specification. One suggested that when currency was at its strongest level of R6 to US\$, any “rubbish” was dumped here, whereas a slightly weaker currency would protect the local market from poor quality imported produce. Evident in some sectors such as household appliance manufacturing is the continued reliance on import tariffs that remain in effect. In one case at least the firms indicated that their local manufacturing plant would have closed years ago were it not for the 20% duty on imported competitor goods.

The combined impact of reduced exports and increasing imports serves to undermine local production, with a number of firms indicating that at R6 to the US\$, they were

continuing to produce only to maintain market share, but at minimal or negative margins. One global firm stated that its operational loss in South Africa in the last financial year:

*... is attributed almost entirely to the strong exchange rate, which has reduced export margins and has resulted in most local plants being marginal. If the currency had hung around R6.00 to the dollar for another six months, we may have made the decision to shut up shop in some instances.*

*Wood Cluster Firm*

The manufacturers in our sample generally did not experience any particular benefit in terms of cheap imported inputs when the currency was strong. Typically, their inputs were local, with their exports being priced at international rates, with the implicit costs of duties, transport and shipping added on. Mentioned in this category were steel inputs, copper, plastic mouldings, etc. Clearly, the issue here is the extent to which firms are able to switch factor markets. In the case of certain inputs, which are heavy and expensive to ship, South Africa's geographic location forms a natural barrier to switching to imported inputs. The producers of these commodities said as much to us. In some cases South Africa is the primary global producer of these commodities but major local suppliers prefer to export and obtain "hard currency" revenues instead of supplying the local market. An added complication is that many primary commodity producers enter into long-term supply contracts with overseas markets, limiting their ability to shift to domestic markets should the exchange rate no longer be favourable.

There is a view that a strong currency could benefit investment where a country is reliant on imported capital goods, making them cheaper to import and hence stimulating investment in plant. Sadly, this view was not corroborated by interviewees. Instead, they pointed to reduced investment in general and the low appetite for investment. Among their reasons for not investing were the currency effect on their competitiveness, and hence their lack of expectation regarding a buoyant export or domestic market to justify their investment. Other inhibitors cited included labour conditions, wage levels and crime, as well as an overall negative outlook in respect of continued high-levels economic growth. The exceptional firms that did undertake investment were a handful of companies that had "a compelling business case" to invest in plant and equipment.

### **3.6 Role of financial providers**

The use of forward cover and other financial hedges appears to be influenced by each firms' stance towards exchange rate risk. This is clearly influenced by the firm's experience in terms of currency. Several of the firms that acknowledge a very conservative stance towards exchange rate risk have a history of being very nearly taken to the brink of insolvency by exchange rate losses.

A number of firms have a policy of placing forward cover on every transaction, for example. This may stem from decades of experience with a volatile currency. This cover often implies that they take a view on which way the currency will move, however.



Others simply believe that the currency cannot be predicted, and will take a neutral position – effectively hedging 50% of the value of the contracts - implying it could go either way. Yet others appear not to “believe“ in financial hedges, or believe they have limited application, and ultimately point to operational hedges which suggest that they have made strategic decisions regarding factor inputs and so on - in response to their economic exposure to currency risk.

Most firms appeared to rely on their banks as their primary source of information and advice. Non-bank financial service providers suggested that this might lead to a potential conflict of interest. This conflict in essence is between the banks’ drive towards increased transactions and contracts and hence its percentage and margin and the firms’ need to contain costs and manage exchange risk. For many firms financial hedging may be far less appropriate than other operational hedges.

Across the range of financial service providers, the consensus view was that while South African firms have become more aware of exchange related risks over the last decade or so, risk management approaches are generally limited and unsophisticated. With the exception of large firms that have dedicated treasury functions, most firms tend to engage in spot purchasing or limited forward cover arrangements without any adequate understanding of their overall risk profile.

Financial management of exchange rate risks is complicated by exchange rate controls. Apart from the obvious complication of compliance with specific regulations, including requirements for physical documentation as well as the complex customs and tax requirements associated with exporting and importing, foreign exchange controls also limit the possible instruments that can be offered to firms. An example cited is the inability to renegotiate a forward contract on an ongoing basis – even daily if necessary. Since this is currently not permitted, it effectively ties in firms to their initial contract.

The size of the firm – or at least the value of its foreign exchange transactions – influences both the level of the service offered by financial service providers and the firm’s ability to obtain special dispensations from the exchange control authorities.

Both firms and providers point to different classes of service for firms engaging in different values of transaction. Unless a firm is taking forward cover of at least R1 million per month, the firm is relegated to retail service, which effectively implies being charged a premium on the spot rate.

In terms of exchange rate controls, locals require an order to obtain foreign exchange cover – unless of course they have track record, in which case, the SARB may grant them a dispensation – based on 75% of their previous turnover. Typically, authorised foreign exchange dealers (the banks) will only seek to enable firms to obtain this dispensation through the Reserve bank if the value of their business warrants it. Typically, this will exclude small businesses.

The cost issue was also indicated as a barrier to increased and effective utilisation of financial hedging instruments. A couple of concerns arise here:

- The first is the premium payable in respect of foreign exchange purchases, which tends to penalise smaller firms. Whereas a large firm is likely to receive a

highly favourable rate from the banks (in measure do its negotiating power as well as in-house treasury expertise) smaller firms often receive little relief from the commercial spot rate.

- In general, the larger corporates do not pay a premium for forward cover, hence the bank does not add a margin on the market price – or if it does do – it will be a very low margin on the spot price. (For example, if the Rand spot price is R6.00, the corporate will pay 5 cents or 500 points above this (R6.05). Smaller firms tend to pay the most, for example, they would pay between 1000 and 1400 points on the spot price (i.e. R6.14).

### **3.7 Conclusion**

The study reveals that the exchange rate has been, and continues to be, a key influence on the decisions of firms regarding their employment and growth decisions, as well as their operational strategies. While it has been emphasised that this influence is indirect, it is a truism to say that employment is a derived concept in economics.

It is also noted that exchange rate risk is clearly one of many risks that firms have to manage. The period studied (2000 – until the present) is one where liberalisation from a previously protected environment was keenly felt, given the unexpected strengthening of the currency after an earlier collapse. For this reason, firms' awareness of the importance of the currency may be heightened.

The firms that were interviewed are winners – i.e. survivors. Hence while virtually all of them indicated that the exchange rate had impacted their revenues, only half of them indicated that it had impacted on their employment decisions. Almost every firm pointed to at least one competitor, supplier or purchaser that had gone out of business over the period. It is presumed that the real impact on employment could only be discerned from case studies of these firms.

Clearly many influences impact on firm employment decisions, but it is clear that the domestic economic boom over recent years has done much to compensate for loss of export markets, and has enabled the size of the local pie to grow to such an extent, that for many firms even foreign competition can be managed (within limits, of course).

There is no clear sense of whether it is the exchange rate volatility or strength that matters most. In part this may be an artificial question to pose, as clearly firms have to deal with both influences simultaneously. During a period of on-going volatility, which may ultimately lead to a completely different level, the two may be hard to separate conceptually, let alone in reality.

A couple of lessons do emerge however. For most firms, there is a real sense that the level of the currency can – and should – be managed (although there are some limits to this ability). Hence, most firms pointed to ways in which they had improved their operations and become more efficient. In some cases they had shed employment and they emphasised the need to ensure competitiveness through differentiation or specialisation.



What makes successful management of exchange rate difficult at times is the presence of other complicating factors. These factors include the ability of suppliers to pass on import parity pricing – with little thought of the consequences for downstream producers. What may also be relevant is the existence of anti-dumping protection for previously state owned enterprises with considerable hold over downstream producers. The existence of foreign exchange controls and import and export regulations complicate the ability of firms to manage risks.

In terms of management of volatility, while it is true that not all firms make use of the most appropriate instruments, and some seem uninformed as to what is available, the instruments do have limited application. In some cases, this is because of the limitations imposed by exchange controls. In other cases, it is the very nature of the contracts involved that such instruments are inapplicable. In terms of operational decisions, firms have attempted to manage the uncertainty associated with input prices through acquisition and expansion of their supplier pool. Where firms have limited ability to do this, volatility of the currency is often seen as the most significant aspect of exchange rate risk.

The study has provided useful insight into how firms have adjusted to a strong and volatile currency regime, at the same time that the economy has become more open to trade and foreign influence.



## **4. Methodology and profile of firms**

The following section sets out the methodology of the research, the selection of sectors and the selection of firms. Finally, a profile of the firms interviewed is presented.

Given the limitation of 40 firm interviews, it was thought that focus in terms of both sub-sector classifications, as well as in terms of geographic spread, would be most fruitful. The geographic focus was Gauteng, although around 8 interviews were conducted in Cape Town and Durban.

### **4.1 Selection of sectors**

The sectors selected to be researched were identified on the basis of their contribution to employment and their sensitivity to the exchange rate.

The latter could be the consequence of an apparently high export-output ratio or a high import penetration ratio. Alternatively, a reliance on imported inputs would also be important.

As a first step in identifying sectors, annual employment and export data, from 1996-2004, were correlated for the agricultural, mining and manufacturing sub-sectors. Export value in current prices was used as a proxy for the exchange rate effect on each sub-sector. Those sub-sectors that showed the highest levels of correlation between employment and export data potentially showed sensitivity of employment to the exchange rate. The data used for this correlation are shown in the Appendix.

Sub-sectors (with their relevant SIC, or Standardised Industrial Codes) that show a strongly positive correlation between employment growth and export growth (where values above +0.70 for the Pearson correlation are seen to be significantly positive) include:

- 12 Forestry and logging
- 32 Wood and wood products

Sub-sectors that show a strong negative correlation (values smaller than -0.70) include:

- 13 Fishing
- 21 Mining of coal and lignite
- 30 Food beverages and tobacco products
- 34 Other non-metallic mineral products
- 35 Metal products, machinery and household appliances
- 36 Electrical machinery and apparatus



- 37 Electronic, sound/vision, medical appliances
- 38 Transport equipment

Of these data, strongest negative correlation for manufacturing exists for Food and beverages and Electronic, sound/vision, medical appliances.

In view of its significant contribution to employment, metals and metal products was selected above some of the sub-sectors and the presence of the forestry and wood sectors, together with furniture manufacturing seemed to indicate the usefulness of researching a wood cluster. The table below shows the data for exports, employment and the Pearson correlation for the selected sub-sectors.

**Table 1 – Employment data**

Export and employment correlation by sub-sector			
Sub-sector	Exports (R) 2004 current prices	Employment 2004	Pearson correlation 1996-2004
12 Forestry and logging	273,082,089	76,553	0.823
32 Wood and wood products	11,112,950,643	192,971	0.749
39 Furniture and other items NEC and recycling	12,700,136,218	77,208	-0.064
35 Metals, metal products, machinery and household appliances	74,947,942,912	215,587	-0.796

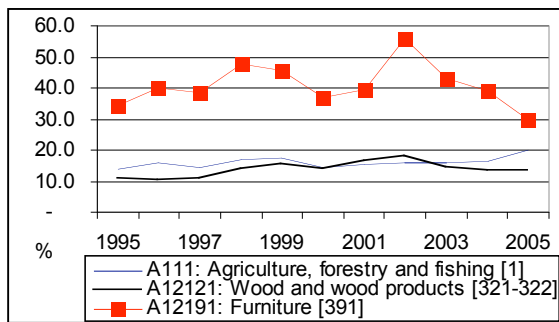
*Source: Global Insight*

This formed the first scan of the data. As it was agreed early on that a cluster approach might be useful, the wood and metal clusters were selected for the research.

The metals sector encompasses basic iron and steel, basic non-ferrous metals, metal products excluding machinery and machinery and equipment. It was also thought that the inclusion of the manufacture of household appliances should also form part of this cluster. The metals cluster includes a broad range of metals and associated manufacturing. As it happened, the interviews that were initially secured were steel producers and manufacturers. Through a process of referral and association, ultimately the participating firms were all either steel producers or manufacturers. Hence while the data for SIC code 35 includes the whole metals industry, our focus came to be on steel-related firms.

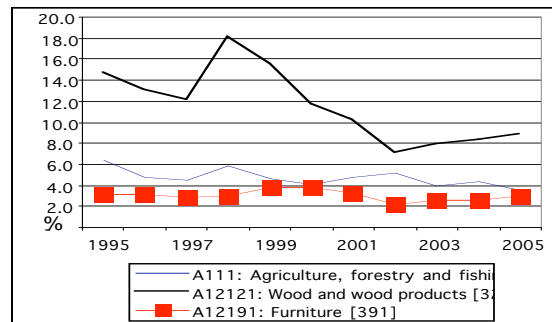
The data below show the export-output and import-output ratios for the wood and metals clusters<sup>5</sup>.

**Figure 1 – Export-output ratios:  
wood cluster**



Source: Quantec, 2006

**Figure 2 – Import-output ratios:  
wood cluster**

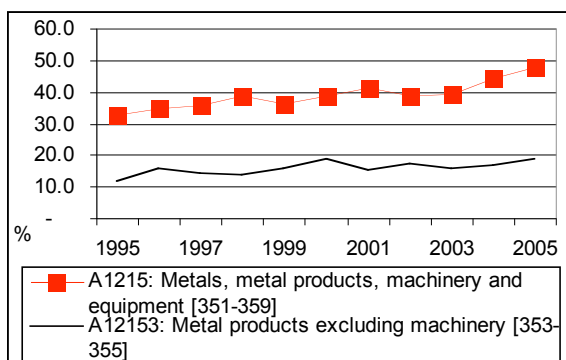


Source: Quantec, 2006

In the figures above, the export-output and import-output ratios are shown for the wood cluster. The export-output ratio for furniture is very high, exceeding 50% in 2002, however, as the Rand gained strength, and the export-output ratio fell back to around 30%. The largest import-output ratio in the cluster is for wood and wood products, which declined from 1998 until 2002, but then recovered to around 9% in 2004.

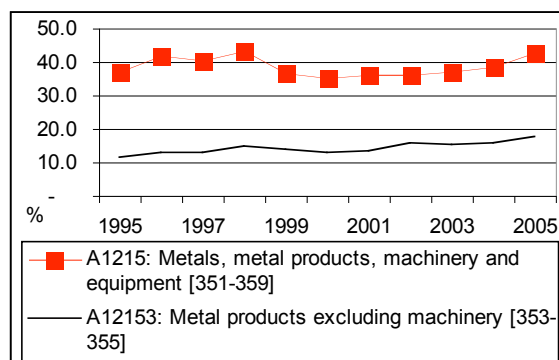
<sup>5</sup> Note that an alternative to the import-output ratio is the import-domestic demand ratio. Output is measured as total sales including exports but excluding imports. Domestic demand is measured as total sales less exports plus imports.

Figure 3 – Export-output ratios: metals



Source: Quantec, 2006

Figure 4 – Import-output ratios: metals



Source: Quantec, 2006

The export-output and import-output ratios for the metals sector are high, with the export-output ratio reaching 48% in 2005. Some of this increase in exports since 2002 comes from the metals products sector, but much of the increase from 2002 appears to be the consequence of the exports associated with basic iron and steel and basic non-ferrous metals which have an export ratio of 59% and 50% in 2005 respectively. In the case of import-output ratios, imports as a ratio of metal products output has grown by 6.1% per year since 2000. Between 1999 and 2005, the export-output and import-output ratios for metal products increased from just over 11% in either case to 19% and 17% respectively.

As a consequence of input from the Reference Group, a decision was made that firms in the services sectors should also be included in the research. Because of the emphasis on employment in the study, the construction and tourism sectors were chosen, as these are both sectors that make a significant contribution to employment. (The data for employment is shown in the sector analyses in Section 5).

## 4.2 Selection of firms

Firms from the following sectors were identified:

- Forestry & logging
- Wood and wood products
- Metal (steel) products
- Household appliances
- Construction
- Tourism

■ Financial Services Providers

A number of publicly available databases were used to identify firms, including listings on the JSE and Alt-X. The Internet was used extensively and various websites were used to gather names and information for potential firms. This constituted the first screening phase.

Invitations to prospective interviewees were sent out at beginning of June 2006 until end of August 2006. One hundred and fifty one firms (including the financial services providers) were contacted, and the research explained to the prospective interviewee.

Each firm was further screened on the phone to ensure that we could identify some sensitivity to the currency, and that the firms had been in existence for at least five years. Most firms displayed some interest when the process was explained to them, but there were a few outright refusals. Eventually, 51 firms agreed to be interviewed but one cancelled at the last moment.

All interviews were concluded by end-August 2006. The table below sets out the data per sub-sector.

**Table 2 – Number of firms contacted and interviewed**

Sector	Firms contacted	Firms participating	Appointment set-up	Interviews completed
Household appliances	8	3	3	3
Metal (steel) industries	32	11	11	11
Wood and wood manufacturing	46	12	12	12
Tourism	16	7	7	7
Construction	27	7	7	7
Total (excl. FSPs)	129	40	40	40
Financial Service providers (FSPs)	22	10	10	10
TOTAL (incl. FSPs)	151	50	50	50

### 4.3 Profile of firms interviewed

The profile provided here is for the non-financial firms, i.e. those in the construction, tourism, steel and wood clusters.

The firms were classified into different sizes on the basis of the number of employees. For this purpose, both permanent and temporary employees were included. The classification is as follows:

- 500 or more employees – large firm
- Between 200 and 500 worker – medium-sized firm
- 200 or fewer employees – small firm

The table below summarises the detail of the firm profile per sector.

**Table 3 – Profile of firms interviewed**

Cluster	Total employment	Size	No. of local operations	No. of foreign operations	Total annual turnover (Rm)	Export turnover as % of turnover	% imported inputs
Construction	17,828	Large	307		8,560	40%	2%
Construction	350	Medium	18	7	130	10%	0%
Construction	35	Small	1		15	53%	15%
Construction	1,300	Large	18	15	550	27%	0%
Construction	290	Medium	8		100	4%	0%
Construction	503	Medium	18	5	350	20%	3%
Construction	1,200	Large	4	2	1,400	29%	25%
Steel & Appliances	545	Large	1	3	1,600	38%	85%
Steel & Appliances	600	Large	5		1,800	0%	75%
Steel & Appliances	174	Small	2		150	0%	25%
Steel & Appliances	1,700	Large	6		1,700	25%	0%
Steel & Appliances	385	Medium	3		460	9%	40%
Steel & Appliances	5	Small	1		20	30%	40%
Steel & Appliances	1,600	Large	7		1,000	30%	0%
Steel & Appliances	153	Small	3		170	10%	5%
Steel & Appliances	120	Small	3	3	270	52%	65%
Steel & Appliances	40	Small	1	1	150	40%	35%
Steel & Appliances	1,250	Large	3	3	500	23%	15%
Steel & Appliances	4,500	Large	39	9	10,000	4%	4%
Steel & Appliances	180	Small	1		400	8%	0%
Steel & Appliances	55	Small	3		150	0%	60%
Tourism	2,726	Large	180	6	1,134	0%	0%
Tourism	850	Medium	28	3	1,400	40%	0%
Tourism	500	Medium	60	4	350	25%	0%



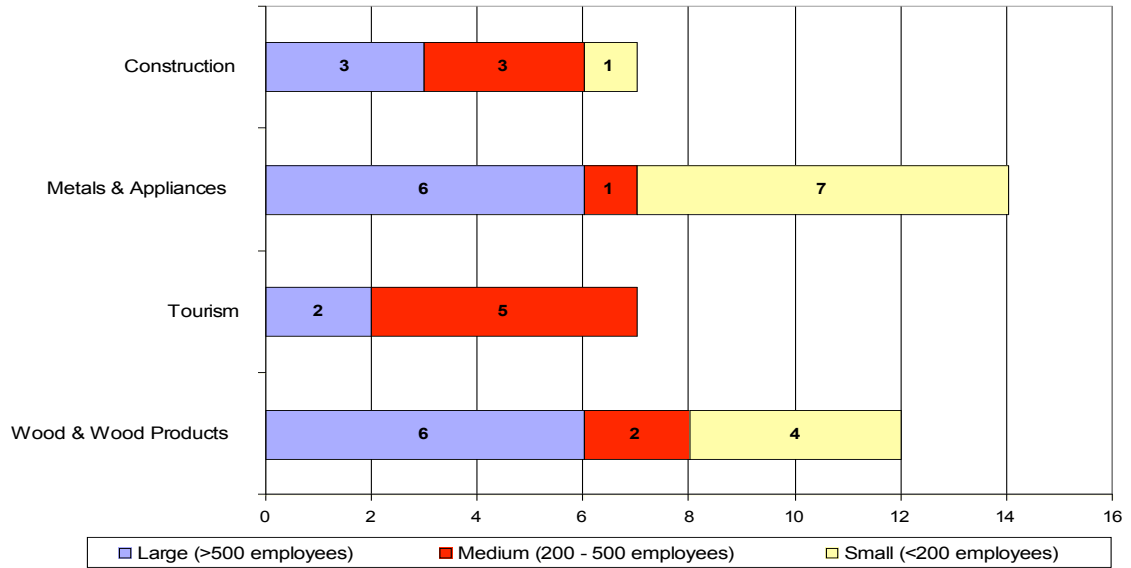
Cluster	Total employment	Size	No. of local operations	No. of foreign operations	Total annual turnover (Rm)	Export turnover as % of turnover	% imported inputs
Tourism	400	Medium	18		320	33%	5%
Tourism	3,700	Large	22	4	500	0%	0%
Tourism	245	Medium	10		45	0%	0%
Tourism	290	Medium	4		80	95%	3%
Wood & Wood Products	1,300	Large	-	2	500	0%	48%
Wood & Wood Products	95	Small	1		15	80%	0%
Wood & Wood Products	240	Medium	1		76	1%	40%
Wood & Wood Products	100	Small	1		16	2%	70%
Wood & Wood Products	25	Small	1		240	100%	10%
Wood & Wood Products	5,500	Large	5		700	10%	3%
Wood & Wood Products	7,000	Large	17	13	31,500	73%	10%
Wood & Wood Products	2,768	Large	3		2,000	85%	0%
Wood & Wood Products	900	Large	5	1	500	100%	65%
Wood & Wood Products	470	Medium	3	-	1,000	8%	40%
Wood & Wood Products	24	Medium*	1	-	-	0%	0%
Wood & Wood Products	1,000	Large	6	-	200	0%	80%

*Source: Firm questionnaires*      *Note: \* Classified as such as the firm was a medium-sized firm before going into liquidation. It failed to mention its status prior to the interview but still provided an interesting case*

In total, there were 17 large firms (42%), 11 medium-sized firms (28%) and 12 small firms (30%) interviewed. The figure below shows the breakdown per cluster: no small firms were interviewed in the tourism sector and only one was interviewed in the construction sector.

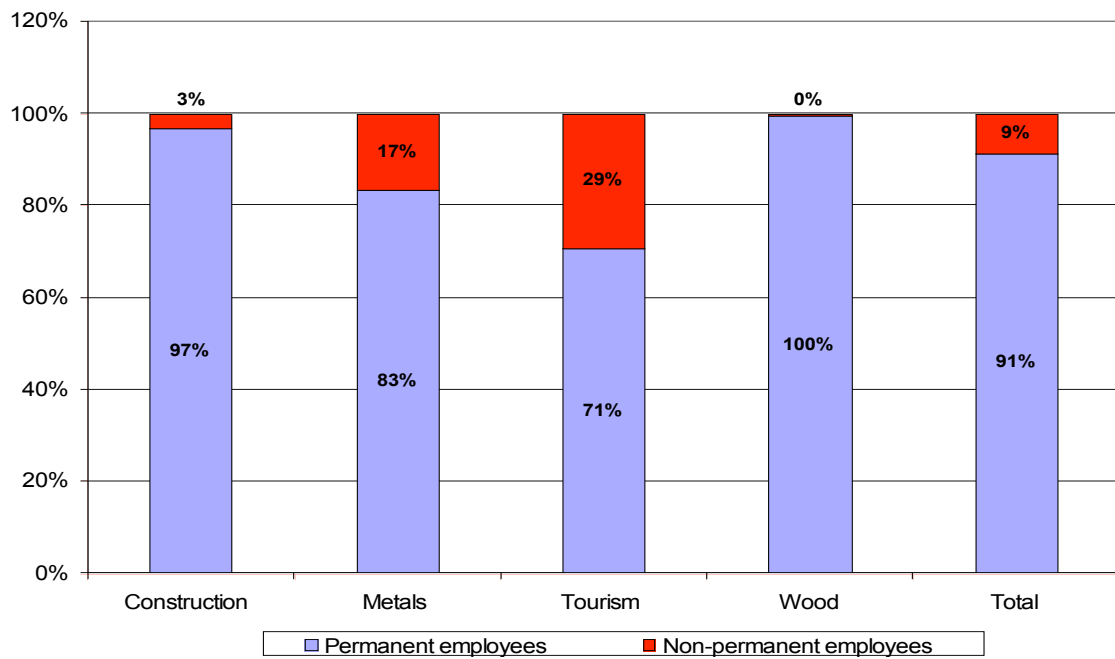


Figure 5 – Size of firms in sample



Source: Firm questionnaires

Figure 6 – Employment status of employees per sector

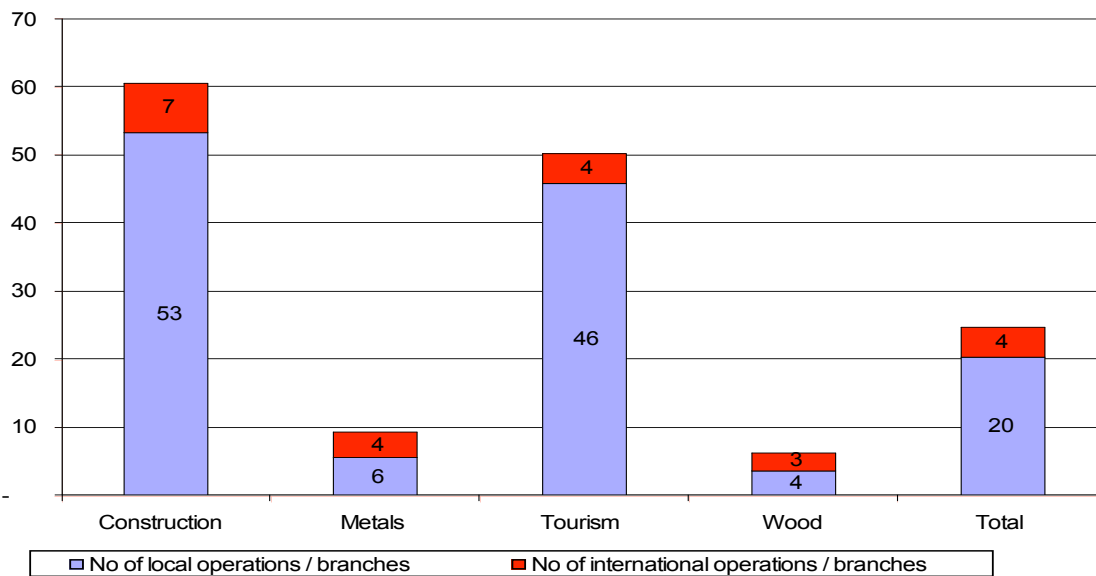


Source: Firm questionnaires

The data in the figure above show the split of permanent and temporary workers in the sector. Although much has been said about the casualisation of employment in South Africa, it is only in the steel and tourism categories that this appears to be a widespread phenomenon. In total, only 9% of the 60 946 jobs represented by the firms interviewed were temporary.

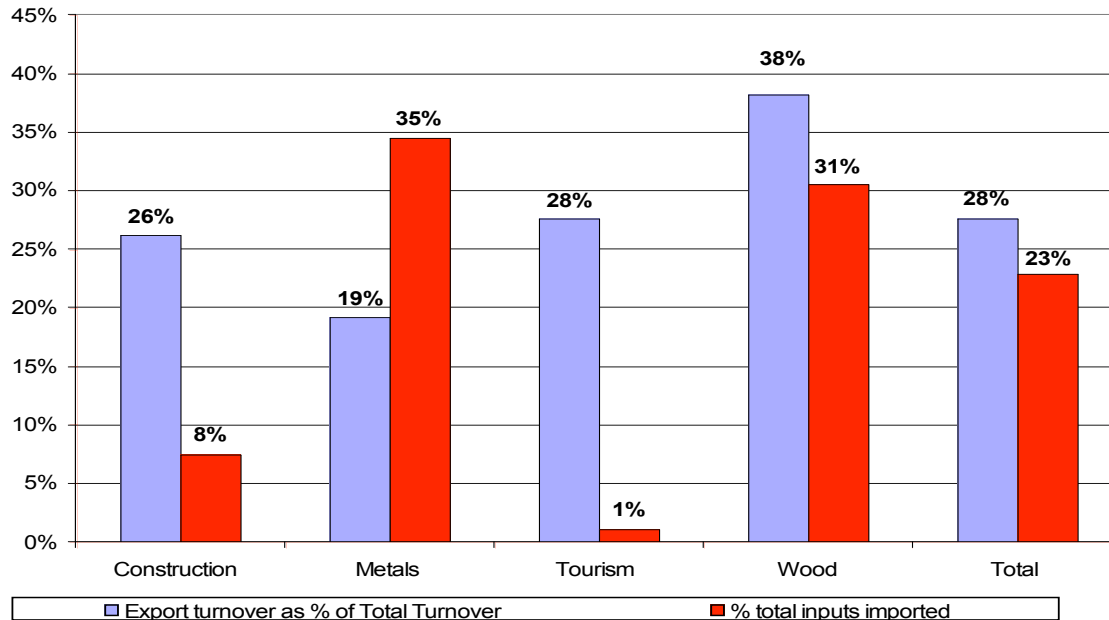
In the figure below, the data are shown for the average number of local and foreign operations per sector. Construction firms were more likely than any other sector to have foreign operations, mostly as a consequence of needing to manage projects in Africa and the Middle East. The foreign operations of tourist firms represented for the most part foreign properties or branches, whereas for those in the metals cluster, it represented manufacturing plants.

**Figure 7 – Average number of local and foreign operations by cluster**



Source: Firm questionnaires

Figure 8 – Average share of exports and imported inputs



Source: Firm questionnaires

In the figure above, average shares of exports and imported inputs for the different sectors are shown. The greatest share of exports is for the wood cluster. Not surprisingly, export income accounted for a relatively high share of tourism turnover (28%), but it also contributed 26% of construction turnover.

The greatest share of imported inputs is accounted for by firms in the steel cluster, followed by those in the wood cluster. In the latter regard, furniture firms accounted for much of this high level of imported inputs. The inputs include wood and leather. These two clusters contribute significantly to the 23% imported input share of the 40 firms. The 1% imported input for tourism is accounted for by properties and resorts in other countries, owned by the local firms interviewed for the study.

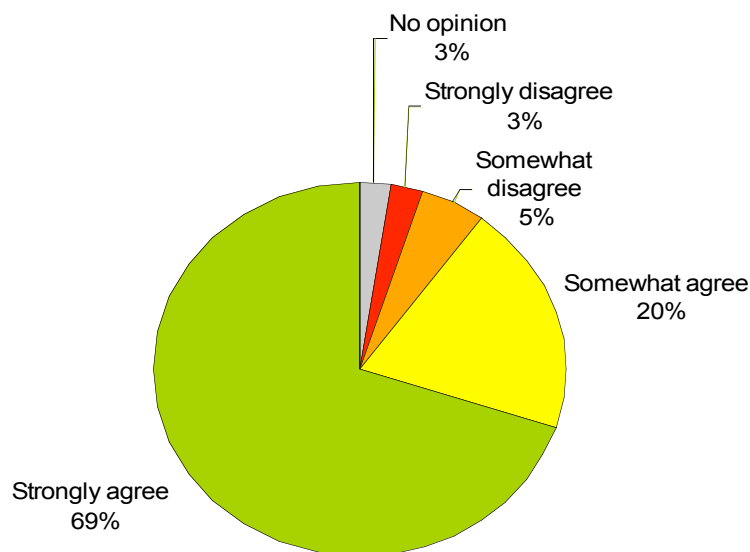
## 5. Questionnaire analysis

The analysis here provides an overview of the answers submitted by firms, and makes comparisons between the sectors. It highlights the key questions in the questionnaire – which can be found in its entirety in the Appendix. All the data reported in this section are from the firm questionnaires.

### 5.1 Importance of the exchange rate to the firm

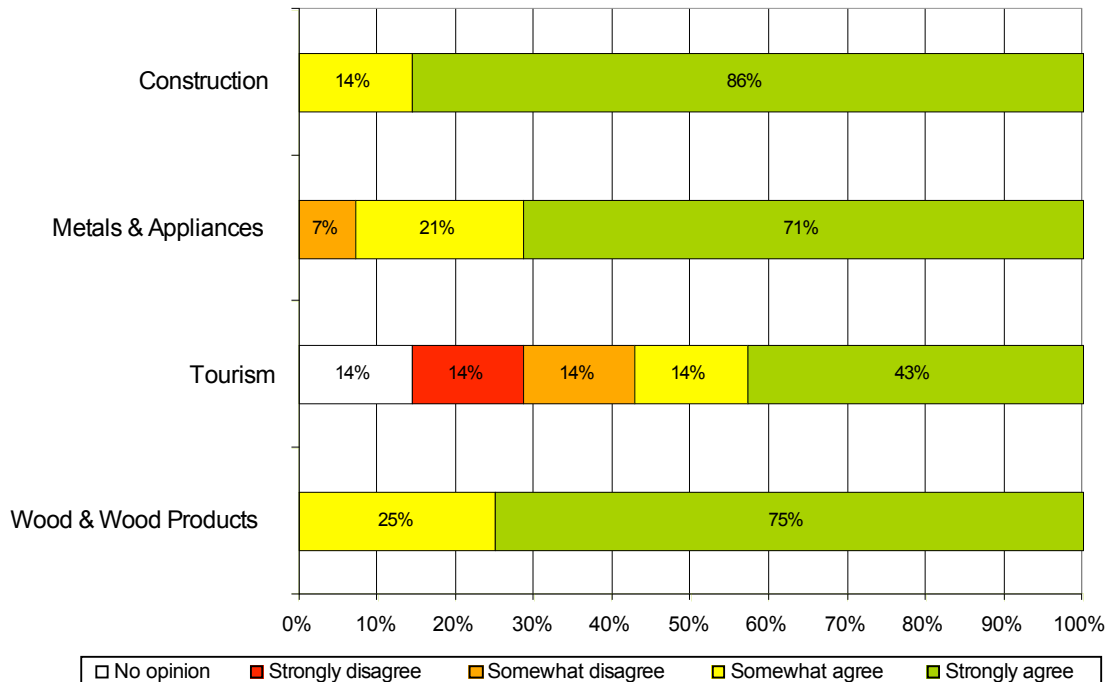
Section A of the questionnaire framed a number of questions aimed at understanding the importance of the exchange rate to the firm.

**Figure 9 – Responses to “Exchange rate issues have become more important in recent years”**



The figure above illustrates that 69% of the firms indicated that they strongly agreed with the statement that exchange rates have become more important in recent years. Taken together, the “somewhat agree” and “strongly agree” response make up 89% of the sample. Only one firm disagreed with the statement.

**Figure 10 – Sector responses to “Exchange rate issues have become more important in recent years”**



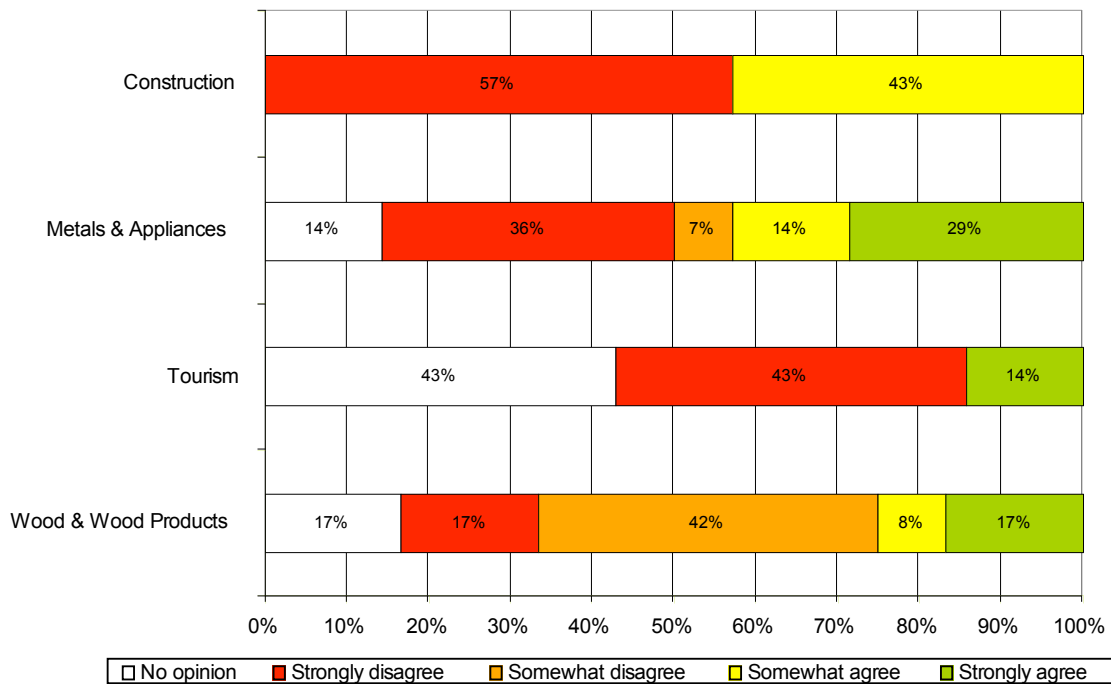
The figure above presents the view from the perspective of the different sectors. Those who most strongly agreed with the statement were firms in the construction, wood and wood products and metals sectors. Firms in the tourism sector seemed to be far more neutral to the statement with only 43% of firms agreeing with the statement.

In spite of the exchange rate gaining importance in recent years, most firms surveyed strongly disagreed or disagreed somewhat with the statement that the ability to manage exchange rate risk provided firms with a strategic advantage (see figure below). Taken together, the two negative categories (strongly and somewhat agree) accounted for the responses of 57% of construction firms, 43% of metals and appliance firms, 43% of tourist firms and 59% of wood and wood product firms. The responses to this question implied that while firms could see the potential of the management of exchange rate risk to generate competitive advantage, their ability to do so was impaired.

In the figure below, the sector responses are given. Ironically, although the vast majority of construction firms indicated the importance of the exchange rate in recent years, none felt that the management of their exchange rate risk provided them with a competitive advantage. In most cases, construction firms appeared to feel the available financial instruments failed to provide a useful solution to currency risk. This was linked to the nature of their business, which involves long-term contracts that experience long delays. (See sector analysis).

In contrast to this, 29% of firms in the metals product cluster strongly agreed that their ability to manage the exchange rate risk placed them at a competitive advantage and 14 % somewhat agreed. This reflects the discussion in the interviews – overall, there was a much greater sense from steel and appliance manufacturers that the hedging facilities made a positive difference to their risk management.

**Figure 11 – Sector responses to “My firm treats the ability to manage exchange rate risk as a strategic competitive advantage”**

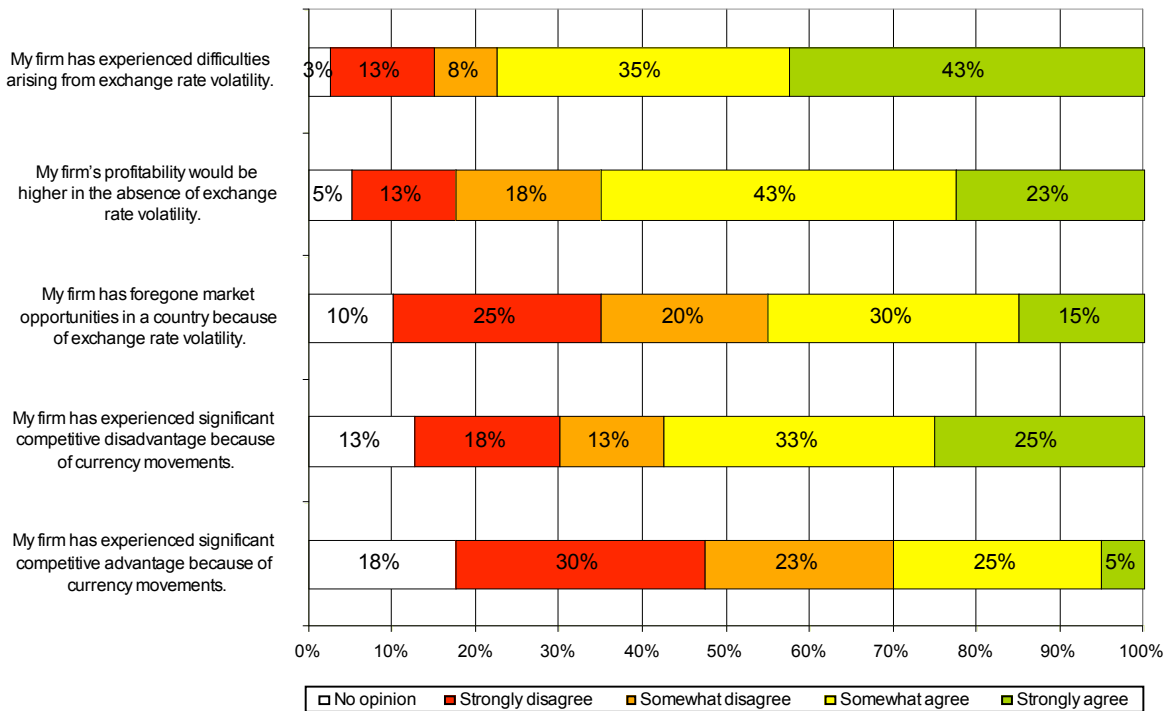


## 5.2 Impact of exchange rate volatility on competitiveness and profitability

Firms were asked a range of questions on the impact of exchange rate volatility. Their answers are presented the Figure below.

Three questions elicited generally affirmative answers: My firm has experienced difficulties arising from exchange rate volatility, my firm’s profitability would be higher in the absence of exchange rate volatility and my firm has experienced considerable competitive advantage because of currency movements. Taken together, the positive responses to this question (strongly agree and somewhat agree) account for 31, 26 and 23 of the firms interviewed respectively.

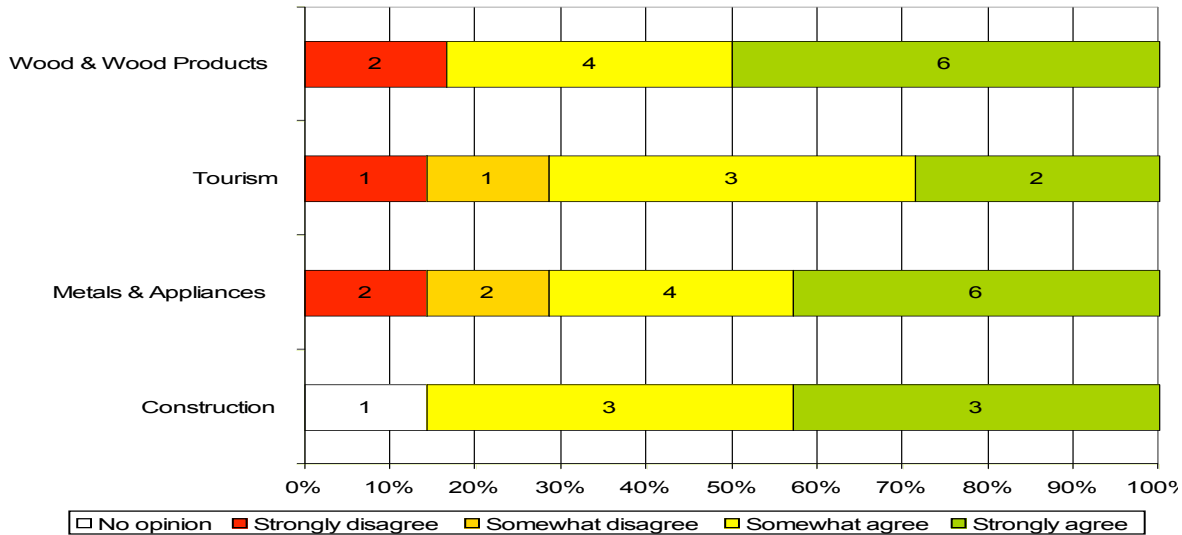
Figure 12 – Firm responses to the impact of exchange rate volatility



The first of the questions above is: *My firm has experienced difficulties arising from exchange rate volatility* below. Figure 13 analyses the answers to this question by sector.

Note that the figures appearing in the coloured blocks in the Figure below now refer to numbers of firms, not percentages. Six out of the 7 construction firms, 10 of the 14 steel and appliances firms, five of the seven tourism firms and 10 out of the 12 wood cluster firms gave a positive response to the question.

**Figure 13 – Sector responses to “My firm has experienced difficulties arising from exchange rate volatility”**



The fourth and fifth statements in Figure 12 investigate if: My firm has experienced significant competitive disadvantage because of currency movements and if my firm has experienced significant competitive advantage because of currency movements. The table below presents responses to the first of these two statements and shows that most firms felt they had experienced some competitive disadvantage because of currency movements. (Twenty-three firms gave a positive response to the first question and 21 answered in the negative to the second).

More firms in the steel and appliances industries (11 out of 14) gave a positive answer to *my firm has experienced significant competitive disadvantage because of currency movements* than in any other sector canvassed (see table below).

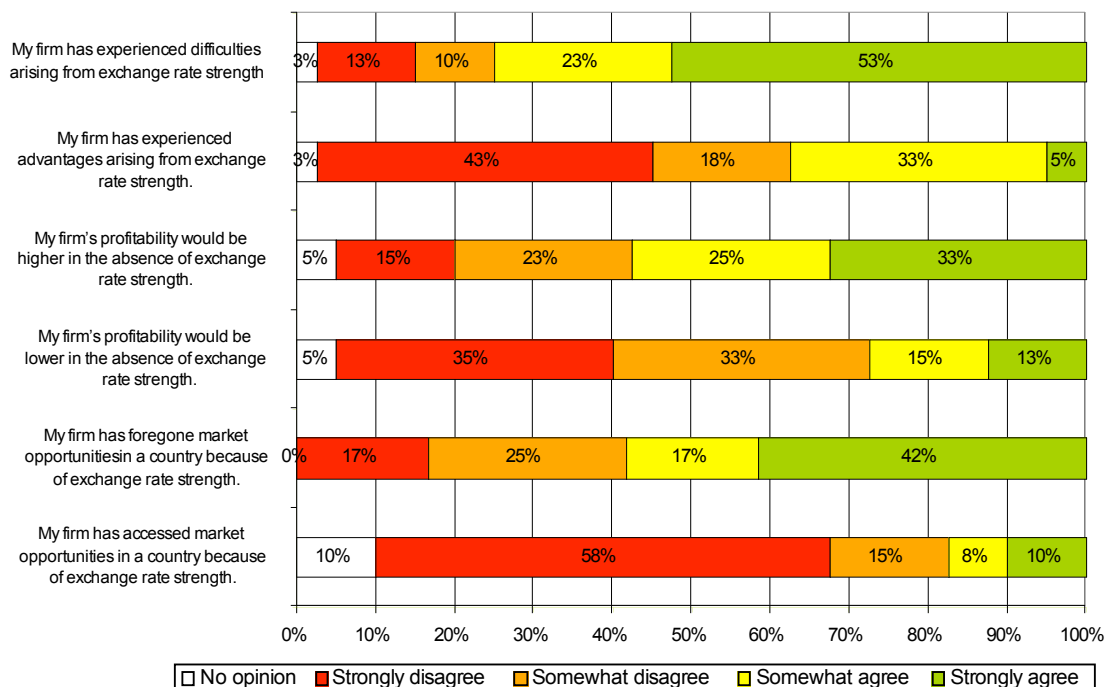


**Table 4 – Sector responses: competitive disadvantage from exchange rate movements**

My firm has experienced significant competitive disadvantage because of currency movements						
	No opinion	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Total
Construction		3	1	2	1	7
Steel & appliances	1	1	1	8	3	14
Tourism	3	2	1	1	0	7
Wood & wood products	1	1	2	2	6	12
Total	5	7	5	13	10	40

### 5.3 Impact of exchange rate strength on competitiveness and profitability

**Figure 14 – Firm responses to the impact of exchange rate strength**



In the figure above it can be seen that most firms (76 % or 30 of them) felt that they had experienced some difficulties arising from exchange rate strength (Somewhat or

strongly agree). Fifty-eight percent or twenty-three firms indicated that their profitability would be higher in the absence of exchange rate strength. Just under half of the firms felt that they had forgone market opportunities because of exchange rate strength.

By contrast, seventy-three percent or 29 of the firms disagreed (either strongly or somewhat) with the statement that they had accessed market opportunities because of exchange rate strength.

The table below presents sector data related to the notion that exchange rate strength presents the firm with difficulties. All the construction firms and most of the wood, steel and appliance firms responded in the affirmative (strongly or somewhat agree) to this notion. Just over half of the tourism firms replied in affirmative to the question.

**Table 5 – Sector responses to difficulties of exchange rate strength**

My firm has experienced difficulties arising from exchange rate strength							
	No opinion	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	Total	Positives
Construction	0	0	0	2	5	7	7
Metals & appliances	1	2	1	4	6	14	10
Tourism	0	2	1	1	3	7	4
Wood & wood products	0	1	2	2	7	12	9
Total	1	5	4	9	21	40	30

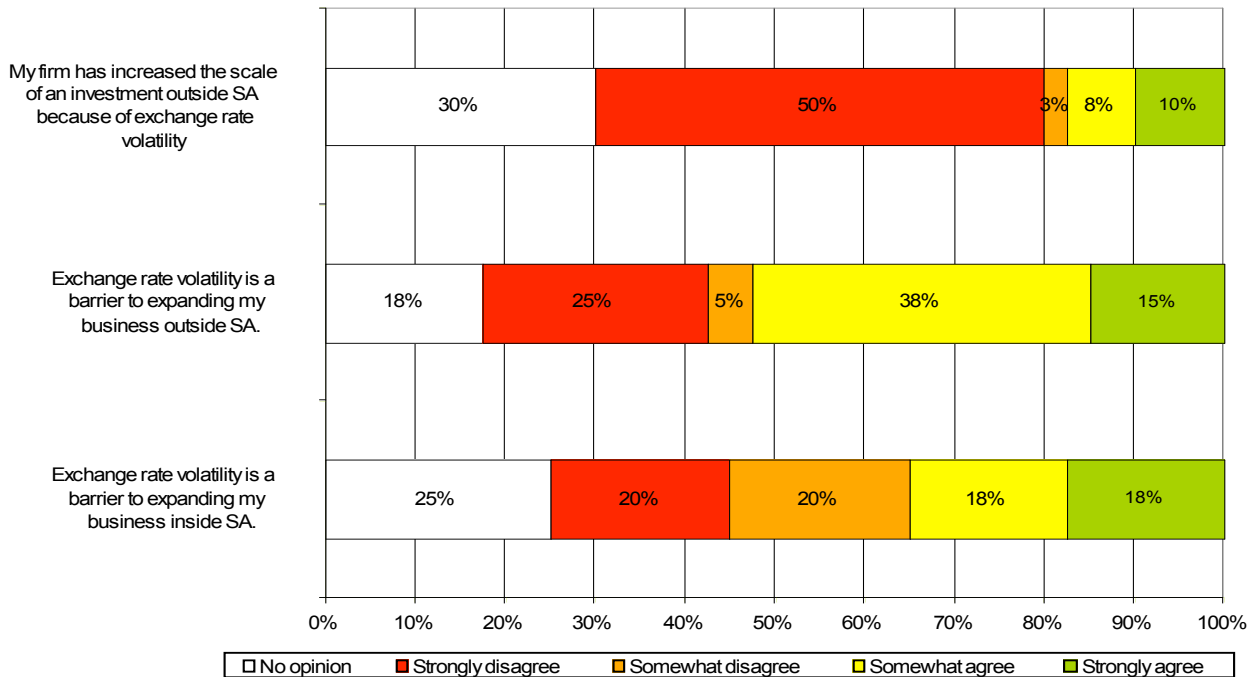
## 5.4 Exchange rate influences on investment decisions

A few questions were asked regarding the impact of the volatility of the exchange rate on the firms' investment and growth decisions. The responses to the three questions are shown in the figure below.

While half of all firms strongly disagreed with the statement that their firm had increased the scale of investment outside South Africa as a consequence of exchange rate volatility, only a quarter of all firms felt that it was a barrier to their expansion outside SA. The firms were evenly split on the question of whether volatility was a barrier to expansion within SA.

The discussion below suggests that firms responded more definitely to the questions relating exchange rate strength and its role on investment than in the case of volatility of the exchange rate. In the interviews, firms did refer to volatility as adding to uncertainty – and hence undermining their confidence in terms of making investment decisions.

**Figure 15 – The impact of the volatility of the exchange rate on investment decisions**



In contrast to the rather inconclusive responses to the question relating to investment and expansion as they relate to volatility, firm responses regarding the currency's strength painted a rather more definite picture. These are shown in the figure below.

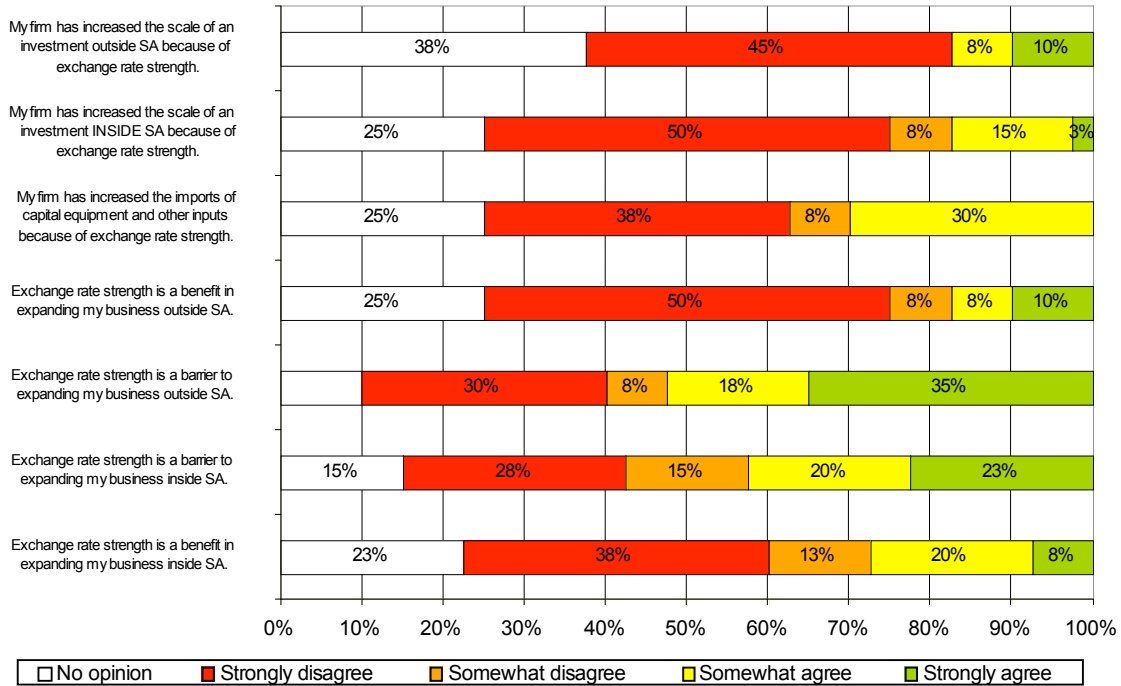
The first three questions relate primarily to investment decisions. It was hoped that such questions would reveal a link between the strength of the currency and imported capital equipment for expansion.

The firm responses were largely negative. Most firms had not increased the scale of investment either outside South Africa or within its borders because of exchange rate strength. Some 45% of firms (18) and 50% firms (20) respectively strongly disagreed with the statements (the first two questions of the figure below).

Only 12 firms (30%) agreed somewhat with the suggestion that they had increased the import of capital goods because of exchange rate strength, while 15 (38%) strongly disagreed with the statement.

As reflected in the sector analyses based on the case studies, very few firms increased investment during the period of exchange rate strength. However, a number of firms had expanded when the exchange rate was at its weakest; in response to what they saw would be on-going external demand for their products. Once the currency had strengthened, not only had those markets evaporated, but firms now also faced increased foreign competition. In the words of one respondent, one needs to have courage to expand now.

**Figure 16 – The impact of the strength of the exchange rate on**



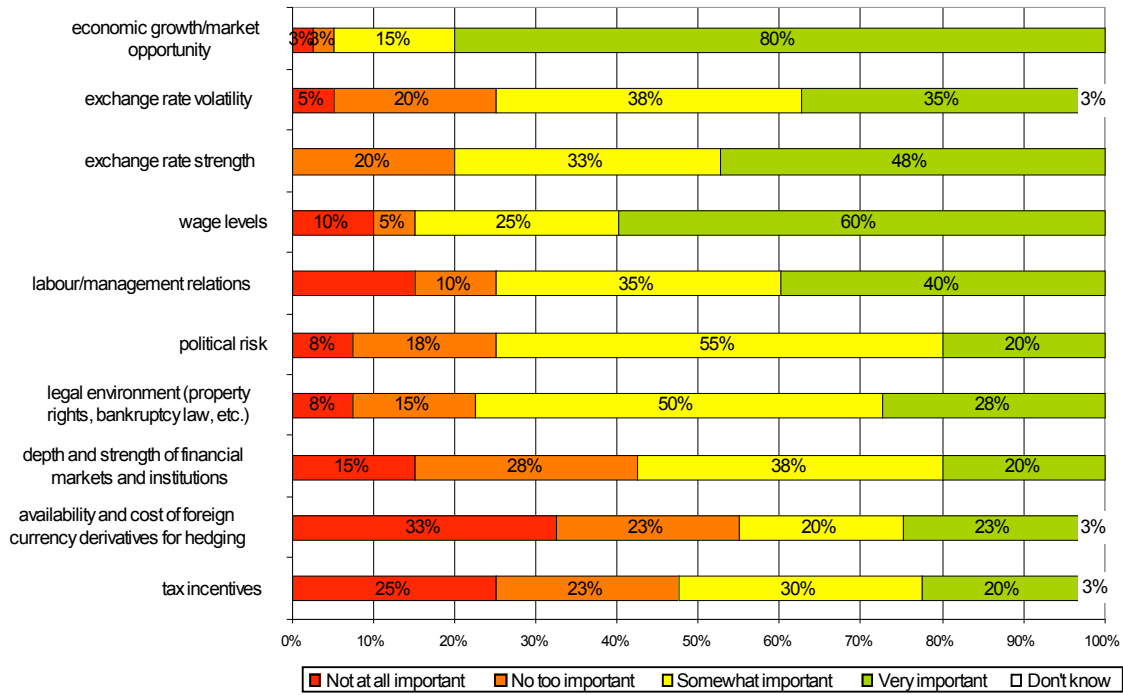
### 5.5 Influences on growth and employment decisions

One of the key questions asked of firms was to rank the importance of a number of possible influences on their growth and employment decisions. Among these were exchange rate volatility and exchange rate strength. The results are shown in the figure below.

Taken for all firms, the results show that economic growth or market opportunity was the key influence for firms’ investment and growth decisions, followed by wage or salary levels, exchange rate strength and exchange rate volatility. The total number of positive responses to these four influences (very important and somewhat important) accounted for 95% (38), 85% (34), 81% (32) and 73% (28) of the firms canvassed.

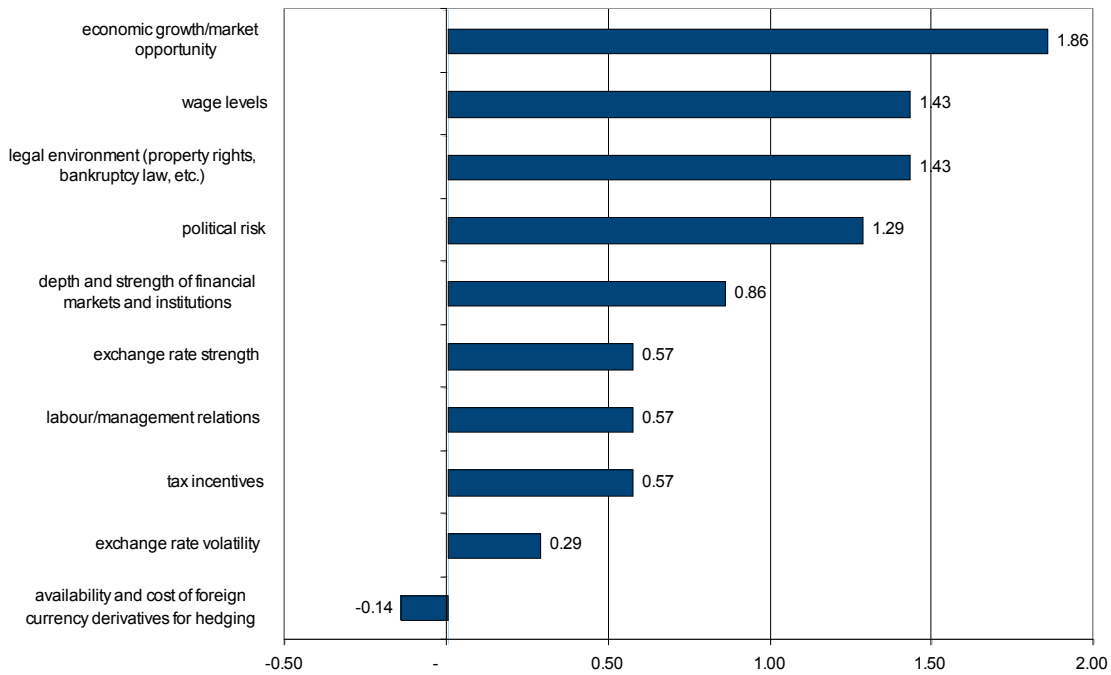
Areas that were ranked as less important included the depth and strength of financial markets, the availability and cost of foreign currency derivatives for hedging and tax incentives. With regard to the latter, firms pointed out that there were no tax incentives for their industries, but they indicated they would respond to such incentives if offered.

Figure 17 – Influences on growth and employment decisions



While the data above show the aggregate data, there were sectoral differences. The data have been weighted in the figures below, so that the average response of each sector is shown.

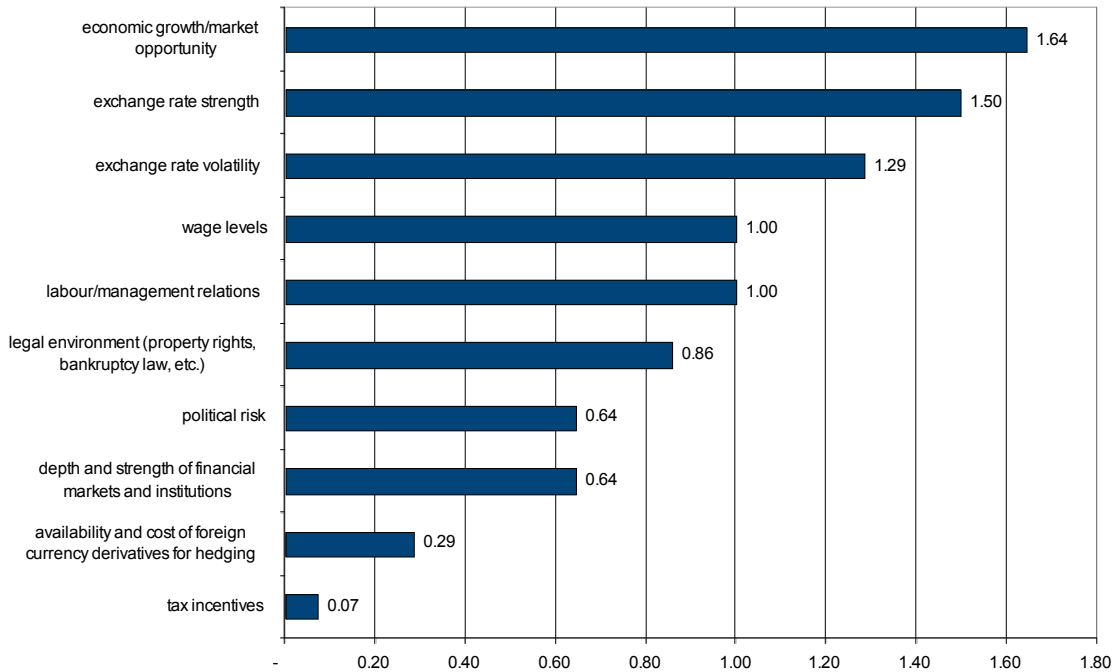
**Figure 18 – Construction: influences on growth and employment decisions**



Apart from the economic growth, wage or salary levels was also ranked as a key influence by construction firms. This is commensurate with their overriding concerns regarding the shortage of skills and the associated salary hikes. In this sector, labour relations were not deemed to be very important, perhaps because the wage level concerns here related to the skills shortage relating to professional engineers and other highly qualified individuals, not typically unionised.

Both the legal environment (which may be associated with legal certainty regarding property rights and corruption, for example) and political risk (associated with economic and social stability) were also strong influences on their growth and employment decisions. In construction firms, this appears to be linked primarily to their operations within Africa and the Middle East.

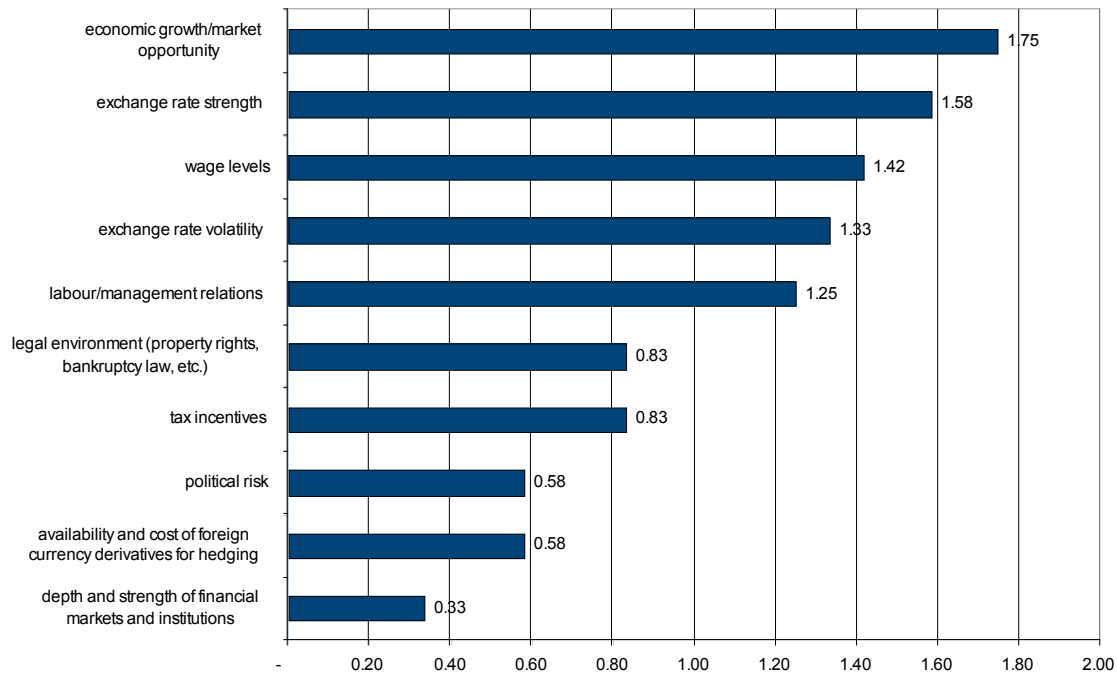
**Figure 19 – Steel and Appliances: influences on growth and employment decisions**



Key influences for firms in the steel and appliances cluster – apart from economic growth – were exchange rate strength and volatility, and wage levels and labour relations (see figure above). Again, these themes emerged in the interviews. These firms felt keenly that the exchange rate influenced not only their export markets, but also their local market – and the strength of the currency was of key concern to their competitiveness and sustainability. These firms tend to be labour intensive, which may affect their competitiveness, if wages are deemed to be excessive.

Figure 20 indicates that the most important influences for firms in the wood industries cluster – apart from economic growth – were exchange rate strength, wage levels, exchange rate volatility and labour relations. Hence for a few minor variances, the picture largely resembles that of the firms in the steel and appliances sector, shown above. This is not surprising, given that both sets of firms depend on commodities for their production and are exposed to imports of foreign competitors. Wood industry firms are aware of the influence of the exchange rate strength and wage levels.

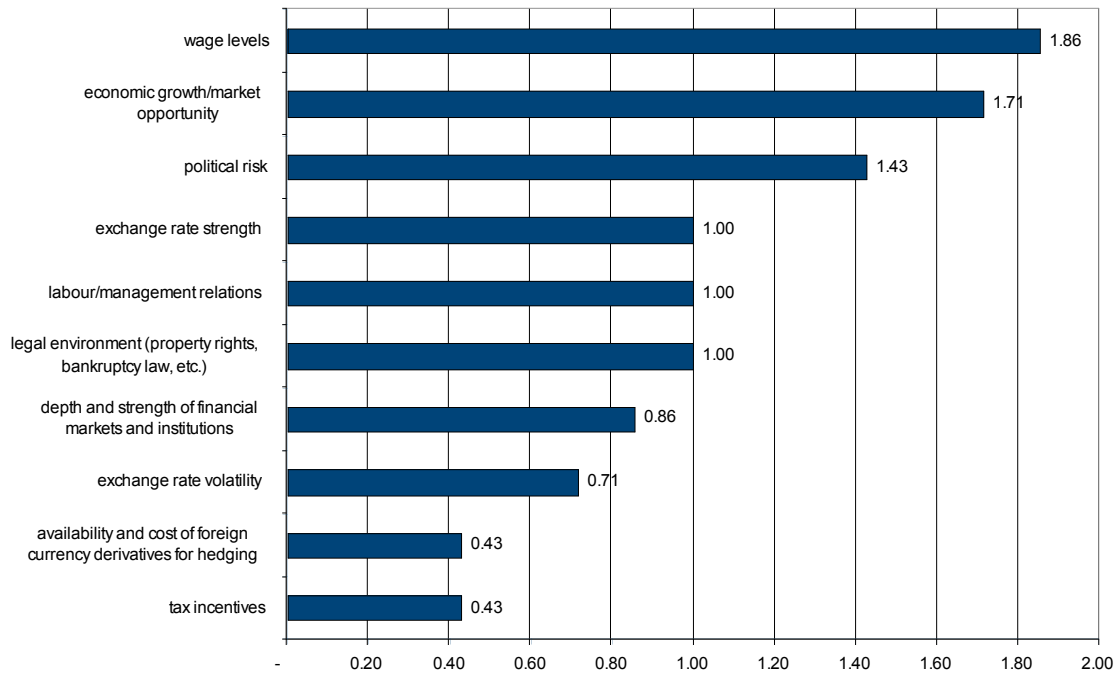
**Figure 20 – Wood industries: influences on growth and employment decisions**



The responses from firms in the tourism sector (see figure below) ranked wage level as the key factor, higher even than economic growth and market opportunity. Political risk (associated with social and economic risk in the minds of travellers as well as personal safety issues) was also ranked as a key influence. Thereafter exchange rate strength, the legal environment and the depth and strength of financial markets were all seen as equally important by tourism firms.

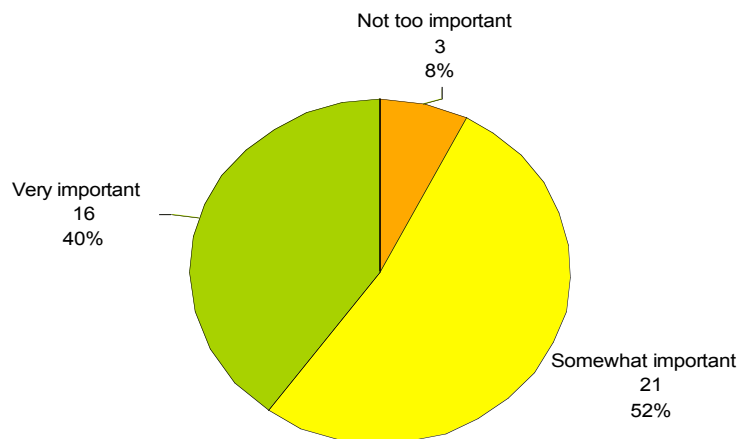


Figure 21 – Tourism: influences on growth and employment decisions



Most firms indicated that they found the overall rating of the importance of exchange rate strength or volatility relative to other risks somewhat important. Forty percent saw them as very important, while only a minority rated the influence the exchange rate as not too important (see figure below).

Figure 22 – Importance of exchange rate relative to other risks

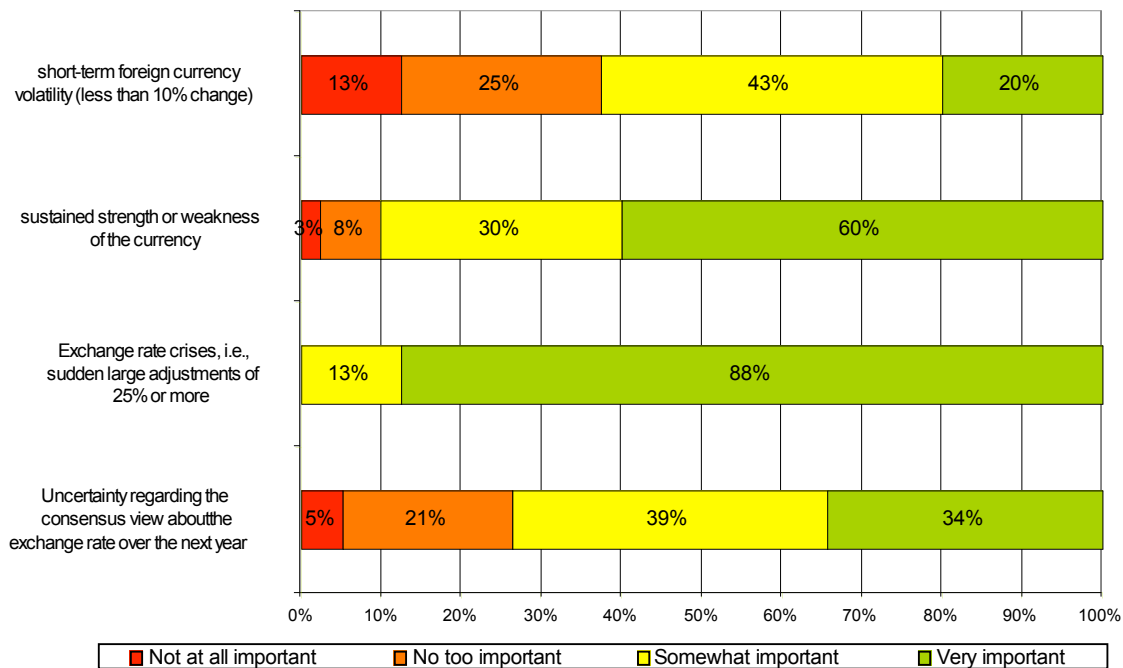


## 5.6 Influence of exchange rate movements on profitability

The figure below presents the responses about exchange rate movements and profitability.

Asked about the impact of different types of exchange rate movement on the firms profitability, firms indicated that an exchange rate crisis, associated with a sudden large adjustment of the currency, followed by a period of sustained strength or weakness were most likely to affect them. While the latter statement may appear to be ambiguous, it captures the responses of importers and exporters alike.

**Figure 23 – Exchange rate movements and profitability**



## 5.7 Impact on employment output and revenue

Interviewees were asked to what extent the firm had experienced a change in employment levels, output and revenue over the last five years due to the exchange rate volatility or strength. Over the past five years, the Rand has recovered from its lowest levels and a period of considerable volatility since 2001. From January 2002 until September 2003, the currency experienced a period of gradual appreciation. The Rand appeared then achieved a relatively stable value until around March this year when the currency has once again moved into volatile territory.

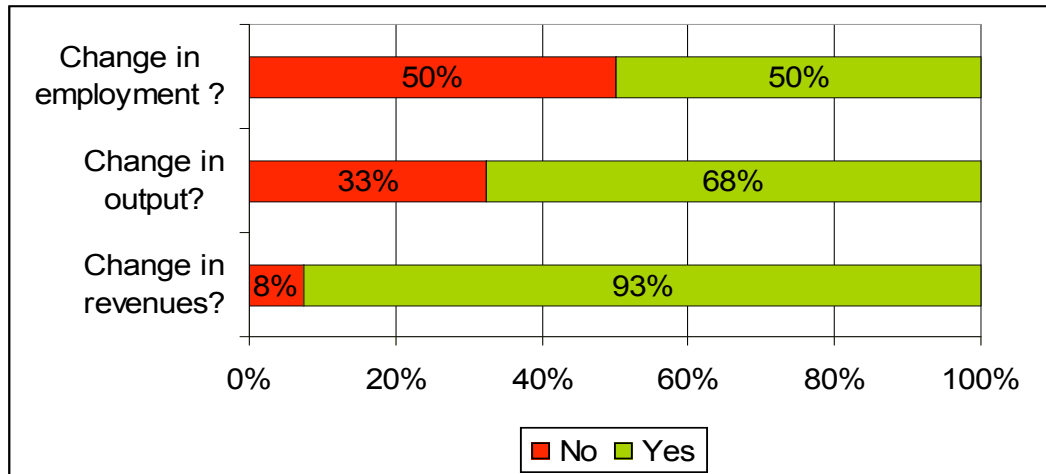
Given this complexity of movement, it is difficult for firms to separate out volatility and strength. For this reason, the question asked firms to quantify in broad terms the impact of the currency on employment, output and revenue.

Firm's responses varied for each of these categories, with 37 firms indicating that the exchange rate had had an impact on their revenues (93% of respondents). Twenty-seven firms (68%) indicated that their output had been affected. This may be artificially low as more than one service sector firm wasn't sure how to respond to the notion of output. 20 firms indicated there had been some influence on their employment in the past five years. The responses appear in the figure below.

The responses of firms to this question resonates with a recurring theme in the interviews, that most firms saw exchange rate volatility and its level as affecting their bottom line.

A number of firms indicated that exchange rate volatility affected their employment decisions indirectly only through this mechanism. However, there were still a number of firms that felt that exchange rate strength had had a direct impact on their competitiveness and hence their employment decisions.

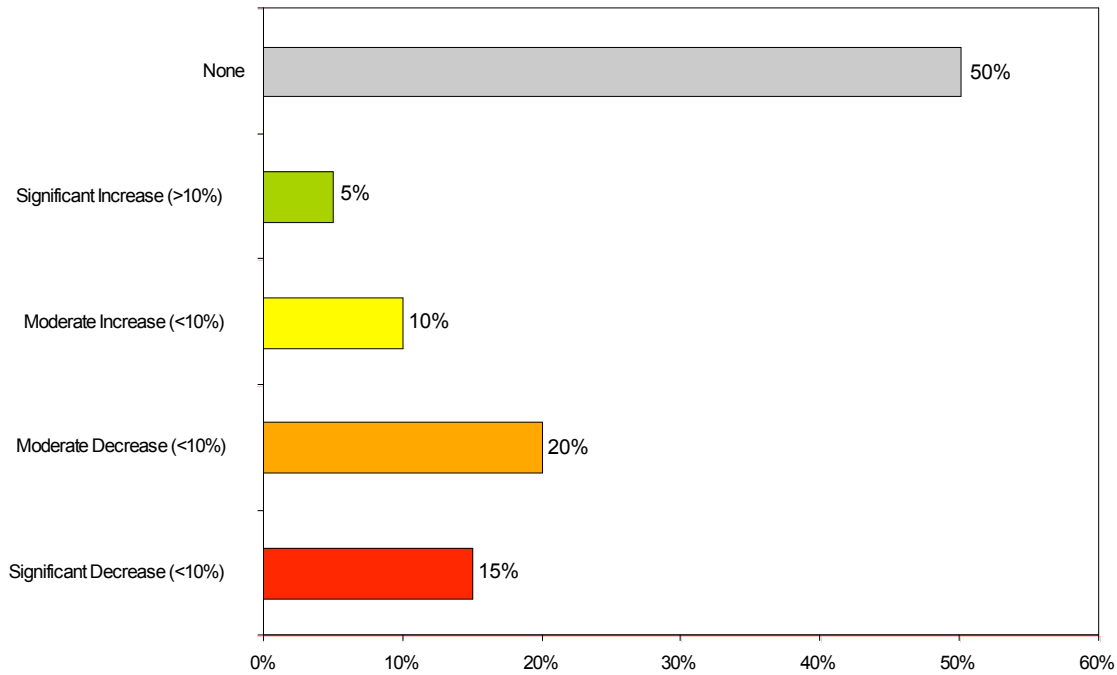
**Figure 24 – Has your firm experienced any change due to exchange rate volatility or strength over the past five years?**



In terms of change in employment, half of the firms indicated there had been change attributable to the exchange rate in the past five years. Six firms (15%) indicated that it had significantly decreased their employment – where significant was defined as a 10% reduction or more. Three of these responses came from firms in the wood industry, two from firms in steel and appliances and one from a tourist firm.

Eight firms (20%) indicated there had been a decrease in employment of less than 10 percent. Two and four firms indicated that they had increased employment significantly and moderately respectively over the past five years. The responses are illustrated in the figure below.

**Figure 25 – The nature of the impact on employment**



The figure above presents the responses to questions about whether or not exchange rate movements affected output. Firms in the steel and appliances and wood industries clusters were most negatively affected by the exchange rate over the past five years, with six steel and appliance manufacturers and three wood industry firms indicating they had experienced a significant decline in output. It is notable though that it is only in these two clusters that any firm indicated that their output had increased either moderately or significantly.

Figure 26 – The nature of the impact on output

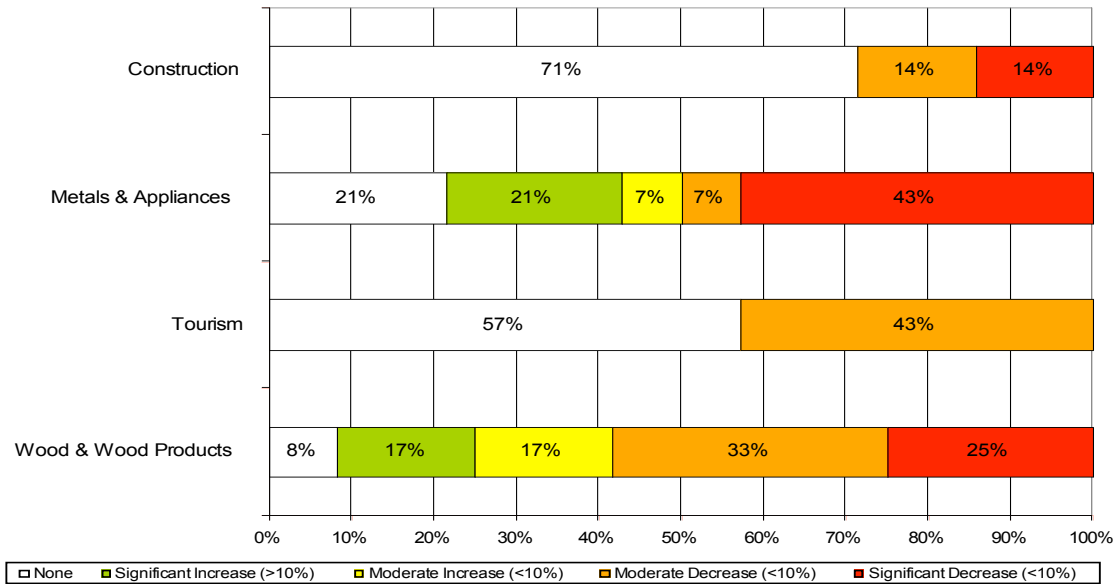
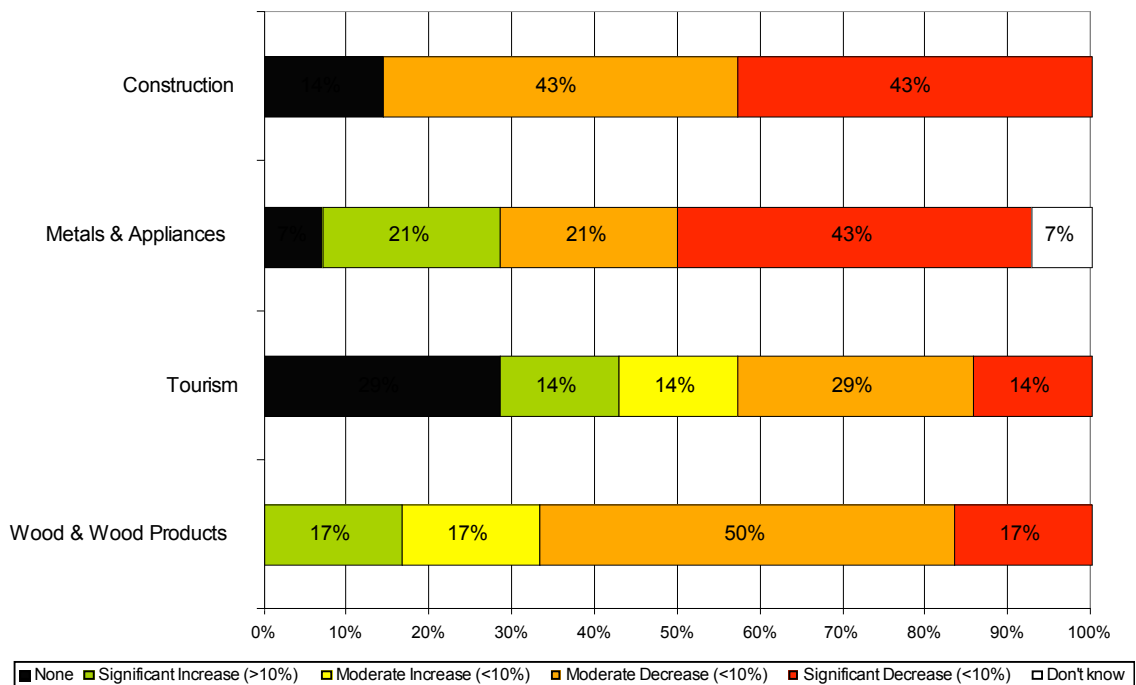


Figure 27 – The nature of the impact on revenue



The figure above presents the picture in terms of revenue. Of the 37 firms that indicated their revenue had been affected by the exchange rate over the last four years, 26 said that the effect had been either moderately or significantly negative.

As the figure above indicates, 86% of construction firms (or 6 firms) said there had been a significant or moderate decrease in revenue associated with the exchange rate. Nine firms were in the steel and appliances cluster (64% of the cluster) and eight were wood industry firms (67% of the cluster). Only 45% of tourist firms interviewed felt that the exchange rate had affected their revenues negatively, while 28% or 2 firms indicated that they felt the exchange rate had enhanced their revenues over the past five years. Four and three firms in the wood and steel industries respectively also felt the impact of the exchange rate had been moderately or significantly positive.

## 6. Sector analysis

### 6.1 Construction

#### 6.1.1 Overview

Construction embraces a broad range of activities, amongst which building and civil activities predominate. It includes residential and non-residential building, civil engineering – associated with infrastructure development - and industrial and mining related construction.

Activity in the construction sector tends to be cyclical in nature, with the sector currently (September 2006) in a boom. This comes after almost two decades of subdued construction activity. The decline was particularly severe in the early 1990s, when output fell by more than 10% per year between 1991 and 1993. However, output in the industry has increased since 1995 (Teljeur & Stern, 2002).

The contribution of construction to GDP in terms of gross value added has grown in recent years. It now constitutes over 3% of GDP (R30 billion in 2005 constant prices). The contribution of construction to gross value added has grown by 45% since 2000.

Construction activity is very closely linked to gross fixed capital formation, and it has become industry norm to use three of the five categories of investment expenditure employed by the Reserve Bank to provide a sense of *expenditure* on construction activities. These three categories include residential buildings, non-residential buildings and construction works<sup>6</sup>.

In figure 28 below, the expenditure on construction – that is expenditure on gross fixed capital formation by general government, public corporations and the private sector - amounted to just over R97 billion in 2005. In 2000 the amount stood at R49.2 billion.

The current expansion phase has already started to place stresses on the sector – particularly in terms of skills. A recent building and construction survey by the Bureau for Economic Research, for example, indicated that 98% of those surveyed were constrained by lack of skills. As will be seen, the emphasis on skills is a theme of the interviews (Engineering News, 2006).

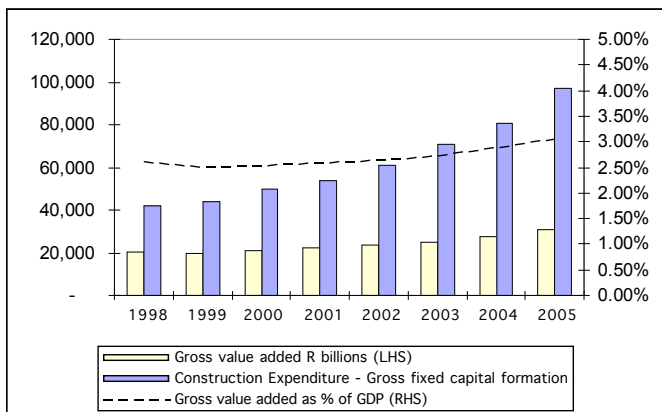
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<sup>6</sup> Transport equipment and machinery and other equipment are the remaining categories of gross fixed capital formation by type of asset excluded from the construction expenditure calculations. It perhaps should be noted that machinery and other equipment has a very high imported component, and so of course this category of investment has its own exchange rate implications.

In figure 29, employment figures from different sources are shown. The employment estimates for the starting date (1995) reveal wide differences. There is a difference of almost 250 000 employees between the high and the low estimates. Such discrepancies may have something to do with differences relating to recording of permanent or temporary workers: it is estimated almost 40% of the total number of people employed in the industry are employed informally. In their Status Report of the construction industry of 2004, the Construction Industry Development Board (CIDB) identified the trend towards greater casualisation of construction workers and expected it to continue increasing (CIDB, 2004).

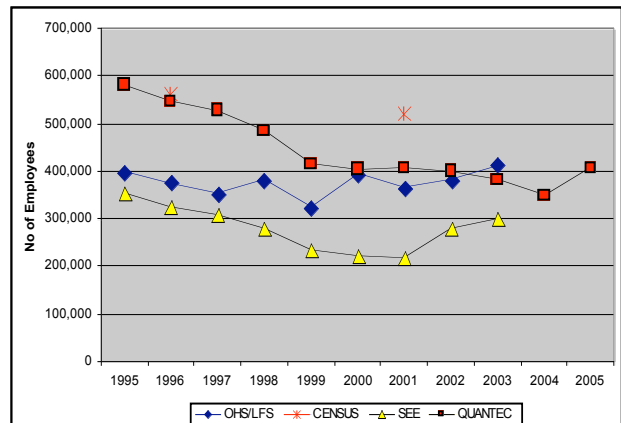
However, the employment data also suggest some convergence in later years. The most complete employment data source suggests that employment in construction declined from 583 000 in 1995 to 349 000 in 2004. (See the line with red boxes.) However, a real up-tick in employment growth took place in 2005, with registered employment in the construction sector growing to 406 000.

**Figure 28 – Construction: real growth and contribution**



Source: SARB Quarterly Bulletin

**Figure 29 – Construction employment**



Source: Altman et al, 2006 (adapted)

The domestic building and construction boom is likely to influence the trading share of construction activity. South Africa's construction industry has historically had a high degree of trade liberalisation; nonetheless, little foreign entry into the South African market has taken place. In the past, this has been attributed to the weakness of the Rand and the lack of familiarity with local conditions and labour practices. However, Chinese firms have begun to make in-roads into the domestic market<sup>7</sup> and

<sup>7</sup> Such as the awarding of a R425 million water-related contract in December 2005 to China National Overseas Engineering Corporation (Covec).



the shortage of skills may lead to increased imports of engineering and contracting skills.

The industry has competitive advantages in providing exports of basic infrastructure for African countries. However, exporters experience a number of problems related to contract payment in Africa and the Middle East (CIDB, 2004). In the interviews, firms indicated that they see work in Africa as both a substitute for and a complement to their domestic contracts. During the current expansion phase, export earnings as a share of turnover may fall, as firms concentrate on domestic projects.

### 6.1.2 Selection of companies

Some 27 firms were approached and screened across the range of these services, with seven firms ultimately agreeing to participate in the research.

The firms interviewed included professional services firms (typically consulting professional engineers) and contracting firms. The largest firms interviewed were involved in providing professional services and contracting services.

Four large firms, all with more than 500 employees, two medium-sized firms with more than 200 employees and one small firm were interviewed (see table below).

**Table 6 – Profile of interviewed firms**

Construction firms	Permanent employees	Non-permanent employees	Annual domestic turnover (Rm)	Export turnover (Rm)	No. of local operations	No. of foreign operations
1	17,828	0	5,136	3,424	307	0
2	350	0	117	13	18	7
3	5	30	7	8	1	0
4	1,200	100	400	150	18	15
5	290	0	96	4	8	0
6	429	74	280	70	18	5
7	700	500	1,000	400	4	2

Source: Interview Questionnaire

### 6.1.3 Impact of the exchange rate on growth and employment decisions

In general, the construction firms interviewed saw the influence of the exchange rate on their growth and employment decision as indirect, rather than direct. Hence, they rated the influence of the currency as somewhat important, or not important at all on the questionnaire. In discussion, firms said that the exchange rate affected their

profitability, and that this had an indirect effect on their employment and growth decisions.

All the firms but one indicated that economic growth and market opportunity were the most important factors influencing their growth and employment decisions. This response possibly reflects the particular awareness of firms in this sector of the importance of the economic cycle.

Another key influence on their growth and employment decision was salary levels in the industry and the availability of skills. Several firms commented that their expansion was being limited by the availability of skills. While industry sources suggest that an increase in the number of artisans are called for (Engineering News 2006), two of the firms interviewed pointed out that it probably takes some ten years to train skilled professional engineers. Hence, the skills shortage is unlikely to evaporate quickly.

Firms that indicated that they had experienced a change in employment in the last five years pointed out that this was a consequence of the buoyant market conditions, rather than the influence of the exchange rate.

#### 6.1.4 *Impact of the exchange rate on firm strategy*

In total, the turnover reported by the seven construction firms interviewed amounted to R11.1 billion for the previous financial year. Of this, 37% came from exports of services – to Africa and the Middle East. While firms did not see exchange rate risk as directly influencing their employment and growth decisions, they were acutely aware of having to manage the risks associated with a volatile currency or a currency whose level undermined their competitiveness.

One of the key risks firms identified is the possibility of not being paid for their work in Africa and the Middle East. While we were unable to establish how many of them had actually experienced this risk first hand, it was a common theme in the interviews that some firms only tendered for, and worked on projects, with external and (guaranteed) payment.

*Working in Africa has its challenges and the key one is repayment risk – rather than exchange rate risk. We price in stable currencies like the US\$ and Euro, but our costs are in Rand. This means that our profitability is vulnerable to fluctuations in the currency. In order to reduce our payment risk, we try to work for donor agencies like the World Bank.*

#### *Construction Firm Case Study*

Even where projects are funded by external agencies, construction work in Africa brings with it some unique challenges in terms of managing exchange rate risk including:

- The length of contracts, which makes it hard to predict export turnover and returns.

- The unpredictability of project start dates, invoicing dates and payment dates, which undermines the ability to use financial hedging instruments which require these parameters to be set.
- The complications associated with importing equipment from other countries directly into African countries, and having to provide proof of such activities to South African authorities.
- The management of more than one set of currencies for any one project. While the contract may be in US Dollars, for example, some costs will be in the local currency, and others will be in Rand. Recently, the currencies of some SADC countries have strengthened against the Rand and US Dollar.

One of the construction case studies reports:

*The key challenge in respect of foreign contracts is the significant delays in respect of decision-making, which can take up to three months, and beyond. Some contracts take years. Often major tenders require funds to be made available upfront (guarantees). Consequently, there is considerable risk in the period between tendering and awarding of contracts. In some instances, South African guarantees are not accepted and the firm is required to access funds and guarantees from offshore financial institutions.*

*Construction Firm Case Study*

One of the familiar strategies to dealing with exchange rate risk was to set up a local subsidiary, in the country of the project. This appears to be particularly common where projects are long-term and substantial. This allows for offshore bank accounts to be established dealing with local costs and imported equipment.

*In respect of all work out of South Africa, the firm undertakes a strategic review of each project to determine the most appropriate manner in which to implement a contract. In some cases, the decision has been to open up a foreign subsidiary with local bank accounts for a project. In some cases, this may be a requirement of particular contract or tax regime.*

*Construction Firm Case Study*

An alternative to setting up a subsidiary on a project-by-project basis is the establishment of an offshore subsidiary to earn “hard” currency. Through this entity, forex earnings from all external projects are channelled. One firm reported that:

*(they) established their “global” firm in 1998, when the currency was very weak and earning hard currency was desirable. The strategy was seen as an operational hedge against a fluctuating currency.*

*Construction Firm Case Study*

However, the subsequent strengthening of the currency meant that the offshore subsidiary failed as an operational hedge, as the currency strengthened rather than weakened. The firm is in the process of shutting its offshore entity down.

It is not surprising therefore, that more than one firm indicated that they were obliged to price in a premium for these risks (see below).

#### 6.1.5 Management of the exchange rate risk

All of the firms pointed out that the standard forward contracts had limited application in their businesses, primarily because they could not pre-determine key milestones such as invoicing or payment dates. Over and above this, several firms saw the costs associated with forward cover too great. In particular, the funding requirement of 10% of their respective overdrafts was too great a constraint on cash flow. While the turnover of these firms is substantial, many of them reported a margin of between 2-5% on a project; hence, cash flow management is crucial.

Two of the firms we interviewed had an active financial risk policy in place to manage exchange rate risk.

*The firm undertakes very active foreign exchange management and has a full-time treasury function of four staff for the group. The firm utilises forward contracts, collars and puts<sup>8</sup>. Typically the firm covers about 4 month's worth of exposure, but will also look to cover the lifetime of contract if it is a very large project.*

#### Construction Firm Case Study

Other firms indicated that it would take forward cover as and when appropriate – such as when the threat of loss exceeded the opportunity involved.

The firms that did not use financial instruments to hedge the risks associated with the exchange rate, appeared to see the timing of repatriated earnings via their CFC accounts as a hedging facility. However, several admitted, that it did not really fulfil this function, as the Rand had strengthened against all expectations. One firm wryly noted that

*its management of the currency (though the CFC account) was "mismanagement", costing them between 3 and 4 percent of their profits each year between 2002 and 2005.*

#### Construction Firm Case Study

Another noted that while it liked the idea of timing the repatriation of forex earnings in the CFC accounts to their greatest advantage, in reality they pretty much had to convert funds to Rand as soon as they landed - as their local costs demanded this.

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<sup>8</sup> See Section 7 for a description of these different instruments.

### 6.1.6 Importance of volatility or strength

While almost all the firms acknowledged that a weaker currency was good for their export market, as it made them more competitive, most firms see the volatility of the currency as the more pertinent of the exchange rate risks. The following response from one of the firms is typical:

*Specifically asked about the impacts of volatility and net strength, the interviewee said, “volatility is the big enemy”. “We can work around issues of net strength”, he noted.*

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The key reasons for the focus on volatility have to do with its unexpected effect on repatriated revenue and its associated impact on profits. Several firms pointed out that the vagaries of the export markets was such that they could not always repatriate foreign exchange earnings at an advantageous, or even neutral, rate.

*The volatility of the currency is a concern, as their costs are in Rand and wages and salaries have to be paid. Unexpected changes in the level of the currency mean they sometimes have to repatriate foreign exchange earnings at disadvantageous rates – simply because they have immediate cash-flow needs.*

*They would prefer a stable currency – so that they know what they are “in for”. A volatile currency has an impact on them not only because of their ultimate export revenue, but because it adds to the uncertainty in the market – and ultimately affects the interest rate. Given their high levels of debt – this is a problem.*

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*For example, if one quotes on a job when the Rand is weak – say R11=US\$1, then when the Rand appreciates and payment is due – the client will not entertain any variation on the basis of currency fluctuation – so one repatriates fewer Rands than expected.*

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Perhaps another reason why volatility – rather than level – of the currency was identified as a concern is that firms were bullish about being able to continue to win contracts in Africa, even at rates which made their engineering costs on a par with European ones.

*The firms’ activities tend to be highly specialised and this has meant that in spite of a stronger rand, exports have continued to contribute significantly to their turnover.*

#### *Construction Firm Case Study*

More than one firm noted that volatility came into the pricing equation:

*...the volatility effect comes into the pricing activity – uncertainty associated with the exchange rate exacerbates the difficulties of engaging in such export projects. This results in firms building sufficient “fat” into their contract price. Basically, the client has to pay a premium for the uncertainty involved. The tendency to offer prices “at which one can’t lose” is common.*

*Construction Firm Case Study*

*... the company will take a view of the Rand’s direction over the contract period and put in a sufficient margin on the price to cover for exchange rate risk. This is done by the firm themselves (senior management). In their words, “we take a gamble”.*

*Construction Firm Case Study*

#### 6.1.7 Relationship with financial providers

Responses relating to the relationship of firms with their financial service providers spanned positive, negative and indifferent reactions.

Most of the firms appeared to have a somewhat distant relationship with their bank or financial service provider as far as foreign exchange risk management was concerned. They typically indicated that they only contacted the bank when they needed to convert currency to meet local cash-flow needs and wanted the current rate.

*They do not see themselves as actively managing the currency, but they think they have become better over the years in reading the signs of the market. When they need to repatriate earnings, they monitor the currency levels on a daily basis until sometime that week, they are happy with the levels.*

*Construction Firm Case Study*

In many cases, these firms relied on their own reading of macroeconomic factors, although some indicated they did get information from the bank – which was not always helpful.

*The firm expressed dissatisfaction with banks and their ability to advise them – banks are generally very conservative and have very little ability to read the macro signs – or if they do – they are not telling firms! The firm also complained that they have noticed that there is a lag in the rates offered by their bank, relative to what other firms are getting from their banks at the same time. The firm sees this as hysteresis, during which the bank has an opportunity to make money.*

*Construction Firm Case Study*

More than one firm appeared to feel that their service provider did not specifically meet their needs. Firms were not convinced that speaking direct to the dealing desk had any specific advantage:

*Even if the firm gets to make the deals online or speak to the forex desk directly, the bank still makes their expected margin on the firm, as they are a small player in terms of forex dealings. The firm feels inhibited shopping around for better rates, however, as its CFC account is with the bank, as well as all its other accounts.*

*Construction Firm Case Study*

The most positive response came from the firm that appeared to have both the policy and internal resources to engage with its bankers. This firm indicated regular contact and reliance on its banks' advice:

*As already noted, the firm actively manages the firm's foreign exchange exposure on a group-wide basis. As such the treasury function is engaged with all major banks and will consult with them at least every second day in respect currency movements. The firm noted that it was reliant on the banks for information.*

*Construction Firm Case Study*

6.1.8 Other points

While not unique to the construction sector, it was apparent that a number of the firms had found it difficult to accept that the currency could maintain its newfound strength in 2003. Hence, while firms were actually underachieving in terms of their anticipated turnover and profits, they appeared to persist in their costly strategies. This included channelling forex earnings via an offshore entity that was obliged to repatriate earnings at a lower rate, or keeping forex earnings in their CFC accounts for as long as possible. Only some three years later, ironically as the value of the currency appears to be turning, does there appear to be an adjustment in their strategy.

*The firm noted that holding money in a CFC account has been a bad decision, as the currency has continued to strengthen, beyond the expectations of anyone, least of all the analysts at the banks. But given that there is little faith in the Rand, holding money in hard currency is hard to resist.*

*Construction Firm Case Study*

In part, holding on to "hard currency" may be a consequence of the costs of setting up offshore guarantees. One firm noted that the cost of setting up guarantees in South Africa should not be underestimated.

*If a company is required to raise a guarantee in dollars for example, but does not have the currency available in a CFC account, then it will have to raise the equivalent in Rands, for the guarantee, plus between twenty and thirty per cent to cover possible fluctuation in the currency. If the currency is highly volatile at that time, the firm will be required to continually "top-up" the guaranteed amount.*

*Construction Firm Case Study*

## 6.2 Steel and steel products

### 6.2.1 Overview

The metals and metal products cluster (including household appliances) includes both the primary production of steel and semi-finished steel products as well as the metal industries which fabricate and beneficiate the basic product. Included in this range of activities is basic metal production, casting of metals, manufacture of structural metal products, tanks, reservoirs and steam generators, manufacture of other fabricated metal products, metalwork service activities, manufacture of general and special purpose machinery, manufacture of household appliances and manufacture of office accounting and computing machinery.

In this cluster, interviews concentrated on steel producers and manufacturers. However, the closest category of data available is for metals and metals products, which while a considerably broader category of economic activity, provides some indication of the trends in the steel sector. In the discussion that follows, please note that although the generic terms metal and metal products are used, our interviews focused on steel and household appliance manufacturers exclusively. (We did not for example interview any aluminium producers, etc).

The cluster embraces both upstream and downstream activities, where upstream operations tend to be large scale, capital intensive operations, producing an intermediate product - such as sheet metal - through the process of extracting, processing and refining. Typically, the product from upstream producers will require further processing by intermediate producers before it can be used by downstream manufacturers. The latter are involved in a variety of industries – involving cutting finished product to size or the manufacture of complex machinery.

The *Metals Sector Development Strategy* (2006) of the Department of Trade and Industry (**the dti**) provides an illustration of the different stages of production that may be identified within the metals cluster; where

- Stage 1 involves the primary action of mining or producing an ore or concentrate
- Stage 2 involves the conversion of the ore to a metal or alloy
- Stage 3 involves the transformation of the metal into a refined, semi-fabricated product suitable as an input in downstream metal industries. Furnaces and foundries are used to perform heat-treating and cold finishing processes.
- Stage 4 involves the fabrication of the refined metal input into a finished product.

The firms interviewed for this research were involved in Stages 3 and 4 (primary manufacturing and finishing activities). Firms involved in these activities are also sometimes grouped as part of the metals and engineering sector.

While activity in the metal industry makes a substantial contribution to manufacturing employment, employment levels and the value of the finished product tends to be greater in the downstream activities (Stages 3 and 4).

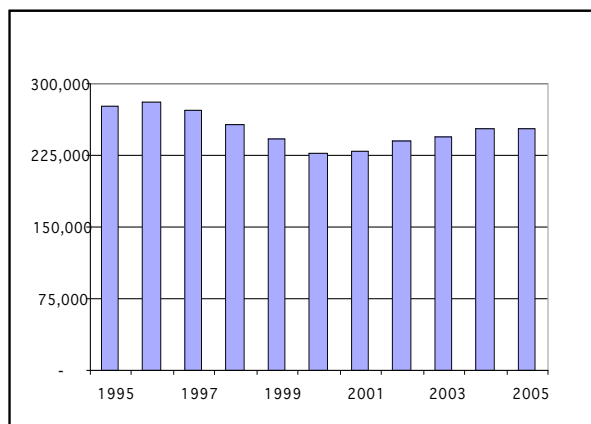


The metals industry plays a key role in the manufacturing sector. The figures below show the composite data for the metals, metal products and machinery and equipment and then the metal products industries individually.

The upstream or primary steel producers are generally highly capital intensive, with the metal products industries rather more labour intensive.

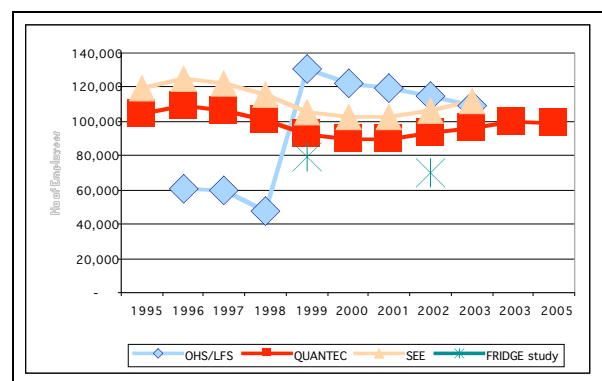
On a composite basis, employment in the metals sector accounted for some 253 000 employees in 2005 (RHS figure), of which employment in the metals products industries accounted for around 99 000 employees (LHS figure).

**Figure 30 – Employment: Metals and metal products (SIC 351-9)**



Source: Quantec, 2006

**Figure 31 – Employment in Metal products (SIC 353-5)**



Source: Altman, 2006 (adapted)

Other sources for employment in the metals products industries (LHS figure) suggest that around 100 000 people were employed in 2003. This indicates a recovery from 1997, which began a declining trend in employment in the sector. All of the data sources (Quantec, FRIDGE, SEE and OHS) show a declining trend between 1999 and 2001. This decline mimics the loss in employment in the metals and engineering sector, which declined annually by 5.6% over this period. Employment losses in basic metals, machinery and equipment and the electronic engineering sectors, particularly in previously large companies, accounted for the decrease in employment. Employment has not yet recovered to its 1995 values.

Since 1997, there has been a trend towards “non-typical” employment – casual, temporary and subcontracted labour. Four causes of increased casualisation of employment have been identified (FRIDGE, 2003):

- The outsourcing of non-core activities, such as cleaning, security and canteen services, to reduce costs and administrative issues;

- The need to manage labour costs in sectors that are project driven, such as metal fabrication, or are subject to large fluctuations in levels of demand;
- Volatility of the exchange rate has affected employers' ability to forecast demand from export markets, making them less inclined to commit to permanent labour contracts; and
- Avoidance of the perceived costs of CCMA cases.

Other factors that influence employment performance in the metals cluster include:

- Input costs and Import Parity Pricing (IPP) which is seen as a hindrance to employment creation within the cluster. IPP particularly affects downstream sub-sectors which tend to be relatively labour intensive;
- Employment costs, particularly for industries where demand is unpredictable or cyclical;
- Increasing levels of import penetration and increasing uncertainty of demand from both public and private sector customers;
- Lack of focus on the export market, as a consequence of exchange rate volatility; and
- The skills constraint, particularly in the sectors that tend to be highly skilled such as engineering design.

The basic metals sub-sector is fundamental to the cluster as most other manufacturing sub-sectors within the cluster are highly dependent on the industry. Additionally, the sub-sector is a major contributor to South Africa's GDP, employment and earns a significant percentage of foreign exchange. Capital-intensive equipment such as mills, smelters, blast furnaces and foundries are included within the sub-sector (FRIDGE, 2003; [www.thedti.gov.za](http://www.thedti.gov.za)).

Although the basic metals industry was protected until the early 1990s, trade liberalisation was implemented to encourage exports and improve competitiveness in the sector ([www.thedti.gov.za](http://www.thedti.gov.za)). Producers responded through restructuring initiatives, the consolidation and replacement of large integrated plants with small and efficient mini mills, privatisation, continuous improvement and technological advances. These initiatives led to increased automation, rationalisation of grades and the closure of uneconomic plants. Together with an increase in non-typical employment, the result was a high number of job losses.

The basic metals sub-sector includes iron and steel producers and non-ferrous metals components. The firms that agreed to take part in the research were ultimately steel manufacturers, hence the iron and steel producers, rather than the non-ferrous metals components, are of interest in our study. Domestic iron and steel producers are affected by the cyclical domestic and international demand in the industry, price fluctuations, trading of raw iron and steel on international markets and the protection many governments give their domestic producers and as well as global over capacity (FRIDGE, 2003).

The metal products industries used to benefit from policies of import substitution, high tariff protection for domestic manufacturers and long-term preferential contracts for domestic manufacturers from parastatals (which could be guaranteed for up to 15 years). This gave the domestic manufacturers certainty and stability.

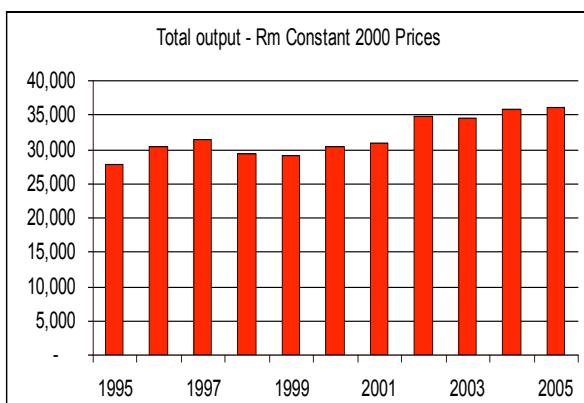
However, since 1994, domestic and global processes have changed the structure of the sector and private sector players have undergone strategic repositioning. The result has been the emergence of a strong service sector alongside the manufacturing base in the sector. For example, service-oriented acquisitions been driven by trends in the cellular and information technology industries which has increased employment.

Figure 32 shows the output data for the metal and metals products SIC codes 351-359 – which is a broad category including metals, metal products and machinery and equipment). Figure 14 shows the data for SIC 353-355 (Metals products – excluding machinery). The data in Figure 13 show the decrease in total output for the sector between 1998 and 1999, followed by a recovery in output, to around R36 billion in constant prices in 2005.

In figure 33, one sees a rather more dismal picture with little evidence of a recovery in output after 2002. Instead, the decline in output begins in 1997, and only levels off in 2003, after which output levels appear to stabilise.

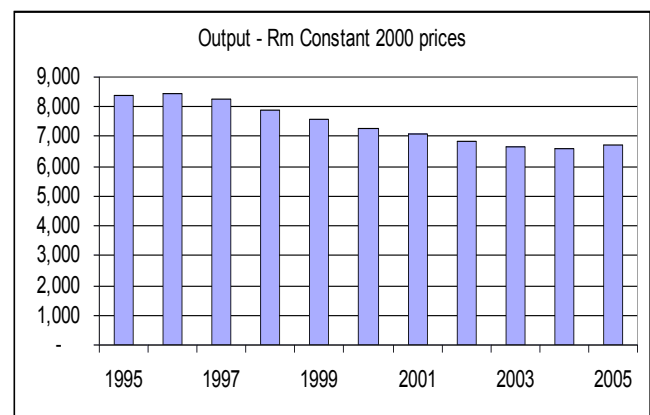
The latter trend suggests that the levels of beneficiation and growth of downstream industries – such as those captured in the metals products data has not increased over the period under review. Instead, it appears that a reversal has taken place (the DTI, 2006). Evidence of this in certain areas of activity emerged from the interviews where it was apparent that manufacturers had shifted to distribution or trading (effectively importing what they had previously manufactured locally).

**Figure 32 – Output: Metals and metal products (SIC 351-359)**



Source: Quantec, 2006

**Figure 33 – Output: Metal products (SIC 353-355)**



Source: Quantec, 2006

The import-domestic demand and export-output ratios for both the entire sector and metal products follow similar trends only from the late 1990s onwards (see table 7). For metals (SIC 351-359) the ratio of imports to domestic demand increased substantially from 35% to 43%, between 1995 and 2005. Similarly, the export-output ratio increases from 30% to 44%, during this period. Both exports and imports increased over the period.

**Table 7 – Import and export ratios for the metals sector**

Year	Metals, metal products, machinery and equipment [SIC 351-359]		Metal products excluding machinery [SIC 353-355]	
	Import-domestic demand ratio	Export-output ratio	Import-domestic demand ratio	Export-output ratio
	%	%	%	%
1995	34.72	30.27	11.74	13.37
1996	38.59	33.05	13.47	17.38
1997	38.33	34.62	13.29	16.79
1998	40.74	36.81	14.90	15.88
1999	35.55	33.56	14.34	16.23
2000	35.01	34.91	13.34	17.16
2001	35.75	34.81	13.76	15.05
2002	36.13	36.25	15.89	15.68
2003	36.96	36.53	14.89	14.18
2004	39.23	40.03	15.71	15.09
2005	43.50	44.17	17.44	17.67

Source: *Quantec, 2006*

The import-domestic demand ratio can be seen as a manifestation of increasing import penetration by foreign companies over the past 10 years. The up-tick in recent years – since the rand strengthened in 2003 - is particularly notable. Falling prices of imported goods coincided with the lowering of interest rates since 2003. This has meant in some industries, such as household appliances, that while sales volumes have increased, domestic manufacturers have lost market share and employment has suffered. (<http://www.geda.co.za>). This theme emerges from the interviews with both metal products manufacturers and household appliances manufacturers.

The increase in the export ratio for the whole metals sector has been attributed to the major investments in basic iron and steel and non-ferrous metals and the consequent increase in output (*the dti, 2006*). Accounting for the increase in the export-output ratio for the metals products industry is rather more difficult, coming at a time of reduced output, and signs of decline in the industry, together with the strength of the currency. Apart from one the primary steel producers, there was little evidence from the interviewees that they had increased or even maintained earlier export levels.

### 6.2.2 Selection of companies

Some 32 steel manufacturing firms were approached and screened, with 11 firms ultimately agreeing to participate in the research. In order to secure three interviews with manufacturers of household appliances, some eight firms were approached and screened.

The interviews secured came from the production cluster associated with downstream activity. Hence, while we did not interview the primary producers of steel, we interviewed those firms who would be involved in processing it for other downstream producers as well as the downstream manufacturers themselves. The firms interviewed ranged from firms that had their own furnaces and mills, with which to process primary steel, to those who produced steel boilers, irrigation equipment, fencing, roof sheeting, steel used in building applications and thin-gauge steel coils. Hence, they were Stage 3 and 4 firms.

In all, of the 14 firms in this cluster, six large firms, all with more than 500 employees, one medium-sized firm with more than 200 employees, and seven small firms were interviewed. The high occurrence of small firms is typical of metals products industries. In other countries, growing steel industries are characterised by small, specialised firms which develop niche capabilities (**the dti**, 2006).

**Table 8 – Profile of interviewed firms**

Firms	Steel products manufacturers					
	Permanent employees	Non-permanent employees	Annual turnover (Rm)	Export turnover (Rm)	No. of local operations	No. of foreign operations
1	1,000	700	1,275	425	6	0
2	1,600	0	700	300	7	0
3	153	0	153	17	3	0
4	120	0	130	140	3	3
5	30	10	90	60	1	1
6	450	800	385	115	3	3
7	4,500	0	9,600	400	39	9
8	180	0	368	32	1	0
9	55	0	150	0	3	0
10	345	40	420	40	3	0
11	5	0	20	0	1	0
Manufacturers of household appliances						
1	220	325	1,000	600	1	3
2	600	0	1,800	0	5	0
3	150	24	150	0	2	0

Source: Questionnaire Analysis

### 6.2.3 Impact of the exchange rate on growth and employment decisions

Half of the firms interviewed in this sector indicated that they saw exchange rate risks as very important to their growth and employment decisions. Of the rest, most of them indicated that the exchange rate influence was somewhat important. The top three most important influences on growth and employment decisions were economic growth of the market, exchange rate strength and exchange rate volatility. As can be seen below, these factors are related.

11 of the firms in the cluster indicated that economic growth and market opportunity were the most important factors influencing their growth and employment decisions. A number of the firms pointed out, for example, that while their exports had been



eroded (or eliminated) as a consequence of the strong Rand, the current economic boom had compensated for this loss.

*While it appears that they rank volatility as more important than the level of the currency – the firm did point out that when the Rand is strong, this tends to come together with high consumer spending and a low interest rate regime.*

*Household Appliances Manufacturer*

The second most important influence on their growth and employment decisions was the strength (or level) of exchange rate. More than one manufacturer pointed out that during the period of a very weak currency after 1998, they were able to establish export markets, hone their exporting skills and expand their prospective markets. For at least three of the firms interviewed this was a windfall period which has sustained them in some way. In one case, it had enabled them to sustain a presence in those markets – although at reduced margins – in subsequent years. In another, it had generated surplus profits which had given them a head start on competitors in terms of cash flow and ability to expand.

*The firm experienced growth in turnover during 1999 and 2000 – but the margins were under pressure. In 2002, given the weak Rand, the firm experienced its best margins ever... The weak Rand in 2002 hence gave the firm a boost that essentially set it ahead of its competitors.*

*Steel Manufacturer*

While a minority of firms indicated that their importing activities were advanced by a stronger Rand, almost all firms were conscious of the impact of the strength of the currency on the sector's competitiveness. Even upstream producers, who felt themselves to be impervious to currency movements, acknowledged that it affected their downstream buyers.

*They have lost some business opportunity during the period of the strong Rand as some of their downstream clients have closed their businesses.*

*Steel Manufacturer*

A number of firms reported that firms that produced undifferentiated products were particularly exposed to imported substitutes from China.

The volatility of the currency was seen to undermine expected profit margins and affect firms' balance sheets.

*In addition, the value of the Rand has direct impact on the firm's balance sheet, specifically the value of its stock. Of concern is that the firm is required to carry a significant amount of stock to meet customer demands and minimise lead times. However an adverse change in the Rand value could result in a significant devaluing of the stock or significant appreciation of its value.*

*Steel Manufacturer*

While exchange rate risk was not the only factor leading to the demise of particular firms and to the demise of capacity in the sector, it was seen as a key contributor.

Other factors influencing growth and employment decisions included the import parity pricing strategy of key suppliers in the industry, anti-dumping tariffs imposed against primary steel imports and an inability to pass price increases on to consumers in a market ever-more competitive as a consequence of cheap imports.

Firms that indicated that they had experienced a change in employment in the last five years pointed out that this was only partly explained by the influence of the exchange rate. One firm retrenched roughly 20% of their staff when the Rand was at its strongest. Another said that in the past three years, they had lost half their staff.

#### 6.2.4 *Impact of the exchange rate on firm strategy*

In total, the turnover reported by the 14 firms interviewed amounted to R16.2 billion for the previous financial year. Of this, R2.1 billion, or 12% came from exports of output. At the same time, on average, firms in the metals cluster imported some 35% of their inputs. For some producers, the share of exports in turnover had declined substantially:

*Some 12 years ago, 75% of their turnover was locally manufactured, and exports accounted for around 33% of output (primarily to the US). Now only 15% of turnover is manufactured locally, the rest is imported. Exports now represent less than 3% of output.*

##### *Household Appliances Manufacturer*

However, there were others who suggested that the variability of exports was relatively small:

*Export earnings are 23% -30% of their output. They have exported virtually since inception - exporting to order to many parts of the world.*

##### *Steel Manufacturer*

Ten firms in the cluster indicated that exchange rates issues had become more important in recent years. It is worth noting here that the firms interviewed are the ones that have survived the structures of a strong currency undermining their competitiveness. Virtually every firm pointed to others that have not survived the relatively hostile environment.

A number of possible strategies have emerged, in response both to the influences of the exchange rate and frustration with input prices:

- Switching activities from manufacturing to importing and distribution;
- Securing inputs into the production process through acquisition;
- Securing inputs through imports, sometimes through sister companies; and
- Ensuring improved competitiveness through niche or specialist activity.

Those that have switched activities from manufacturing to importing and distributing finished product include both steel and household appliance manufacturers. This has had an impact on their employment – but they have typically shifted resources into their new activities. The retention of some part of their manufacturing activity was linked – in some cases – to the existence of local tariffs:

*This segment is highly price sensitive and the market segment within which the firm operates is not particularly brand sensitive. Consequently this division is highly susceptible to the threat of cheaper imports. The manufacturing division only remains sustainable because of a 25% duty protection on imported goods. The division employs some 400 to 600 people.*

*Household Appliances Manufacturer*

A number of firms saw securing inputs as a solution to dealing with high input prices or unreliable supply. Two alternatives emerged, some firms attempted to gain ownership of local resources, others found overseas suppliers. One firm saw acquisition of inputs as “backward integration” - and had secured all but the first input stage in order to retain competitiveness. This firm had started out in the 1960s as a finished goods manufacturer, but had recently embarked on acquiring an arc furnace as well as a mill to ensure its inputs.

An alternative strategy was to secure imported inputs. Firms using this alternative strategy included firms who were able to use sister company supplies at a lower landed cost, and those that had no alternative as their local input suppliers had gone bankrupt. The following two quotes from the case studies typify these responses:

*With the currency as strong as R6.05 to the US\$, they imported their steel from one of their sister companies in Spain. The company rule is that sister firms are obliged to sell to each other at full cost plus 10%, which meant that steel could be delivered to their site at a 15% discount to the local supplier's price at the time.*

*Steel Manufacturer*

*They used to have 100% local content in their production, but the local producer of electric motors closed their doors two months ago, so currently 25% of their input is imported in the form of electric motors from Brazil.*

*Household Appliances Manufacturer*

Finally, there were a number of firms that felt the only way to compete under the existing market conditions was to cut costs as far as possible and try to maintain their competitiveness through expertise or niche positioning.



*They are a mature industry – everything is price driven, with much competition, including Indian and Chinese competition. They continue to be profitable because they understand local conditions and because they have specialised experience in their segment that is... better than or equal to the best in the world.*

*Steel Manufacturer*

Three firms interviewed had undertaken some investment to secure their competitiveness:

*Operational hedging is apparent in their recent investment of R10 million in a new plant so that they could cut costs. This new plant has improved their marginal cost base from a breakeven point of R9.50 to the US\$ to R5.90 to the US\$.*

*Steel Manufacturer*

However, one firm pointed out that it had been too exuberant during the period of Rand weakness and that its investment had been disastrous for its future:

*in 1996 they made decisions to expand both their export operations and their local operations. This culminated in 1998 when they invested R15 million in their export operations (expanded the factory and invested in machinery and equipment) and then a further R16 million in equipment for the local operation.*

*Exports grew from 1 container load per year to around 50 at their peak in 2001. By 2002 and 2003, as the Rand recovered, they were making a loss on the new plant. What was a stroke of genius the one year lead them to collapse two years later – all because of volatility and the import parity pricing in the industry.*

*Steel Manufacturer*

#### 6.2.5 Management of the exchange rate risk

Eleven of the 14 firms interviewed indicated that they actively managed the exchange rate risk through the use of financial instruments.

*The company has a policy of covering forward as they believe they are engineers not gamblers – even when the Rand was as R6.00 to the US\$, they still took some level of cover. Sometimes they take one or two days to call the position – but it is never more than that after they've received an order.*

*Steel Manufacturer*

*The firm has adopted a conservative forex strategy and undertakes to cover all forex positions. They usually take cover over a month but do also buy some currency every day based on a view of what is needed.*

*Household Appliances Manufacturer*

Five of the firms indicated that the currency decisions were made by the managing director, but five had treasury functions – either in-house or outsourced.

*The firm actively manages its foreign exchange rate risk and has a full time treasury function and treasurer. The treasury department manages the group's daily import and export exposures and covers the net daily position. The treasury also manages a number of foreign currency accounts.*

*Steel Manufacturer*

The most commonly used financial instrument was forward cover, with nine firms indicating that they used this at times. The firms that did not use financial instruments to hedge the risks associated with the exchange rate, appeared to see the timing of repatriated earnings via their CFC accounts as a hedging facility.

The firm has never really managed its foreign exchange risk. In the early years of its existence (1999-2001), foreign exchange risk was considerable and Dollar exposure was a “nightmare”. The problem was one of cash flow – the overdraft raised by the firm was necessary for operations and part of it could not be sacrificed for forward cover. The interviewee estimates that the firm had an exchange rate loss of R2.5 million in 2001.

*Now, however, the firm believes that it is hedged against such losses, as it now manages its CFC Account so that it remains long in Dollars. Also all exports to Africa are priced in US Dollars, and they only take orders from African States on the basis of letters of credit.*

*Steel Manufacturer*

Two of the firms that did not use forward cover or any associated instrument indicated that the reason for doing so was because of the costs of such cover.

*Dealing with volatility costs money. For example, say the firm needs US\$1 million forward cover, the banks don't charge explicitly, but you lose part of your overdraft facility. Assume the firm has an overdraft of R5 million, 10% of the US\$1 m (or \$100K\* R7) will no longer be accessible – so your overdraft is now R4,3 million, even although you pay for R5 million.*

*Steel Manufacturer*

#### 6.2.6 Importance of volatility or strength

The firms in this sector felt that on the whole, the level of the currency, rather than its volatility, was more important to their operational decisions and risk management.

While almost all the firms acknowledged that a weaker currency was good for their export market, as it made them more competitive, some had managed to turn the earlier period Rand weakness to their advantage, and were now relatively comfortable with a relatively strong Rand.

Almost all the firms indicated that a Rand value of around R6 to the US \$ was about as strong as they could tolerate. One firm associated this level with the importing of “cheap rubbish”. While most firms felt comfortable with a rate of R7 to R8 to the US\$, few called for a much weaker rate. It appears then, that firms have now adjusted in some way to the strong Rand, and have now become more reliant on imported inputs. Hence a sudden collapse of the Rand may undermine their sustainability.

*A stable currency is really what's necessary for sustained growth and employment. They prefer a Rand of around R7.00 to the US\$ – which is still relatively strong. If it is too weak they face an increase in the prices of imported inputs.*

*Steel Manufacturer*

Nonetheless, a number of firms appeared to be under considerable pressure when the currency was strong:

*...a strong Rand enables significant amounts of cheaper import to enter the market, even though duties are applicable – 20% in the case of appliances and 25% in electronic goods. In the firm's view, the current market is characterised by the “dumping” of cheap imports. It is the firm's view that the applicable duties ensure its survival.*

*Household Appliance Manufacturer*

Those who raised their concerns about a volatile currency raised the issue of their inability to pass on price changes (there were clearly some dominant firms who had no constraint in this regard).

*Stability in the Rand is particularly important for them as they are constrained from passing on price hikes as a consequence of exchange rate movements.*

*Household Appliance Manufacturer*

*The firm imports a significant amount of goods at a specific price which it must hold until delivered and paid for by its customers. As such it always runs the risk of a significant price shift due to currency movements.*

*Household Appliance Manufacturer*

*Volatility of the currency, together with the world steel price, affects the value of their stock. Generally the local mills increase their prices every month – in line with import parity pricing – but there is a 3-month lag. They import steel (at world prices) but with a strong or weak rand. They base their steel price on the local price. So, if they can turn their stock*

*before the local price adjusts, they have an advantage. A sudden depreciation of the Rand or a sudden increase in the price of steel will increase the value of their stock. If the Rand suddenly increases in value or the world price decreases, they would find that their stock is less valuable locally.*

*Steel Manufacturer*

### 6.2.7 Relationship with financial providers

Relative to the firms in the construction industry, most firms in the metals products sector indicated a more positive relationship with their financial providers. This may have much to do with the fact that in general the design of forward contracts and other financial hedges appear to be more applicable to the nature of trading in the manufacturing sector compared to the vagaries of a construction project.

There was a sense that the financial providers played a constructive role in their decision-making:

*They deal with 12 financial institutions – the big four locally and eight internationally represented banks. In the case of different views from these banks on the currency, they tend to side with the majority view.*

*Household Appliance Manufacturer*

*They make the forward cover decisions, even although they are part of a bigger group. But they get good rates from their bank as these are negotiated as part of their banking package by their parent company. They bank with one of the big four banks.*

*Steel Manufacturer*

Firms pointed out that forward cover did not necessarily deal with all the risks involved- particularly competitive risks associated with management of the currency. The difficulty of guessing what competitors might do is a key consideration:

*More specifically, this risk arises even with forward cover, as it is dependant on the behaviour of its competitors. For instance, while it may hedge a specific transaction a competitor may choose not to do so. Should the currency shift not be an adverse one the firm will have incurred a higher cost for the goods reducing its competitiveness and margin.*

*Household Appliance Manufacturer*

*So forward cover costs you money, and it can cost you dearly operationally. This is partially because one needs to outguess one's competitors...If they don't take cover and the value of the Rand shifts in their favour – then you've carried the cost and they are more competitive. For example, your firm takes cover at R7.00 for R7.50, but the Rand recovers to R6.50. However, your competitor does not take cover - so your firm's prices can be undercut by say 15%. This makes the activity of forward cover a bit like a casino or a beauty contest (a la Keynes). You don't just pick the winning*

*exchange rate – you have to pick what others will choose as the appropriate exchange rate.*

*Steel Manufacturer*

One firm saw the need for forward cover more positively, however. They indicated that the need for forward cover in one's business provided a barrier to entry – which reduced their exposure to competition.

*In a way, the need for forward cover provides a barrier to entry – together with the need for capital and the ability to fund the financing period associated with purchasing and selling imports. Typically they have a turnaround of 90 days or more. Firms who do not have a positive cash flow would find the forward cover sacrifice in terms of 10% of their overdraft facility too great. In their opinion, there are competitors who are unable to take forward cover for this reason, but they are very vulnerable to fluctuations in the exchange rate.*

*Steel Manufacturer*

#### 6.2.8 Other

Clearly, the firms interviewed have managed to adapt operationally to the period of sustained strength, followed by a period of weakness of the Rand. While most firms have scaled down their manufacturing capacity and in some cases reduced employment – most have retained at least some manufacturing capacity.

Of course, as was also clearly apparent from the interviews, many other firms have not survived the vagaries of the exchange rate, which is seen by many as a contributing factor in creating a harsh operating environment (with IPP, foreign competition and shortage of skills as other key influences).

Given that local producers of key input components may no longer be in operation and it may take some time to regain momentum and provide workers with more skills, it will be interesting to see to what extent the sector can respond to the relatively weaker Rand, which emerged during the period that these interviews were undertaken.

## 6.3 Wood industries

### 6.3.1 Overview

A selection of manufacturing firms was made from the following sub-sectors:

- Forestry and logging;
- Wood and wood products; and
- Furniture.



This cluster includes two different and unrelated clusters. The fact that both start with forestry and involve the processing of wood should not be allowed to confuse the issue. Prior to the unbundling of some of the very large interests in the cluster (Safcol, Sappi) there was considerably more ownership overlap across the two productive clusters. Today there is almost none.

The two productive clusters<sup>9</sup> are:

1. Forestry – pulp and paper.
2. Forestry – sawmilling, timber manufacturing (including furniture) and construction.

Pulp and paper (with an export value of R4.9bn) generates over 100 000 jobs (Genesis, 2005). Quantec data suggests employment figures for furniture and wood manufacturing of close to 100 000.

The Forestry Cluster comprises of a number of sub-sectors or segments which tend to be highly dependent and integrated with one another. These segments include plantation forests, paper products and furniture.

**The Plantation industry:** South Africa has in excess of R1,37 million ha under plantation or a total of 1.1% of all land in South Africa is used for forestry. Plantation areas (by number of hectares) are largest in KwaZulu-Natal (528 474ha) and Mpumalanga (526 212ha), followed by the Eastern Cape (152 378), Western Cape (61 660) and Limpopo (60 451). More than 70% of all plantations are owned by the private sector (Godsmark, 2004 as cited in Forestry Economics Services, 2004).

A high degree of vertical integration is present as plantation owners tend to the major processors, and buyers, of wood. Examples are Mondi and Sappi for pulp and paper, Masonite for fibreboard, or Global Forest Products and Hans Merensky for sawmilling (Chamberlain et al, 2005).

Low levels of planting have lead to numerous problems within the sector as shortages have far-reaching consequences. Much of the planting was undertaken by the private sector in 2003 within the following provinces: KwaZulu-Natal (1371ha), Limpopo (306ha) and Mpumalanga (268ha) (Forestry Economics Services, 2004; Chamberlain et al, 2005).

Additional sources of problems in the plantation industry have been noted as increasing global exposure since the 1990s, which has made the industry vulnerable to exchange rate fluctuations and HIV/Aids, which has impacted on the skills and profitability of the industry. As a result, plantation forestry companies have contracted out their low-skilled labour requirements. This has also reduced their exposure to labour unions (Chamberlain et al, 2005).

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<sup>9</sup> A third productive cluster resembling 1 involves chipping logs for export, mostly to Japan where they are used to manufacture wood based panels (chipboard). Aggregate impact on employment is, however, very small. Direct employment for woodchip exports is 500 people (for an export value of R2bn) (Genesis, 2005 – although, this surely excludes forest management).

**Timber processing:** Timber processing includes sawmilling, pulp and paper production, treated pole and charcoal production. The total number of plants available for processing in South Africa is 203, broken down according to processes as follows:

**Table 9 – Processing plants**

	No of operations	Operational in 2004
Sawmills	109	108
Veneer mills	5	5
Pulp, paper & Board Mills	24	20
Mining timber mills	15	12
Pole treating mills	45	42
Match factories	1	1
Charcoal plants	5	4
Total	203	193

*Source: Chamberlain et al, 2005*

**Sawmilling** is the processing of saw logs into sawn timber (lumber) and sawn boards, and the sawmilling industry supplies these raw materials to manufacturers who produce value-added timber products such as products for the construction industry (roof timbers and flooring) and consumer products (furniture and DIY). The size of sawmills varies: large operations can have an annual log intake in excess of 200 000 m<sup>3</sup> where as small mobile mills (including bushmills) have an annual intake of less than 5 000 m<sup>3</sup>. Although the industry tends to be labour intensive, labour requirements at mills depend on the mill category, log intake and capital intensity (Anon, 2005; Chamberlain et al, 2005). The sawmilling sub-sector has remained fairly static over the past decade and has shown very little growth over the past 20 to 30 years.

Exports volumes increased from 1995 to 1999 as South Africa became more integrated with the world economy. However as the rand appreciated it became less profitable to export, and export volumes began declining (Chamberlain et al, 2005). DWAF estimates that in 2005 approximately 150 000 m<sup>3</sup> of unprocessed lumber was exported to various European and North American markets. The remaining lumber is divided amongst building/structural timber applications and other value-adding operations. 20% of the manufactured items in this market (furniture, packaging, doors and DIY products) are exported (DWAF, 2005).

Less than 10% of total domestic lumber demand is imported to South Africa- this is usually exotic wood such as meranti and oak, which is used mainly for mouldings, furniture, flooring and window frames. The reason so little sawn-wood is imported is because of the high cost of re-cutting and transport. (DWAF, 2005).

**Pulp and paper industries (including recycling):** This sub-sector is highly integrated and employs both skilled and semi-skilled workers.



- The pulp industry produced 2.3m tonnes of pulp in 2003. Of the total pulp production, 32% was exported at a value of R2.6bn in 2003 while only 3% of the total volume of production of pulp was imported (PAMSA, 2004b as cited in Chamberlain et al, 2005). The remainder of the pulp is generally used to produce paper. Pulp mills require skilled labour to manage and operate the various production processes (more than 50% of the pulp and paper industry's employees are skilled). The lack of sufficient skilled labour has been identified as a constraint by market players (Chamberlain et al, 2005).
- The Paper industry is categorised according to the four main categories of paper production- printing and writing, newsprint, packaging and tissue paper. The South African paper industry is dominated by two large players, namely Mondi and Sappi. Although markets for paper products are mostly domestic, almost 30% of paper production was exported and 16% of paper was imported in 2003 (Pamsa, 2004b as cited in Chamberlain et al, 2005).
- Waste paper recovery is a well-established global industry. In South Africa the percentage of paper consumption from waste paper recoveries has risen from 32% in 1992 to 51% in 2003. Labour tends to be the largest input into the recovery of paper but collectors are paid for the paper they collect and are therefore not a direct cost to firms (Chamberlain et al, 2005).

**Wood chip exports:** The export of wood chips is as maybe seen as low value activity as South Africa is a primary producer and little beneficiation takes place in the case of wood chips. However, producers argue that these exports are used to allow an expansion process, including time for the plantations to come to sufficient scale before capital-intensive beneficiation plants such as pulp mills are constructed. Depending on the exchange rate and the price of paper, plantation owners can earn larger profits by exporting chips than selling them locally. Approximately 3m BDT<sup>10</sup> of hardwood chips were exported in 2003, with the majority (98%) sold to the Japanese market (Japanese Import Statistics, August 2004 and Satoshi Ishikawa, 2004 as cited in Chamberlain et al, 2005).

**Furniture:** Export-output ratios have traditionally been high for the furniture industry in South Africa (accounting for between 30% and 50% of output since 1995). It seen as an industry with relatively low barriers to entry and one that is relatively labour intensive (Fakude, 2001).

Increasing competition between global manufacturers has resulted in an attempt to automate the production process and transform the international furniture industry into a mass producer with economies of scale. However, the production of furniture is still labour intensive and labour productivity and labour unit costs are crucial to furniture firms (Maskel, 1998:102 as cited in Fakude, 2001).

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<sup>10</sup> BDT is used as the unit for trade transactions and stands for bone dry metric tonne, and is equivalent to air dry tonnes (ADT) minus moisture contained in the wood.



The South African furniture industry manufactures lounge, dining room, bedroom, kitchen and office/study room furniture, using approximately 300 000 m<sup>3</sup> of industrial timber for the production. The industry is predominantly made up of small producers who typically employ between five and 30 people and individually achieve a turnover of up to R15 million per year ([www.thedti.gov.za](http://www.thedti.gov.za); [www.dwaf.gov.za](http://www.dwaf.gov.za))

Production for the domestic market is complicated by small and short runs, in which it is difficult to maintain economies of scale. In the early 1990s, exports and imports increased rapidly as both globalisation and trade liberalisation opened new markets for the furniture industry. The industry continues to produce for the local market and tends to export cheaper (lower cost) furniture and import higher quality, expensive furnishings and designs. The main export destinations are Britain, Germany and France with some exports to the USA, Australia and the Middle East (Fakude, 2001; Moodley, 2001).

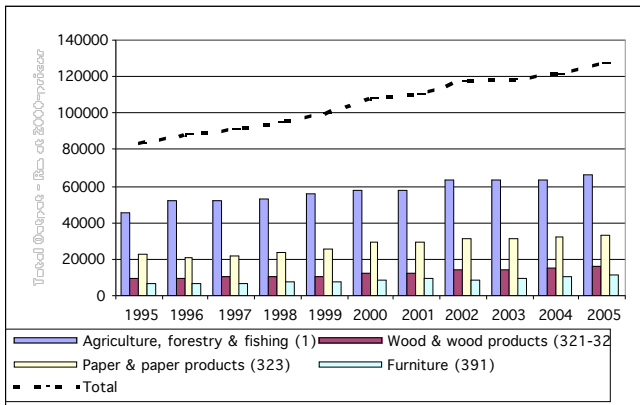
Other wood product activities include:

- **Packaging:** packaging materials like pallets, cable drums, coffins and crates, bulkbins and boxes tend to have low barriers to entry and are highly dependent on adequate raw material supply. The industry also has very low profit margins. For these reasons, timber is sourced directly from sawmilling companies.
- **Products used in construction:** A small percentage of lumber is used to produce Ceilings, Flooring, Shelving Doors, Joinery and Mouldings.
- **DIY products:** DIY products include shelving, folding doors, mirrors, dowels, furniture, edging, picket fences, trellises and garden accessories such as benches, birdfeeders and bridges as well as kitchen and bathroom accessories (DWAF, 2006).
- **Pole industry:** The South African pole industry produces two main types of timber pole markets: treated and untreated. The markets are highly competitive and compete with alternative poles such as concrete and steel. Large companies such as Woodline, Thesens and Boland Wood Industries supply approximately 85% of total demand. The remaining 15% of sales are untreated poles sold directly from plantations and used by surrounding communities for building and fencing purposes (DWAF, 2005).
- **Charcoal production:** the charcoal market is minor in comparison with other segments of the commercial plantation value chain and produces an annual ex-factory value of approximately R300 million (DWAF, 2005). Charcoal is used in the industrial market as a reducing agent in non-ferrous melting processes. The household market has the highest level of charcoal for briquettes and braais. Small-scale operators dominate the market but four large industrial companies produce branded products which are distributed through established retail chains, petrol stations and small retailing groups (DWAF, 2005). The industry requires low levels of capital inputs and technical knowledge but is labour intensive and employs an estimated 6,000 people (DWAF, 2005; Chamberlain et al, 2005).

The figures below show the increasing trend in total output by the forestry cluster. It also indicates the increasing trend in output of many of the sub-sectors that form part

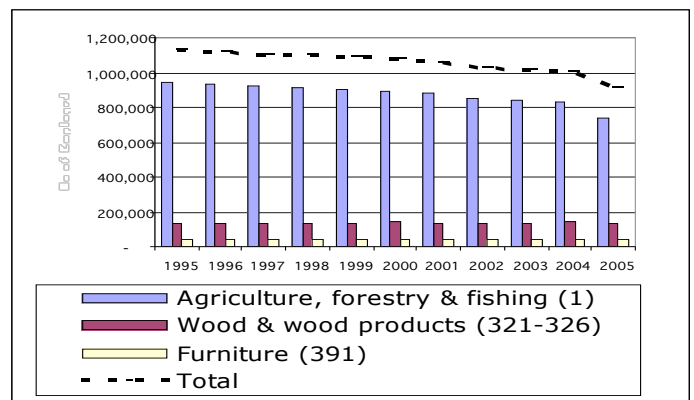
of the wood cluster. Noteworthy increases in output by the paper sub-sector as well as the agricultural sub-sector (see figure 34) have taken place from the late 1990s.

Figure 34 – Total output by sector



Source: Altman et al, 2006 (adapted)

Figure 35 – Employment



Source: Quantec, 2006 (adapted)

Altman et al (2006) use data from a number of sources to illustrate the various employment statistics with reference to agricultural employment. Employment in the wood and wood products cluster has remained relatively stable but the declining primary sector employment dominates the employment statistics (See table 10).

Table 10 – Employment shifts within the Wood Cluster

Sub-sector	Weighted annual average decline rate (1995 - 2005)	Total % decline rate (1995 - 2005)
Agriculture, forestry and fishing	-1.90%	-21%
Wood and wood products	-0.79%	-11%
Wood, paper, publishing and printing	-0.07%	-6%
Furniture	-1.43%	-15%

Source: Quantec, 2006

### Industry issues

A dominant theme of the interviews was the local shortage of timber. Almost every interviewee mentioned timber supply shortages. Timber supply has been simultaneously squeezed from several directions, of which three may be identified:

- Less timber is being grown in SA due to environmentally-informed policy decisions;
- Over-cutting in the mid-late 1990s (blamed by some interviewees on Safcol) has disrupted the rotation of SA forests. Interviewees spoke of being supplied with 20-, 17- and even 10- year old local timber compared to the 23 year old logs available in the early 1990s;
- The booming construction industry. This sector can absorb everything saw-millers produce and more, and even though there is much talk about the high technical standards needed for SA roof trusses it seems that this is less demanding than producing for furniture manufacturers. It may also be more lucrative (because more of each saw-log is utilised).

In response to timber supply problems, several of the companies interviewed indicated that they had become more international by nature. Even smaller manufacturers have increased their direct purchases of off-shore timber supplies. But this is not entirely new territory for most of them as some key wood types – meranti for instance – have never been produced in SA. One interviewee said that this more complicated aspect of the business has come about because of the “decline” of SA timber merchants, which (he suggests) was direct result of the currency shock of 2001.

*“There used to be 13 or 14 timber merchants. If one didn’t have what you needed, another one did. Now there’re about 3 and we’ve had to get directly involved in imports ourselves”.*

#### *Furniture Manufacturer Case Study*

The timber supply issue does not arise for the forestry-pulp paper productive cluster as very young pine is utilised by this sector.

Africa was not a major market for any of the interviewees. However, it is a major source of timber supply and has developed since the decline of SA’s timber growing (and includes Zimbabwe, Mozambique and Ghana, to mention a few).

All interviewees treated SADC as an extension of the SA market at least in part because all trade in the area can be easily Rand denominated.

#### *6.3.2 Selection of companies*

Some 36 companies were screened within this cluster, with 12 companies ultimately accepting our invitation to participate on the basis of their appropriateness for the study.

As far as possible, our choice included representatives from both productive clusters. Sadly, this excluded the dominant furniture manufacturer. Nevertheless and despite this omission there was some success in covering the important issues in the sector.

Productive cluster 1 (above) is entirely dominated by two companies and was dealt with in the course of an interview with one of these. Another interview dealt with a representative of the chipping and chip exporting productive cluster. It is worth pointing out that in these limited situations there is much that is likely to be missed. For example, the wood chip exporter has complained vociferously, both in its annual report and the press, about the negative impact, in recent years, of the strong Rand on its business. Its management of the issue is easy enough to explore in a single interview. But what cannot be dealt with is the company's substantive position regarding profitability and survival. Would on-going Rand strength imply demise? Or would the company find alternatives – probably in the domestic market – and might these not in fact be much more favourable for domestic employment?

Three of the interviewees are substantial forest owners, whom claim to own over half of SA's forests. From productive cluster 2, two saw-millers were interviewed. One of these is also a substantial international timber trader as is one other interviewed company. Another interviewee was essentially a purchasing office for a large international group, focused on wooden manufactured items (mostly furniture). Four interviewees are furniture manufacturers, one of which is also active in the other manufacturing category (doors and window frames). One interviewee was a specialist door and window frame manufacturer. One interviewee was a manufacturer of wooden panels. In summary, the following activities were covered by the interviewees:

- Forest owners – 3
- Saw-millers – 2
- Traders (timber) – 2
- Traders (manufactured products) – 1
- Furniture manufacturers – 4
- Other manufacturers – 2
- Pulp and paper – 1
- Wood chippers – 1

Note that some companies are involved in more than one activity.

### *6.3.3 Impact on employment and growth*

The two firms that were in the process of closing down at the time of the interview, appeared to use to the strong rand (and elimination of export opportunities) as capricious reasons to explain their demise.

The other firms interviewed have much longer track records and their management decisions concerning employment and growth reveal much more about the strategies of well-established and committed firms in the cluster.

Saw-millers tended to be preoccupied with taking advantage of the boom in construction and thus interested in supplying the local market. The shortage of timber supply is the big issue in this sub-sector. But a strong local currency makes it possible to import timber. One company said that a greater interest in the international timber market had caused it to become more skills intensive at the expense of overall employee numbers.

*“The industry’s full of bright young things sitting in front of computer screens and we’re employing fewer people on the saw-milling side”*

*Wood Industries Case Study*

Manufacturers were generally disinclined to hire new staff although questions about reductions in staff were mostly avoided or dismissed. Two manufacturers spoke about how they had focused on providing extra training for their existing workforce. In one case this reflected a much greater capital intensity (and efficiency) in production and was presented as a deliberate strategy to deal with imported (labour-intensive) competition. Another company, in the process of hanging-on in the EU market admitted to laying-off 400 (of 1, 000) employees at one production facility.

*“Some quite sophisticated stuff on the production line is now being done by people who used to sweep, make tea, and so on. And yes, we are getting money back from our Seta. That’s what’s funded this”*

*Furniture Manufacturer Case Study*

The only instance of a major new investment among all interviewees (in the last 12 months) was that currently being made by a company supplying the construction industry. This was a new production facility which will also generate new jobs. Other interviewees spoke about how the biggest companies in the cluster were all in the market to purchase assets. But this appears to be a reference only to forests, which represents an attempt to secure timber supply.

Across all companies in the cluster, the strong rand had rendered competitiveness in foreign markets more difficult, if not impossible. No interviewee had an export oriented growth strategy; more than half were concerned with trying to fend off imported competition in the domestic market.

*“There’s been real interest in our products from overseas ... the problem is, we’re just not price competitive”*

*Furniture Manufacturer Case Study*

6.3.4 *Impact on of the exchange rate on firm strategy*

A wide range of operational hedges has been utilised by the interviewed companies. For the biggest companies these include the movement of production facilities offshore and decisions about which local suppliers to develop. For smaller firms, decisions in terms of payments to offshore suppliers can be seen as a sort of operational hedging as can their pricing strategies in the local market.

However, the matter is complicated by the fact that pure currency issues alone very seldom drive operational hedges. Currency issues have a fairly direct relationship with the competitiveness of SA firms vis-à-vis Far Eastern Competition both in SA and offshore. But the relationship between currency and local timber supply problems is certainly not immediate. One firm stated the matter clearly: “Currency issues haven’t driven our repositioning. They are simply a complicating factor that has to be managed”.

For manufacturing companies in the cluster the strong rand virtually closes off overseas markets, which also serves to eliminate a range of operational hedging options (involving sales and/or partnerships offshore). No wood manufacturing interviewees spoke of establishing production facilities offshore for sale into the South African market although two big companies – a saw-miller and a pulp and paper producer are both involved in such strategies.

Sourcing timber from various previously unexploited (by SA firms) markets can be seen as a sort of operational hedge. So too can directly dealing with foreign suppliers – a strategy adopted even by some of the smallest companies. But these are responses to the timber shortage, not currency driven.

### *6.3.5 Management of the exchange rate risk*

All big companies took currency risk management very seriously. Among the less internationalised medium-sized companies, risk management was often not very sophisticated and boiled down to forward cover from the bank.

What was surprising was the number of smaller companies that do (or did) not hedge (five manufacturers). This may be related to margins – which may be high enough to obviate the need. The only firms that said anything about their own margins managed to do so in a misleading way. It may be that there is an unmentioned assumption that it is not worth getting into a business if the margins are so small as to necessitate hedging. It is difficult to attribute this to ignorance or lack of sophistication. One firm that refused to hedge nevertheless monitored exchange rates on an hourly basis and tries to choose an advantageous moment in its 30-day payment cycle to make the transfer.

No interviewee took the view that the ability to manage currency risk was an important comparative advantage. “If that’s your game you should be trying to (produce and sell what we do)”, said one. Currency issues were overwhelmingly regarded as a hassle which simply had to be lived with. Only two interviewees – both with big companies – were relaxed about the issue and in both cases exchange risk were managed by dedicated staff at a central treasury.

### *6.3.6 Importance of exchange rate volatility or strength*

The firms have been divided into those that are unaffected by the exchange rate strength, those that have been negatively affected and those that are still competitive (or who have managed to avoid competition).

#### Firms unaffected by exchange rate strength

Two of the 12 companies that were interviewed were happy with the rand about where it was at time of the interview (about R6.50 to the US \$) or stronger.

One was a company which through its structuring into two divisions – one in wood and one in exporting other agricultural products – had a “natural hedge” in place. It does not seem that there is anything deliberate about the creation (over many years) of this natural hedge. It simply works right now because the wood division is focused on the SA construction sector market and could resort to imports should the Rand look move into a medium-term stronger trading band.

*“The strength or weakness (of the rand) is only important to us in terms of their consequences – through imported inflation and interest rates – for the building industry’s demand for timber”*

#### *Wood Industries Case Study*

The other company comfortable with a strong Rand is insulated from global competition by the vulnerability of its product to deterioration at sea. It also and imports a considerable portion of inputs. But it does actively look for operational hedges, especially in sourcing inputs.

#### Firms negatively affected by exchange rate strength

Rand strength has affected the competitiveness of all firms in export markets. Two have reduced sales offshore, two others spoke about not being able to get into overseas markets despite off-shore interest in their products and two had closed down.

Two companies have closed down as a direct consequence of the reduced competitiveness of SA furniture manufacturers as a result of the strong rand. One was a buying operation for a large international retail chain which had sourced garden furniture in SA. A small (two-person) office will be left behind. This was an almost entirely exchange rate driven opportunity as the company’s interests were represented by a similar-sized operation prior to 2002. But the interviewee did have some scathing comments on the quality of SA timber and increasing problems meeting EU standards.

*“Timber quality has become a real problem. I wouldn’t let my children play on a SA-made pine jungle gym”*

#### *Wood Industries Case Study*

The second company that closed down was in fact a supplier to the trading enterprise mentioned immediately above. It was a low-cost component knock-down (CKD) manufacturer which has been mothballed. The 24 skilled staff (out of 1,200) have been retained and the interviewee expects the operation to viable once more at just under R8 US \$.

It is worth mentioning that almost every interviewee had at least one anecdote about a company that had closed down.

Many of these were companies within the dominant furniture manufacturing group, most of them acquired by that group in the last four or five years. The group did not find it possible to arrange an interview (they never refused outright) but did say over the telephone that all exchange rate risk was centrally managed. The decision to close these various operating units was also made from the centre. But the real role of the exchange rate is not known.

Interviewees made dark comments about “buying your opposition and then shutting them down” and how “(the dominant group) will tolerate opposition until a certain size... then bam!” The dominant group was indirectly the subject of a Competition Commission hearing when a furniture retail merger was challenged last year.

Other interviewees spoke about closures of sawmills. One, a company that has long spoken about its own problems securing saw log supplies has closed some of its mills, opened at least one off-shore and developed its international trading arm. Another interviewee spoke about “small family owned sawmills” that has to shut down. But the problem does not seem to be directly related to the strong Rand, as timber supply problems are known to have been accumulating since at least the mid-1990s.

#### Firms managing exchange rate strength

All other manufacturing interviewees have by definition managed to deal with competition from cheap imports from the Far East. Strategies include: Skilled, capital intensive production; seeking specialised market niches; avoiding direct competition in areas where especially Chinese manufacturers are strong; gaining control of inputs further up the value chain (e.g. sawmilling); and selective pricing (low margins where faced with competition, made up elsewhere).

Where these manufacturers have exported previously, they have now mostly lost their offshore markets to the Far Eastern competition. It was suggested that SA manufacturers could no longer provide certain items for the local market – coffee tables for instance. Two interviewees spoke about Far Eastern manufacturers (one Chinese, one Indonesian) stealing their design and selling the same item in direct competition, at a lower price.

One manufacturing firm – which has lost its US market to Latin American competition but which is still active in Europe – spoke of the loss of 400 (out of 1,000) jobs at one of its five plants. The same firm spoke of the importance of export competitiveness. It moved into offshore markets (in the late 1980s/early 1990s) in order to earn economies of scale that would not be possible were it to solely focus on South Africa/SADC. Another interviewee (currently engaged in an R400m expansion) argued that the benefits of mechanisation were not possible in SA due to the limited size of the local market (and thus lower returns per manufacturing unit).

Five of the 10 manufacturing companies still functioning stated that volatility was a bigger problem than the strong Rand. There is of course nothing statistically significant about these numbers – these are companies that have, after all, managed to



work around a strong Rand. What is perhaps significant is that the 3 interviewees who complained most passionately about volatility were the top financial managers in large internationalised firms, all of which insure currency risk in quite sophisticated ways (the biggest employs some 11 financial instruments).

Specific problems raised include: time and hassle costs; the cost of professional advice (not from banks – there was scepticism about both the efficiency and “conflict of interest” for these institutions); off-shore loan repayments; transfer pricing; inability to manage offshore hedges timeously (i.e. using US dollar receipts for one operation to offset risk in another operation). One interviewee expressed a preference for managing international trade through a dedicated offshore dollar based account (not a CFC account) because his company’s international trade was all dollar denominated.

At least two manufacturers suggested that the biggest problem with volatility was how difficult it made it to “outguess the opposition”, especially foreign rivals.

### 6.3.7 *Regulatory issues*

A possible nuisance variable is that all three of the more passionate interviewees appeared to conflate, at least to some degree, volatility with exchange control issues. There is no doubt that all have experienced practical problems in managing volatility issues thanks to exchange controls. Both straight regulatory provisions and clumsy management on the part of the authorities were cited. It might be that the message from the practitioners is that these are issues that cannot be viewed separately.

The biggest company interviewed – and also the one with the most international exposure– was, by comparison with most interviewees, relatively unconcerned about regulation, describing it as “now only a bit of an irritation”. The firm is easily able to raise capital abroad. By contrast another interviewee, employed by a subsidiary of a major international company said that his overseas head office is worried about repatriation of borrowed money brought into SA. The fear persists despite repeated assurances from the local office that it is misplaced. These negative perceptions appear to be related to a single incident involving regulation and poor performance by a SA financial service provider.

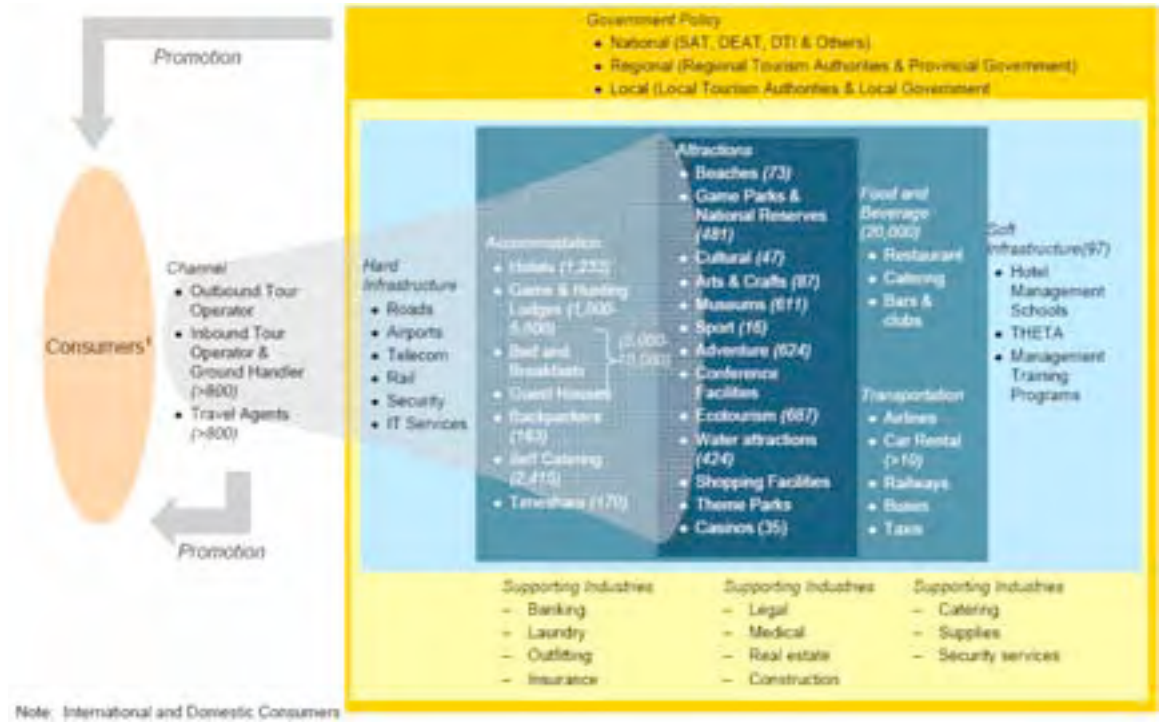
180 days repatriation window on CFC accounts was pinpointed as a problem.

## 6.4 **Tourism industries**

### 6.4.1 *Overview*

The tourism sector comprises tourism-related products and services including accommodation, transportation, and retail and leisure activities. The figure below provides an overview of the diversity of the South African Tourism cluster.

Figure 36 – SA tourism cluster



Source: Monitor Company, SA Tourism Competitiveness Assessment, 2004

Not all activities are directly related to the arrival of tourists. As Lowitt (2006) notes there are two concerns - firstly the lack of agreed definition and secondly the fact that tourism is not defined as a traditional economic sector in terms of the Standard Industrial Classification system. As such all tourism activity that is captured within the national accounts is not visible.<sup>11</sup>

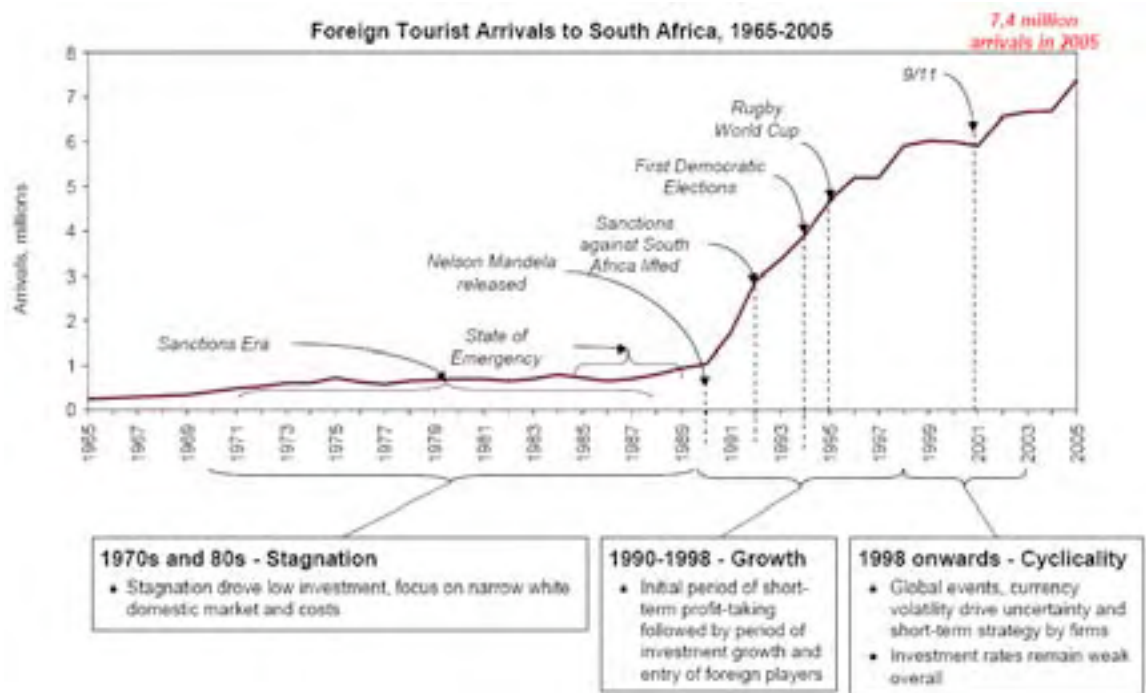
Tourism is estimated by the World Tourism Organisation as the world’s largest economic sector, generating some US\$500 billion per annum and employing some 340 million people globally – directly and indirectly. The World Travel and Tourism Council predicts that by 2011 the industry will contribute some 11% of global gross domestic product (GDP).<sup>12</sup> Globally tourism also accounts for some 35% of exports of services and over 8% of exports of goods. Tourism globally is seen as one of the fastest growing sectors with the number of arrivals set to increase from 760 million in 2004 to some 1,56 billion in 2020.

<sup>11</sup> To deal with this countries adopt one of two approaches. Either they establish Tourism satellite Accounts or they attempt to compile a picture of the tourism sector by aggregating portions of existing SIC data (Lowitt, 2006).

<sup>12</sup> World Travel and Tourism Council, Press Release: *World Travel and Tourism Council Forecast Places Tourism among Leading Economic and Employment Generators*, 8 May 2001.

The South African tourism industry has experienced high growth rates over the last decade. In terms of tourist arrivals to South Africa the number has increased by 100% since 1994 - from some 3,7 million tourists in 1994 to 7,4 million in 2005. The key growth segment has been from other African countries.

**Figure 37 – Foreign tourist arrivals to South Africa, 1965-2005**



Source: SA Tourism, Indaba 2006: Fact Sheet

This rapid growth appears to bear little relationship to exchange rate issues but is rather the result of the removal of international sanctions and an improved disposition towards the South Africa. Lowitt (2006) notes that no correlation can be identified between the exchange rate and the growth in the tourism industry.

Despite the growth in numbers, local tourism, comprising some 49,3 million tourists per annum in 2003 (88% of the total number of tourists) only represents some R23.4 billion (30.3% of the total number of tourists) in expenditure, according to the WTTC. The most recent WTTC data also indicate that while international tourism volumes contribute only 12% of total tourism, this equates to some 70% of total value, or R53.9 billion in 2003.<sup>13</sup>

<sup>13</sup> Tourism Indaba Fact Sheet. The data is based on WTTC estimates which are considered highly unreliable and problematic. See Lowitt, 2006.

The expectations for the tourism industry are considerable both in terms of GDP and in terms of job contribution. Lowitt (2006) provides the following snapshot of recent estimates.

**Table 11 – Expectations matrix**

Organisation	Economic growth	Employment growth
World Travel and Tourism Council (2006)	Tourism industry to grow from 3.3% of GDP to 3.8% by 2016 Tourism economy to grow from 8.2% of GDP to 9.3% of GDP by 2016	Tourism employment to grow from 485,000 in 2006 to 665 000 in 2016 Tourism economy employment to grow from 1,083,000 in 2006 to 1,500,000 in 2016
President’s Office (2006)	Tourism to grow from 3% of GDP in 2006 to 13% of GDP by 2014	Employment to grow by 400,000 between 2006 and 2014
Customised Sector Programme (DTI)	By 2014 SA will attract 10million foreign tourists and 80million domestic tourists. By 2014 tourism will generate ZAR75billion forex per annum and ZAR3billion new investment.	
DEAT (2006 budget speech)	R100 billion contribution within 5 years 8.5 million foreign arrivals	500,000 new jobs

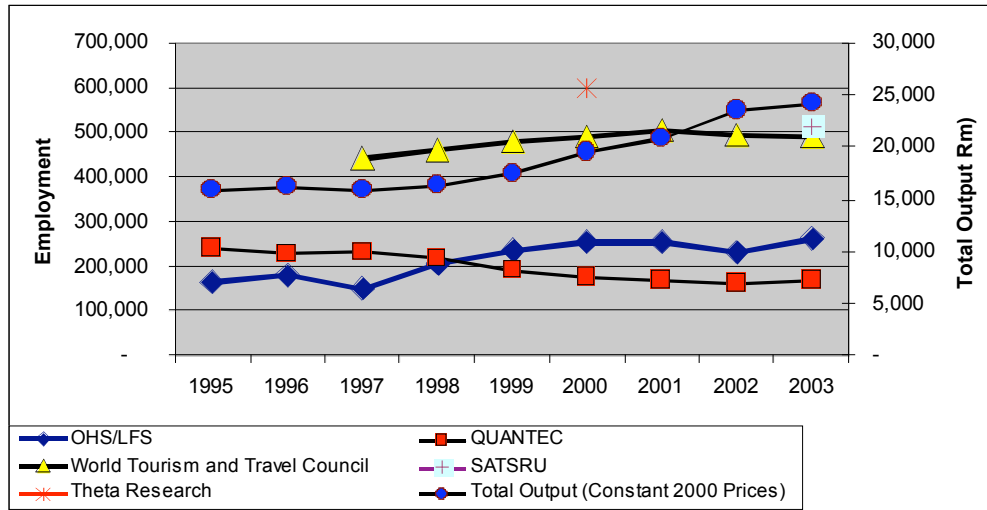
Source; Lowitt, 2006

The actual GDP contribution of the tourism industry is a subject of much debate, from both a modelling point of view and a data point of view. Lowitt notes,

*“As such there is very little that we can say about the contribution of the tourism industry to GDP at this time with any certainty. We can say that (based on the SA Tourism data) in 2003 domestic tourism contributed 1.8% to nominal GDP and that in that same year inbound tourism contributed 3.3% to nominal GDP based on the SARB data. If we utilise SA Tourism’s inbound receipts (excluding capital expenditure) the inbound tourism contributed 3.8% to GDP and if capital expenditure is included this rises to 4.2% contribution to GDP. ... there appears to be a general increase in tourism receipts between 1997 and 2003 but that a decline has been noted in 2004. Using the most conservative SARB figures inbound tourism’s contribution to GDP has grown from 2% in 2000, to a high of 3.3% in 2003 and falling slightly to 2.9% in 2004 producing an average growth rate of 2.6% per annum” (Lowitt, 2006)*

The overall contribution of tourism to employment and employment growth remains another contentious issue. A number of estimates exist. SA Tourism for instance estimates total tourism related employment at 512,000 in 2003 while the Labour Force Survey indicates some 262,000. The graph below provides an overview of various data sources and employment estimation for Tourism.

Figure 38 – Estimates of tourism-related employment



Source: Lowitt, 2006

The high and the low estimates were obtained from different approaches. The SA Tourism and WTTCC data is generated with the aid of a model while the Labour Force and Quantec data appears to be based primarily on an analysis of Catering & Accommodation sector data.

While overall estimates in respect of GDP and employment contribution are problematic, there at least appears to be consensus that the tourism has grown over the last decade in both GDP and employment terms.

#### 6.4.2 Selection of companies

Some 16 firms in the tourism sector were approached and screened across the range of services provided. Seven firms ultimately agreed to participate in the research.

The firms interviewed included professional services firms (typically consulting professional engineers) and contracting firms. The largest firms interviewed were involved in providing professional services and contracting services.

Four large firms, all with 500 or more employees and three medium-sized firms with more than 200 employees were interviewed. No small firms were interviewed (see table below).

**Table 12 – Profile of interviewed firms**

Sub-sector	Permanent employees	Non-permanent employees	Annual domestic turnover (Rm)	Export turnover (Rm)	Export turnover as % of total turnover	No. of local operations	Inter-national operations
Diversified travel group	2,726	0	1,134	-	0%	180	0
Luxury resorts & hotels	1,200	2,500	500	-	0%	22	4
Tour operator & travel agency	850	0	840	560	40%	28	0
Car rental	500	0	263	88	25%	60	4
Tour operator & travel agency	400	0	214	106	33%	18	0
Hotel group	245	0	45	-	0%	10	0
Adventure tourism	230	60	4	76	95%	4	0

*Source: Interview Questionnaire*

The firms interviewed for this study comprised formal tourism firms operating across tourism value-chain or in niche segments of the tourism industry. All serve the formal local or international tourism sectors – rather than cross-border shopping tourism.

#### *6.4.3 Impact of the exchange rate on growth and employment decisions*

Overall this group of firms represents an unusual perspective on foreign exchange concerns. The overall opinion of the firms interviewed was that foreign exchange played a critical role in the tourism industry – albeit indirectly in respect of impact on firms. Unlike manufacturers for instance who are either reliant on exports or require imports the tourist companies perspective was that while foreign exchange issues clearly impact on their revenues and margins (or at least place limits on these) the most important consequence was the impact of the exchange rate on the overall competitiveness of South Africa as a tourist destination.

Not all firms interviewed were equally exposed to international tourist markets and the companies interviewed adopt a diverse set of strategies to managing foreign exchange risks. This risk management however is in almost all cases considered an element of a larger business / operational risk management approach rather than a core focus.

All firms noted that exchange rate risks do have an impact on both revenues and margins. The overwhelming impact, however, was on the overall competitiveness of the South African tourism industry.

This impact was identified at two levels. The first had to do with South Africa's competitiveness as an international tourism destination. If the Rand strengthens, South Africa becomes a less attractive destination in comparison to other long-haul competitor markets. The high cost of the long-haul air travel in particular was noted. In order to address this barrier, local accommodation and related services and

attractions must be perceived to offer value for money for international tourists. In some niche market the sensitivity to increased prices as result of exchange rates is less critical, but for the majority of budget and VFR (“visiting friends and relatives”) travellers these are uppermost concerns.

The second impact is that while foreign tourists may still come to South Africa in the face of a strong Rand or appreciating currency, the consequence is reduced overall expenditure. Simply put, tourists will typically downgrade accommodation, eat at less expensive establishments and limit their tours and shopping. The overall impact is that total revenues are reduced to the sector.

Currency fluctuations, however, also impact margins. This is both in respect of in-bound and out-bound tourism. In terms of in-bound tourism this is less of an issue as typically services are priced in Rand and inputs are all Rand-based. In some instances however – notably high-end adventure or lodge type tourism activities – these are priced in US\$ or Euros. In such cases a strengthening currency negatively impacts margins while a deprecating currency has the opposite effect.

In terms of out-bound tourism the impact of a strengthening Rand is that international packages typically become cheaper for the local market, i.e. more affordable resulting in increased revenues as well as improved margins. A weakening currency typically results in a redirection of local demand towards local tourism and where outbound tourism still takes place tour operators can face significant margin pressure as their markets struggle to absorb the full impact of the increased international costs.

It should also be noted that some operations (such as car rental) face additional challenges in respect of input cost. Typically cars are sourced locally, but many of these are fully imported. The increased cost, should the Rand weaken, must be recovered by the rental operators. As was noted in one case the ability to absorb and pass on these increases can be challenging. In particular the ability to increase car rental prices is heavily depended on market strength and the behaviour of competitors. Given the dominance of a number of large players as well as their diversified holdings, larger players can typically sustain periods of reduced margin more easily.

While tourism firms considered exchange rate issues as important they felt that there was no direct relationship to growth and employment in the industry.

Other concerns were ranked as far more critical - in particular the high cost air travel to South Africa and labour costs. In respect of air travel it was indicated that South Africa has insufficient airline capacity and offers expensive airfares relative to competitor markets. Given the distances, airfares constitute a large part of any tourists’ budget. The impact of rising oil prices as well as weakening currency further exacerbate the challenge. A stronger currency - while good for fuel costs - reduces margins to the tourism sector.

In respect of employment, firms noted that the cost of South African labour was high and in most case studies constituted the single biggest operating expense. More critically the low levels of productivity were seen as a concern.



Firms suggested that even with considerable growth in the tourism industry the level of employment would not raise dramatically. This was because of technological deployment, current over-staffing and the utilisation of contract / casual labour.

*Our overall employment has increased because of improved turnover. This is mainly due to significant growth in out-bound tourism over the last three years. Our in-bound is still good business. Our front office (travel agencies) are most sensitive to volume and any significant increases in demand would result in some increased staffing despite our significant investment in technology.*

*Tourism Operator*

The biggest impact in terms of potential employment lies with luxury travel where one employee per room is typically the norm. As one firm however pointed out, the initial capital development cost of a single luxury hotel room is in the order of R1,5 million.

*Improved market conditions are unlikely to result in any increased employment in the short to medium term because we operate with a core of permanent staff and utilise casual labor during peak periods and outsourced contract staff for certain functions. Many of our hotels regularly run at 100% occupancy with no additional staff requirements. But significant increase in the number of (foreign) tourists will result in the development of additional rooms.*

*Hotel Management Company*

While not raised explicitly in any of the case studies, the issue of the seasonality of tourism markets appears to be a key concern according to industry sources.

The sector has shown significant growth in employment, but as respondents noted that is a consequence of the overall tourism industry boom since 1994 rather than a consequence of exchange rate movements.

#### *6.4.4 Impact of the exchange rate on firm strategy*

In total, the turnover reported by the seven tourism firms interviewed amounted to R7 billion for the previous financial year. Of this 28% came from exports of services, i.e. in-bound tourism. However, in individual cases as much as 95% of turnover was from foreign tourist receipts. The remaining 72% of turnover comprise local (South African) tourism related revenues. The amount of out-bound tourism activity was not established for aggregate of the firms interviews. However from the case studies it is evident that this comprises as much as 50% of revenues in some instances.

As noted earlier, exchange rates impact at two points – total revenue and margins. Firms interviewed have adopted a range of operational strategies and hedges to dealing with the impact of foreign exchange risks.

In the case studies the impact of exchange rate on firm strategy varied across the size and types of firms interviewed. Three key factors seem to dominate the specific strategy adopted:



- Overall market strength;
- The level of diversification; and
- The nature of the target markets.

Overall market dominance appears to play a key role in dealing with exchange rate risk. In at least two of the cases the approach adopted has been to expand and grow the tourism business through the acquisition of other smaller firms. Market dominance enables these firms to improve their negotiating power in terms of local and international inputs. It also enables them to improve their ability to pass price increases on to customers. Furthermore the increased size gives rise in many instances to economies of scale. This position therefore provides an ability to manage their margins in the face of currency fluctuations. Often this strategy is coupled with a diversification of businesses in the tourism cluster in order to obtain a greater share of overall spending and in order to reduce cost.

Closely allied to the growth by acquisition strategy is a strategy to expand through forward and backward linkages. Consequently the operations of some firms have expanded to include activities linked to tour operators, travel agencies, bus operators and retail merchandising. In one case the company has extensive holdings ranging from charter planes, hotels, restaurants, curio shops, tour operators and a tour bus service to name but a few. Consequently the firm seeks to package and sell tours that maximise the utilisation of its various services and products.

The diversified nature of the business provides hedges against currency and other risks. Furthermore through this integration these firms are able to control input costs and retain a larger share of the revenues and increase margins.

The third factor considered by firms in their strategy is to focus on specific target markets or a mix of target markets. Two approaches are evident in the case studies.

The first is a niche approach concentrated on the luxury market from both an international and a domestic viewpoint. Typically these firms operate in markets that are far less price sensitive and are therefore able to absorb any price increases if required. In one instance the firm interviewed sets its prices in what it terms “hard currency”, i.e. US\$ or Euro. The impact of any exchange rate fluctuation is there a direct impact on their margin.

The second approach is to diversify across markets. In essence the key markets include domestic and international tourism, and businesses and consumer tourism. In addition some firms operate both an in-bound and out-bound international tourism business.

Each of these markets responds differently to exchange rate issues. In respect of outbound tourism, which comprises mainly South African tourists visiting regional or international destinations, a weaker Rand exchange rate increases the cost of getting to and staying at overseas destinations.

The outbound market, however, is split between long-haul destinations (such as Europe) and Southern African destinations. In the face of a weak currency some firms

have in the past shifted from long-haul outbound tourism to Southern African and domestic tourism. This was notably the case in 2000, but has been significantly reversed over the last two years as the Rand has again appreciated.

The second market position strategy is to focus on the business travel market rather than the consumer market. Firms indicated that much of the consumer market comprises relatively low value transactions as travellers (even if international inbound) typically utilise service providers for only one aspect of their travel arrangements, such as the booking of flights or hotel accommodation. By-and-large this segment is also price sensitive.

Some firms have sought to mitigate the fragmented nature of the consumer market but focusing on the development and packaging of tours (typically all inclusive) to South Africa. Such packaged tours to South Africa appeal to European and Asian budget travellers in particular. This distribution approach can provide good margins in view of the bulk purchasing capacity and mitigate the high transaction costs associated with individual travellers. This strategy can be very profitable in a stable currency environment. However, as firms indicated this market is particularly sensitive to price increases and exposed to currency risk. In most instances such tours are priced and advertised up to a year in advance with little room to adjust prices in the face of any adverse currency movements. Pricing may occur in Rand, but is most often in a foreign currency. A significant appreciation of the Rand negatively impacts margins. This is in cases exacerbated by the fact the foreign operators (especially large customers) have extended credit terms interdicting a further currency risk at the time of foreign currency repatriation.

*“This [distribution] strategy has allowed us to develop an operational hedge against exchange rate fluctuation. While our distribution business is sensitive to the exchange rate, our retail business is largely unaffected as is our exhibition/conference business. The foreign exchange business benefits from a gradual depreciation of the Rand”*

*Tour Distributor*

In contrast to the consumer business, the business travel segment appears to be far less sensitive to price fluctuations. A number of firms (for instance car rental firms) focus on the corporate market segment in particular. It must, however, be noted that this is largely domestic travel. Nevertheless there is some concern as much of the corporate business, which often has a considerable international travel component, is credit business.

#### *6.4.5 Management of the exchange rate risk*

The management of foreign exchange risk is not highly sophisticated amongst the tourism firms interviewed and is largely confined to the management of pricing and cash flow.

As one firm noted typically tourism comprises a high volume of relatively low value transactions making it almost impossible to take any forward cover. Consequently few of the firms utilise forward cover – most often this happens where large packaged tours are bought or sold internationally.

The core strategy to dealing with overall exchange rate risk was seen by most firms as comprising careful forecasting and operational management. Focusing on cost saving measures in particular “when times were tough” was an essential approach. Other approaches include shifting market focus, notably a shift from international to local travel destinations for local tourists when the currency weakens.

Most firms sought to fix prices in Rand, even where these were being sold internationally to hedge against any currency fluctuations. In respect of travel agencies it was noted that typically customers are required to pay for their travel within a specified time and all prices are subject to exchange rate adjustment.

In such cases the risk is passed to the consumer. As one interviewee commented,

*“A key challenge in respect of outbound travel is that international packages and destinations need to be paid for in the respective local currencies or preferred international currency. In most instances this is US\$, Pounds or Euros. Our company ensures that outbound travellers pay for their travel arrangement upfront and ensures that all contracts contain clauses that enable price variations to adjust for foreign currency fluctuations until date of purchase. All large international purchases are covered.”*

*Tour Operator*

#### 6.4.6 Importance of volatility or strength

Overall views in respect of volatility and strength on the Rand were mixed. Some firms indicated that a weaker currency was good for their export market (inbound international travel) as it made the South African destination more competitive. Others however noted that a stronger rand was good for their outbound travel market as demand for international travel from South Africa typically increased.

The table below attempts to summarise the contradictory positions evident.

**Table 13 – Impact of foreign exchange level on tourism receipts**

	Strong Rand	Weak Rand
<b>Domestic tourism</b>		
Inputs	Partially cheaper (e.g. fuel, cars), generally neutral	Partially more expensive (e.g. fuel, cars), generally neutral
Revenues	Neutral (?)	Neutral (?)
Margins	Neutral (?)	Neutral (?)
Market behaviour	Shift from local to foreign destinations	Shift from foreign to local destinations
<b>International out-bound tourism</b>		
Inputs	<b>Cheaper (e.g. hotel rooms)</b>	<b>More expensive (e.g. hotel rooms)</b>
Revenues	↑	↓
Margins	↑	↓
Market behaviour	Increased foreign travel	Shift from foreign to local destinations
<b>International in-bound tourism</b>		
Inputs	Partially cheaper (e.g. fuel, cars), generally neutral	Partially more expensive (e.g. fuel, cars), generally neutral
Revenues	↓	↑
Margins	↓	↑
Market behaviour *	Reduced numbers of international visitors or downgrading of accommodation and reduced expenditure	Increased international tourism, upgrading of accommodation, increased expenditure Increased numbers of tour groups

\* This represents the view from the case studies, but is not borne out by the analysis of data (cf. Lowitt, 2006), which suggests little or no correlation between foreign exchange rate and foreign tourists.

Despite the views on currency levels, most firms appear to regard volatility of the currency as the more pertinent of the exchange rate risks because of its impact on the ability to manage overall businesses risk. As one respondent noted,

*“A consistent (i.e. stable) Rand is important to our business as it enables us to better manage our overall businesses risk. As we are price takers this is especially important”.*

This concern with volatility is especially critical where packaged tours are sold in advance in international markets and credit terms apply. Most of the firms interviewed did not consider forward foreign exchange contracts to be useful to their businesses. The primary reason is that there are few large transactions of sufficient size to justify the cost.

While the level of the exchange rate is important, it is the volatility that erodes margins, especially the margins of activities related to inbound tourism.

#### 6.4.7 *Relationship with financial providers*

The firms interviewed appear to have limited dealings with financial service providers beyond utilising CFC accounts or purchasing spot currency. Only two of the firms utilised forward contracts.

Most firms did not believe that it was really possible to manage foreign exchange risk through financial instruments and most considered forward contracts as the only available tool. No opinion was expressed in respect of financial service providers or other available products.

Foreign exchange risk management, where it occurs, falls to the CEO/MD or CFO / Financial Manager. None of the tourism firms interviewed had a treasurer or outsourced treasury function.

#### 6.4.8 *Other points*

While foreign exchange risks are certainly important to the tourism sector, the overall sense from the interviews was that foreign exchange issues do not represent any new concerns. When asked whether or not exchange rate issues have recently become more important, one respondent noted, “they have always been important”.

Nevertheless, the interviews also suggest that from an industry perspective exchange rate related concerns were currently of less concern than a number of other issues – especially in relation to overall growth and employment decisions.

Across the board critical concerns noted in respect of the tourism sector included:

- The high cost of fuel;
- The cost and availability of airline seats to and from South Africa; and
- The impact of crime.

The high cost of fuel as well as the cost and availability of airline seats impacts in-bound as well as out-bound tourism segments, limiting the ability of the industry to expand its international business as well as placing pressure on margins. While respondents did not perceive the issue of fuel cost and airline travel to be an exchange related issue, clearly an additional dimension that impacts the cost of these inputs is the relative strength of the Rand.

The issue of crime was seen as important for two reasons. The first the impact on tourist flows to South Africa as a result of negative perceptions. The second reason indicated was the overall cost of business, specifically the high cost of security and insurance.

## 7. Financial services providers and foreign exchange risk

Over and above the interviews with the 40 firms, an additional 10 interviews were undertaken with a range of financial service providers. The aim of these additional interviews was to identify the nature of financial hedging products available and to investigate current trends.

This section does not provide an exhaustive analysis of the range of financial service providers operating in the South African market, but merely identifies the range of services on offer. Any inclusions or omission should not be construed as either an endorsement or judgment of any particular firm.

### 7.1 Introduction

The management of foreign exchange risk needs to be understood against the background of the overall risk management strategy adopted by the firm.

Firms constantly face a number of financial risks including interest rate risk, financial market risk and foreign exchange risk and so risk management is an integral part of the operation and management of firms. In theory, foreign exchange risk<sup>14</sup> or exposure is particularly important for firms that import and export goods and services and/or multinationals. Thus, one would assume that the management of foreign exchange risk, allowing firms to protect themselves against unpredictable changes in the exchange rate, would be vital (Allayannis et al, 2001).

While it appears that exchange rate risk/volatility has become a more important factor to firms, businesses tend to find market opportunity the most important factor when establishing global businesses or branches (Fosler and Winger, 2004). Foreign investment decisions are influenced more by political risk, the legal environment, and labour management relations than by the exchange rate environment.

In a survey of 100 multinationals by Ernst & Young (as cited in Fosler and Winger, 2004) "... 33% of respondents said they hedge their earnings' exposure to currency fluctuations..." this amount had increased significantly from less than 10% five years ago.

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<sup>14</sup> Giddy and Dufey (1992) define exchange risk as the effect that unanticipated exchange rate changes have on the value of the firm.

However it has been argued that many firms do not actively manage their foreign exchange exposure for the following reasons:

- Management may not understand the use of risk management tools as they consider these tools speculative.
- Firms claim that exposure cannot be measured.
- Firms feel that they that are already hedged.
- Management says that the firm does not have any exchange risk because it does all its business in the home currency.
- Finally, they assert that the balance sheet is hedged on an accounting basis, which according to the authors is not a viable practice (Giddy and Dufey, 1992).

A study on derivative use by UK non-financial companies also found that firms may not use derivatives for a number of reasons including:

- Concern about disclosures of derivatives required under FASB rules.
- Concerns about perceptions of derivatives use by investors, regulators, analysts or the public.
- The cost of establishing and maintaining derivatives programmes exceed expected benefits (El-Masry, 2003).

Therefore, while not all firms manage their exchange rate risk, it was found that companies – especially those that function in emerging markets use exchange rate management (particularly financial instruments) as a “strategic competitive advantage”. The survey also found that just more than 15% of firms surveyed find exchange rate risk very important in comparison to other risks (especially those firms that operate in emerging markets or in Japan). Almost 65% found the risk somewhat important, 20% found exchange rate risk not too important with a “significant minority” considering exchange rate “Not important at all”. (Dhanani and Groves 2001<sup>15</sup>; Fosler and Winger 2004<sup>16</sup>). As we shall see, management of exchange rate risk is also viewed as a competitive advantage by certain South African firms.

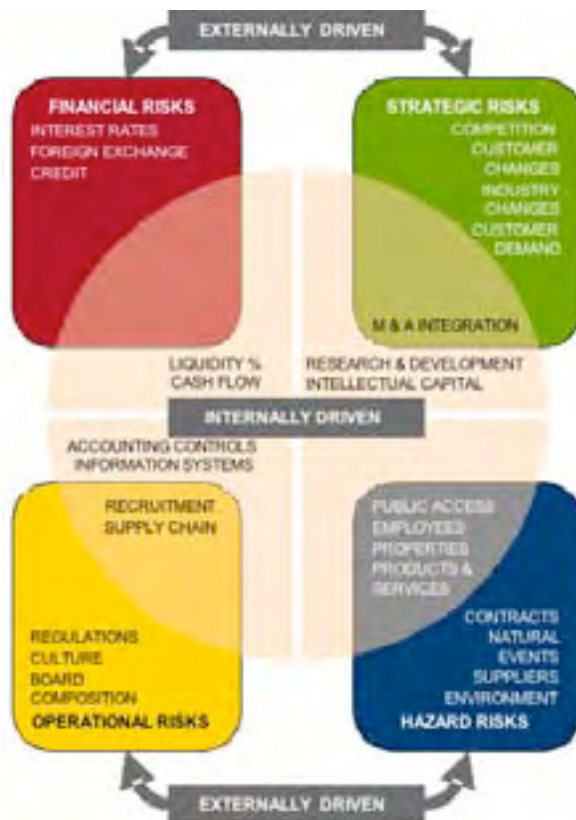
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<sup>15</sup> Dhanani and Groves conducted an empirical study into corporate organisations and active management of strategic risk. They conducted semi-structured interviews with 12 large, multi-nationals listed in the UK with the firms representing seven different industries. The authors warn readers that due to the firms’ specific rather than Random selection and the small sample size, the findings should be viewed with caution: the findings are more suggestive of corporate practices than confirming.

<sup>16</sup> Fosler and Winger surveyed Chief Executive and Chief Financial Officers from approximately 400 publicly traded businesses in 38 companies. The survey attempted to determine if “...economic inefficiencies that could not be clearly detected in the macroeconomic research could be identified in multinational companies’ attitudes and practices towards exchange rate volatility.”

The figure below illustrates the spectrum of risks a firm may face – both internal and external – and the position of foreign exchange risk among these.

**Figure 39 – Overview of firm risks**



Source: IRM, *A Risk Management Standard*, 2002

In this diagram, foreign exchange risk is characterised as a financial risk. (See the red section of the figure.) In the interviews with firms, it was clear that a swing in the currency could also lead to strategic risks (green section) – as competitive changes occur. Moreover the regulations (yellow section) relating to foreign exchange repatriation lead to certain actions designed to minimise associated operational risks. In this section, the discussion focuses primarily on the management of the financial risk associated with the currency (the red section).

Risk can be defined as “the combination of the probability of an event and its consequences” (IRM, 2002: 2). Typically risk management recognises both positive (upside) and negative (downside) aspects of risk. Risk management should be an integral part of any organisational strategy.

It will soon become apparent that firms are increasingly considering foreign exchange risk as one risk amongst many others. Consequently the management of foreign



exchange risk is in many cases not divorced from other financial and operational risk management initiatives.

## **7.2 What is foreign exchange risk?**

Foreign exchange, or simply exchange, risk is the potential gain or loss that could occur as a result of an unanticipated change in the exchange rate. Typically exchange risk can affect a firm at three levels:

- Cash flows;
- Assets and liabilities; and
- Real business of the firm.

The risk or exposure can be considered from two perspectives – an accounting and an economic one. In terms of accounting exposure the risk relates to the effect that currency changes can have on financial statements. This type of risk is sometimes referred to as translation exposure.

The economic risk has to do with cash flows. These cash flow exposures can be related to present cash flows, in which case the term transaction exposure will be employed. They can also be related to future cash flows and here the term real operating exposures will be used.

Translation exposure may occur upon consolidation of financial statements across operating units or subsidiaries that transact in different currencies, such as in the case of overseas branches. When the value of the currency earned by the offshore subsidiary is translated into the domestic currency (such as ZAR) the value typically changes depending on the current exchange rate. This is considered in the literature to be primarily an accounting exposure.

Translation exposure occurs where assets and liabilities are valued at a given point. Such exposure could arise even where no foreign currency is directly involved, for instance in the valuation of stock denominated in US dollars. In the steel industry, for example, the value of stock is determined by international commodity prices.

Transaction exposure concerns the impact of exchange rate volatility on present cash flows. This is typically in respect of transactions already entered into such as in the case of imports or exports or borrowings or lending in a foreign currency or intra-firm funds flow in a company with international operating subsidiaries.

Real operating exposure or economic exposure occurs where changes in exchange rates affect future revenue and cost.

Firms typically deal with these exposures in different ways. The most common approach to dealing with transaction risk is to hedge by means of currency forwards (forward contracts) or futures (options).

In respect of real operating risk, which has to do with the long term, the intervention required has to do with strategies such as cost cutting, changing location, changing markets etc.

Firms do not generally consider economic exposure as something opposed to accounting exposure. Giddy and Dufey (1992) note that much of what passes for exchange risk management is almost entirely concerned with accounting or translation risk. They identify three problems associated with accounting exposure:

- Accounting data do not necessarily capture all commitments of the firm that give rise to exchange rate risk;
- Because of the historical cost principle, accounting values of assets and liabilities do not reflect the respective contribution to total expected net cash flow of the firms; and
- Translation rules do not distinguish between expected and unexpected exchange rate changes (Giddy & Dufey, 1992).

The current study maintains that firms need to look at a variety of interventions and risk management strategies that encompass more than financial hedging in order to deal with economic exposure. Such interventions include those related to the ability to re-price and re-locate production amongst other operational hedges.

In the section below, we investigate how firms can utilise financial hedges to manage their exchange rate risk.

### 7.3 How do firms manage foreign exchange risk?

The responsibility for foreign exchange and exchange risk management varies across firm size and sectors. In large firms the management function will reside within a treasury department or treasury function.

The treasury function is responsible for the overall financial management within a business, typically to ensure that the company has sufficient funds (if applicable, in the required currencies) to meet its operational and financial obligations.

The treasury function extends beyond foreign exchange and encompasses the full ambit of money and liquidity management. The treasury function involves borrowing money and raising funds. Exchange risk management usually also resides within this function. Exchange risk management typically encompasses the use of financial instruments to hedge against adverse currency movements.

Van Rooyen (undated) sees the treasury manager as “the officer responsible for the receiving and safe keeping and disbursement of negotiable value.” The following are the typical functions of a corporate treasurer:

- **Liquidity and cash management.** This involves the short-term management of cash and liquidity and is the primary function of the treasurer.

- **Currency management** involves the converting and hedging of currency receivables and payables and the management of the impact of currency movements on balance sheet gearing and net worth.
- **Funding management** involves arranging bank and capital market debt. The board decides on the level of debt and the treasury manager will decide on how best to resource it in terms of instrument, maturity, currency, interest basis, documentation and day-to-day management of the relationship with the provider.
- **Corporate finance** is the managing of financial structure (for instance, ratio of debt to equity) to minimise the cost of capital to the company.
- **Risk management** involves exposure to pure risk as well as financial risk. It stands to reason that since the treasury department is responsible for risk management, managing other risks may also be its responsibility.

Appendix 1 contains the ACTSA statement of treasury management best practice.

In recent years the treasury function has become more complex. The financial environment has itself become more complex, and there is increased volatility in financial markets. The acceleration of globalisation, and the emergence of e-business and a range of complex new financial instruments (especially leverage instruments) have complicated matters further. As a consequence, firms have become more exposed to financial risks and require a more sophisticated treasury division.

Treasury functions are usually found only in large firms or corporates in view of the considerable cost in acquiring and retaining the necessary skilled staff and systems. Interviews suggest that a small corporate treasury will cost in excess of R 3 million a year.

For small and medium-sized firms, these costs are prohibitive. Consequently most medium-sized or smaller firms undertake basic treasury functions as part of their overall financial management role. In very small firms the treasury function and the exchange related management function might be absent.

Part of the gap in the market is being filled by outsourced treasury service providers. They offer treasury services - including risk management - to small and medium-sized firms on an outsourced contractual basis. The aggregation of a number of customers enables these firms to receive advanced professional services without incurring the high fixed cost of an in-house treasury function. In many instances these service providers are also able to aggregate forex requirements and negotiate better deals with banks.

A number of exchange-related website and e-businesses providers have also emerged. These generally offer an information service to small firms only.

## 7.4 Financial service providers

A range of financial service providers exists. Some 10 financial service providers spanning the spectrum of services or related firms (for instance the SARB) were interviewed.

**Table 14 – Financial service firms interviewed**

Company interviewed	Broad classifications
Rennies Bank	Bank
Export Credit Insurance Corporation	Insurance (Government entity)
RMB (FNB) International Banking	Bank
Treasury One	Outsourced Treasury Service Provider
Standard Bank International Banking	Bank
Forex Brief	Outsourced Treasury Service Provider
PSG Treasury Outsource	Outsourced Treasury Service Provider
Credit Guarantee	Insurance
Kagiso Treasury Services	Outsourced Treasury Service Provider
SA Reserve Bank	Regulator

### 7.4.1 Typical services offered

Four types of service providers can be identified:

- Banks;
- Outsourced treasury service providers;
- Specialist trade agencies and insurers; and
- Foreign exchange information providers.

These four types of providers are shown in the left column of the figure below. We now discuss each of the four in turn.

**Figure 40 – Spectrum of exchange-related services offered**

	Information	OTC Forex buy / sell	Forex advisory services	CFC accounts	Offshore accounts	Trade credit / letters of credit	Trade / guarantees / insurance	Trading desk / dealing room	Forward cover	Other options	Risk management services	Treasury Services
Banks	●	●	●	●	●	●		●	●	●		
Outsourced Treasury Service Providers	●							◐	◐	◐	●	●
Specialist Trade Agencies & Insurers						●	●					
Foreign Exchange Information Providers	●											

### 7.4.2 Banks

The figure above illustrates that banks provide a wide spectrum of exchange related services. The major banks are, in fact, the key players in the foreign exchange market. Generally, the banks offer the full spectrum of exchange related services but the services are targeted at specific groups of clients. For instance, small firms may only be able to purchase forex (spot transactions) at their specific bank branch. Larger corporates, those that trade at least R1 million a month are provided with more customised services and possible access to the trading directly. A common perception exists that such access guarantees better exchange rates.

The major clients of the banks are the large corporates covering all sectors, especially those with significant offshore investments or import / export dealings. Generally these firms have an in-house treasury function.

Banks typically do not offer an exchange risk management service or an outsourced treasury service – although a number of them have an interest in treasury outsourcing service providers.

The most common services on offer by the banks include:

- Spot Foreign Exchange: This involves services related to the provision of foreign exchange.

- Forward Contracts: This involves the provision of forward contract services to allow firms to fix an exchange rate for period of time.
- Foreign Currency Loans: The banks assist in raising offshore finance.
- Currency Accounts: Here the banks provide foreign currency accounts which allow firms to hold their foreign currency earnings for a period of time. These are not equivalent to offshore accounts.
- Offshore accounts: Here the banks assist (either directly or indirectly) with the establishment of bank accounts outside South Africa. While local banks do offer such services typically these are set up utilising international correspondent banks or branches. SARB dispensation is required.

The primary business model pursued by the banks is to charge transaction fees as well as charging a percentage on the exchange value. The latter is typically the difference between the rate the customer pays and that which the banks pay for the foreign currency.

Some firms raised concerns that the banks are here primarily interested in transaction flows and to some extent thrive in period of volatility. Consequently, the interests of banks and their customers are not necessarily aligned- a fact that treasury outsourcers have sought to exploit.

#### *7.4.3 Outsourced treasury service providers*

Outsourced treasury service providers are a relatively new phenomenon. They have emerged over the last decade in South Africa. Aimed primarily at the mid-market corporate that cannot afford a full time in-house treasury service, such providers typically offer a package of risk and exchange management services in addition to standard treasury functions. Local players include Treasury One, PSG Treasury Outsource, Kagiso Treasury Services, Forex Brief, Andisa, WIP and Taquanta Treasury Solutions amongst others.

The core benefit to customers is that they are not required to undertake significant investment in systems or the acquisition of scarce and expensive treasury skills.

Services offered by these firms, typically include:

- General treasury management services including:
  - Cash and liquidity management which aims to ensure that the business has sufficient supplies of cash to meet its obligations and that any surpluses are invested appropriately.
  - Debt management or funding which aims to ensure that the company has continued access to funding facilities which meet the cash-flow requirements of the business.
  - Investment management.
- Risk management: This includes the management of interest rate, exchange rate and counterparty risk is concerned with creating and maintaining acceptable

treasury risk levels while identifying opportunities to add value to an organisation. The kinds of services this would involve are:

- Defining a company specific risk management framework which reflects the board of directors' attitude towards risk. The framework seeks to minimise the areas of risk mentioned by neutralising those risks which impact negatively on cash-flows and profitability.
  - Identifying those areas within a business where financial risk arises (cash and liquidity management).
  - Categorising identified risks into appropriate categories such as exchange rate risk, interest rate risk and counterparty risk.
  - Managing the identified risk according to the risk management policy, strategic view and strategy (deal execution).
- Interest rate management: Interest rate risk is the risk of increased expense (or reduced interest income) due to changes in market interest rates. This would involve:
- Assisting with the setting up of an interest rate risk management objective. This service forms part of the "Risk analysis and treasury policy" service. Defining measures of exposure management - fixed rate percentage; gap analysis; duration; profit value of basis point and value-at-risk.
  - Setting operating limits - once the preferred measure of interest exposure has been selected, it remains for the board of directors to set limits beyond which it does not want the company to be exposed.
  - Identifying permitted hedging instruments - derivative instruments allow the company to change its interest rate profile without changing the underlying loans or investments e.g. Interest Rate Swap; FRA - Forward Rate Agreement; Interest Rate Options.
- Exchange rate management, typically managed as follows:
- Development of a risk management policy that prescribes what risks can be taken, how much, over what time frame and which type of hedging instruments may be used.
  - Identification of exposures and exchange rate risk in the company's future cash flow budget.
  - Exchange rate view comprising a currency forecast view.
  - The development of hedging strategies.
  - By performing the actual deal.

The size of clients for these services appears to be typically in the R500m-R1bn annual turnover category, but in some cases are up to R10 billion. Costs for the services range from R10,000 to R15,000 per month for the full treasury system. These service providers also charge success fees in respect of securing specific exchange rates and contracts.

### **Box 1 – Export Credit Insurance Corporation of South Africa**

The ECIC was established in terms of the Export Credit and Foreign Investments Insurance Act, 1957 as amended. The principal objective of the Corporation is to facilitate and encourage South African export trade by underwriting bank loans and investments outside the country, in order to enable foreign buyers to purchase capital goods and services from South Africa. To achieve this objective, the Corporation evaluates export credit and foreign investment risks and provides export credit and foreign investment insurance cover on behalf of the Government.

Key products include:

#### *Investment Insurance Protection*

- A South African entity investing in a foreign entity can be provided with investment cover.

The insurance cover provided protects the investor against possible causes of loss of the investment into the foreign entity, which prevents the foreign business to operate for at least one year or produce profits for three consecutive years. Causes include amongst others war, nationalisation and the operation of law. Cover is restricted to 90% of the loss and the premium payable is based on the foreign entity's country where the investment will be made; length of the investment period and the amount invested.

#### *Credit Insurance Protection*

This insurance cover is linked to export transactions involving capital goods and related services, or undertaking of works of a capital nature in foreign countries. Through the provision of credit insurance to banks, the Corporation facilitates term finance for such transactions/projects. Insurance cover is provided for losses arising from political and commercial risk events.

The Corporation provides insurance for credits of a minimum of 2 years and up to a maximum of 10 years. The premium cost relating to credit insurance cover depends on the perceived political and commercial risk in the host country where the goods/project will be delivered; the credit risk assessment of the borrower; and the length of the delivery and repayment period.

Credit Insurance Cover of up to 90% of the South African contract value is available, provided the 50% prescribed local content is achieved. SA Content consists of:

- The cost of materials and manufactured goods purchased from South African suppliers minus the value of any materials, goods or major components of manufactured goods, which have been imported from sources outside South Africa;
- Wages, salaries and other remuneration paid by the exporter in South Africa to its employees and such portions of wages, salaries and other remuneration payable to the exporter's employees who are performing work outside South



Africa, and which is paid by the exporter in South Africa;

- Freight charges paid in South Africa;
- Insurance premiums paid in respect of a policy issued in South Africa;
- Finance charges, excluding any interest for post delivery finance, paid to any financial institution normally operating in South Africa;
- Fees and charges paid for any other services performed in South Africa on the exporter's behalf by a South African resident organisation; and
- Fees and profits accruing to the exporter that have been confirmed by the ECIC/Chartered Accountants for qualification as South African content.

To enable South African export credit term finance to be internationally competitive, the interest rates made available through participating financial institutions are as follows:

- Rand Contract: a floating interest rate of JIBAR (Johannesburg Inter Bank Agreed Rate) plus margin;
- US Dollar Contract: a floating interest rate of LIBOR plus 1.25%, or a fixed interest rate equivalent to the OECD USD CIRR (Commercial Interest Reference Rate).

The US Dollar fixed interest rate valid on the date of the first drawdown under an ECIC supported export credit loan is fixed for duration of the relevant contract period. A participating bank may request the ECIC to fix the USD CIRR rate for a period of 90 days or longer on payment of a prescribed fee.

#### *Foreign Exchange Risk Cover*

The ECIC covers export credit loans denominated in South African Rand or US Dollar, as well as the Rand value of foreign investments. In the case of export credit loans denominated in US Dollar, financial institutions are required to raise funding for projects in US Dollar and on-lend to clients in US Dollar, which provides lenders with a natural hedge to mitigate foreign exchange risk.

However, South African contractors who are the beneficiaries of drawdowns under export credit loans for work completed are facing exchange risks in so far as their expenses are Rand denominated. To cater for this risk, South African contractors are allowed to elect which portion of the export contract they would like to receive in Rand. Guaranteed Rates of Exchange, obtained from the South African Reserve Bank are then issued to the contractor to eliminate the impact of currency fluctuations in their pricing during the delivery phase of the project. These rates are used to convert the US Dollar drawdowns or portions thereof, to Rand. For this cover an exchange risk cover premium administered by the ECIC is payable to the South African Reserve Bank.



#### 7.4.4 Specialist trade agencies and insurers

These service providers consist of trade service providers and insurers such as the firm Credit Guarantee and the government owned Export Credit Insurance Corporation (ECIC).

Trade insurance firms typically offer export credit insurance to provide cover against payment risk default. As such these firms do not manage exchange rate risk or offer any products that directly mitigate such risk.

The ECIC, however, does offer a government underwritten policy to assist firms to cover foreign exchange risk. This is applicable only to capital goods and services, focused on African countries.

#### 7.4.5 Foreign exchange information providers

These service providers typically provide a range of information and IT based systems to firms. They assist in tracking key issues emerging and in monitoring foreign exchange movements. An example would be Reuters.

### 7.5 Key issues emerging from interviews

A number of key issues emerged in the interviews.

The first, raised mainly by the banks, concerns the persistence of foreign exchange controls. The impact of the current regime is to limit the possible instruments that could be offered to firms. An example cited is the inability to renegotiate a forward contract on an ongoing basis – even daily if necessary. Since this is currently not permitted, it effectively ties in firms to their initial contract. In the words of one company,

*“SARB regulations have become more restrictive since 1994. They are a major obstacle for us re-hedging (on behalf of our clients) as circumstances change ... By default this can force a company to not hedge at all – which is the worst possible option ... you can't actively manage a big portfolio”.*

*Financial Services Provider*

The current framework in respect of the requirements for physical documentation as well as the complex customs and tax requirements associated with exporting and importing were raised as major concerns.

In terms of exchange rate control, locals require an order to obtain foreign exchange cover – unless of course they have a track record, in which case, the SARB may grant them a dispensation – based on 75% of their previous turnover. This prevents locals from speculating against the currency in the same way that foreigners do.

Across the range of service providers, the consensus view was that while South African firms have become more aware of exchange related risks over the last decade

or so, risk management approaches are generally limited and unsophisticated. With the exception of large firms that have treasuries, most firms tend to engage in spot purchasing or limited forward cover arrangements without any adequate understanding of their overall risk profile.

Some service providers raised concerns about overly conservative boards that prevent firms from utilising the full range of instruments available. As one firm commented,

*“Board policies are often very restrictive even in big and otherwise sophisticated companies. Boards have heard of the dangers of futures and derivatives and seek to limit (the treasury’s) ... scope for utilising these. Our problem is to convince boards to allow a more flexible policy”.*

*Financial Services Provider*

The current fear around foreign exchange issues appears to be compounded by accounting rules.

The reliance of many firms on the banks as their primary source of information and advice was raised as an issue given the potential conflict of interest. This conflict in essence is between the banks drive towards increased transactions and contracts and hence its percentage and margin and the firms’ need to contain costs and manage exchange risk. As was pointed out, for many firms financial hedging may be far less appropriate than other operational hedges.

The issue of cost was also seen as a barrier to increased and effective utilisation of financial hedging instruments. The cost issue consists of at least two components:

- The first is the premium payable in respect of foreign exchange purchases which tends to penalise smaller firms. Whereas a large firm is likely to receive a highly favourable rate from the banks (in measure do its negotiating power as well as in-house treasury expertise) smaller firms often receive little relief from the commercial spot rate.
- In general, the larger corporates do not pay a premium for forward cover, hence the bank does not add a margin on the market price - or if it does do - it will be a very low margin on the spot price. (For example, if the Rand spot price is R6.00, the corporate will pay 5 cents or 500 points above this (R6.05). Smaller firms tend to pay the most, for example, they would pay between 1000 and 1400 points on the spot price (i.e. R6.14).

The interviews suggest that managing exchange rate risk involves access to information. For instance a bank’s client base is largely categorised by the level of their access to information. For example, a big firm like Anglo American or Billiton will have their own Treasury desks, as well as direct access to the different banks’ dealing desks. These firms will take note of the different market views – which will be relayed to them by all their banks – and given their risk profiles and their analysis of diversifiable and non-diversifiable risks, they will instruct the banks to act on their behalf. Having one’s own treasury desk implies high overheads – as indicated it probably costs R3 million per annum to have a treasury department.

An intermediate sized company will not have access to a bank's dealing desk, but may purchase mini-Reuters, which will allow them to see their own flows – but not those of the rest of the market. Often these firms have a partial Treasury department and may fancy themselves as being able to manage the currency risk. The treasury function is typically performed by the financial director.

A small company will only see the information available in the financial press and is totally reliant on the views of his retail banker. They will have technical knowledge about their firm's operations, but will know little about the currency movements. They tend to pay the highest cost for such services. Forward cover of less than R1 million per month means that a firm is viewed as small.

## 7.6 Financial hedges

The South African Reserve Bank (SARB, 2006) states that the aim of hedging is to “...offset or minimise the risk of losses that an enterprise may be exposed to due to the effect of price changes on its assets, liabilities or future commitments”.

Financial hedging instruments for firms are varied and include derivatives, debt, and cross-hedging strategies. The turnover across hedging instruments had risen since 2001 with significant increases in the spot market (from \$387 billion to \$621 billion) and forward markets (from \$131 billion to \$208 billion) relative to foreign exchange swaps (from \$656 billion to \$944 billion) indicating higher hedging activity (Bank for International Settlements (BIS), 2005).

Derivatives are most commonly defined as non-specific terms for financial contracts or explicit types of investments from which value is derived from the performance of assets, interest rates, currency exchange rates, or indexes. Some controversy surrounds derivative markets as firms have lost massive amounts in derivative markets, for example the case of Nick Leeson, a trader at Barings Bank who incurred a \$1.3 billion loss that bankrupted the bank; the bankruptcy of Orange County, CA in 1994, the loss South African Airlines made during 2004<sup>17</sup> and other similar, equally controversial cases (Giddy and Dufey, 1997; [www.wikipedia.com](http://www.wikipedia.com)).

Some communicators warn that derivatives are intricate and complex of nature and advise against the neat categorisation of derivatives (Van Zyl et al, 2006). The SARB (2006) notes the “multiplicity” of hedging instruments and techniques that have developed in recent years. The increase in new instruments is attributed to the volatility of interest rates, commodity prices and foreign exchange rates, which has increased the exposure of enterprises to the risk of incurring losses and the importance of hedging as a risk management tool.

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<sup>17</sup> “In 2004, the SAA hedge book and the embedded derivatives contained in two service contracts for the transport of commodity products by rail contributed a R4,4 billion loss. The hedge book has subsequently been closed off and the embedded derivatives have been expunged.” ([www.transnet.co.za](http://www.transnet.co.za)).

Two broad groups of derivative contracts exist. The first group consists of exchange-traded derivatives, which are products that are traded via derivatives exchanges. A derivatives exchange acts as an intermediary, and takes a margin from both sides of the trade to act as a guarantee. The combined turnover in the world's derivatives exchanges totalled \$344 trillion during Q4 2005 (www.Wikipedia.com; Van Zyl et al, 2006; Giddy and Dufey, 1997; Bank for International Settlements, 2005).

The second group is over-the-counter (OTC) derivatives, which are contracts that are traded directly between two parties, without going through an exchange or other intermediary. The OTC derivatives market is huge. According to BIS, the total outstanding notional amount is US\$ 248 trillion at the end of December 2004 (Bank for International Settlements, 2005).

The most common OTC derivative products are futures, forwards, swaps, options, and warrants. However, hybrids of these derivatives include swaptions, where the purchaser has the right but not the obligation to enter into a currency swap contract; options on futures; future or forward starting swaps; swap futures; optional forwards and futures (or forwards) with embedded options. The most commonly used derivative types for the foreign exchange market are swaps, forwards and options (Van Zyl et al, 2006; Bank for International Settlements, 2005).

Spot transactions are single transactions involving the exchange of two currencies at a rate agreed on the date of the contract for value or delivery (cash settlement) within two business days (Bank for International Settlements, 2005).

### *7.6.1 Financial hedging instruments*

#### **Futures contracts**

Futures contracts are exchange-listed, standardised contracts that predefine a precise quantity of a certain underlying instrument or commodity at a precise price, delivery location and time in the future. Trading of futures contracts rarely results in the actual exchange of the physical commodity (SARB, 2006; Giddy and Dufey, 1997).

#### **Forward contracts**

Forward contracts are similar to Futures. They are both used to hedge or convert known currency exposures, and both tend to have identical rates. They differ in their applicability. Firms who are not financial intermediaries or professional traders generally make use of forwards, because of the flexibility of such contracts. The contracts can be timed and sized to match specific exposures, as negotiated by the buyer and seller. Big companies also use forwards; futures tend to be used whenever credit risk may be a problem (Giddy and Dufey 1997). The exchange of the physical commodity between the buyer and the seller is anticipated and expected at the negotiated location (Giddy and Dufey, 1997; Van Zyl et al, 2006).

Different types of forward exchange contracts are usually available from the banks. These contracts may give the holder greater flexibility in timing the anticipated future purchase or sale of the foreign currency concerned but they can be expensive for

customers who prefer the cheaper alternatives (foreign exchange swap). This is particularly so if the customer needs to realise the forward exchange contract before the maturity rate (Bank for International Settlements, 2005; Van Zyl et al, 2006).

#### **Forward, futures and option products**

New products that are combinations of forwards and/or options are sold which have the benefits of forwards, futures and options but with fewer disadvantages and risks.

#### *Options*

An option gives the buyer the right but not the obligation to buy or sell a specific quantity of an asset at an agreed price at some point or points in the future. This allows buyers to protect themselves against an adverse event while hoping that such an event does not occur. American options authorise the holder to exercise the option at any time before the expiration date. European options allow the holder to exercise on the expiration date only. Buyers pay a premium and the price of the option is directly influenced by the anticipated volatility of the currency. Options may provide the only convenient means of hedging or positioning "volatility risk" (Giddy and Dufey, 1997; Van Zyl et al, 2006).

#### *Warrants*

Warrants are similar to options in that they give the holder the right, but not the obligation, to purchase or sell a fixed amount of an underlying asset at a fixed price and at a fixed future date. However, they are usually for a longer term than options and the exercise of a warrant issued by a company will usually lead to the creation of new equity capital in a firm.

#### *Swaps*

Although swaps are considered a technique rather than an instrument, they have increased in popularity in recent years as a liability management tool used by firms to reduce their funding costs. If each party has access to a particular market on comparatively better terms than the other, the comparative advantage is then shared between the parties and intermediaries arranging the transaction to lower their funding costs. Many different types of swaps exist, the most common being the interest rate swap and the foreign exchange swap.

Swaps are the physical exchange of principal amounts of two currencies at the beginning of the swap's life, with a re-exchange of these amounts at the end, including an adjustment to reflect the interest rate differential of the two currencies. The maturity of a swap varies extensively-from a day to over ten years, although most swaps are traded for short periods.

Van Zyl et al (2006) consider swaps ideal for managing timing mismatches in the foreign exchange market (Bank for International Settlements, 2004; SARB, 2006; Van Zyl et al, 2006; [www.wikipedia.com](http://www.wikipedia.com)).

## Debt

An alternative to other instruments is foreign debt or borrowing in the currency to which the firm is exposed or investing in interest-bearing assets to offset a foreign currency payment. This hedging tool has a similar purpose as forward contracts (Giddy and Dufey, 1997).

## Indirect hedging or cross-hedging

Chang and Wong (2003) explore the use of cross-hedging for a risk-averse multinational firm, confronted by a foreign currency cash flow. They advocate cross-hedging against foreign exchange exposure because less developed countries (LDCs) have undeveloped or heavily controlled foreign exchange markets. This concurs with Broll and Eckwert (1999) who state that futures markets for foreign exchange are not always available, and that hedging therefore has to be conducted by using futures contracts on other deliverable instruments. However, the authors caution that "...with indirect hedging of exchange rate risk, production and hedging decisions can't be separated" (Broll and Eckwert, 1999).



## 8. Exchange control

The basis of the South African exchange control system is contained in the publication *The Exchange Control Regulations, 1961, as amended 1999*. The exchange control system, particularly the Cross Border Foreign Exchange Transaction Reporting System, has been designed in line with international standards for managing balance of payments data and is used to assist in compiling South Africa's balance of payments.

The Exchange Control Manual (of the 1961 regulations) explains the exchange control system and sets out the main purpose of exchange control, namely:

- To ensure the timeous repatriation into the SA banking system of foreign currency acquired by residents of SA;
- To prevent loss of foreign currency resources;
- To form an effective system of control of assets, without interfering in the operation of commercial, industrial and financial systems of South Africa; and
- To obtain foreign currency reserves; and to be able to use these reserves “in the best interest of the country” for instance in order to service South Africa’s foreign debt.

Exchange control was first introduced in South Africa at the outbreak of World War II and has been used since then in an attempt to prevent capital flight and currency speculation. In recent years, exchange controls have been relaxed in an attempt to decrease intervention in the foreign exchange market. They have been relaxed in line with a gradual liberalisation of the capital account.

Exchange control in South Africa is the responsibility of the National Treasury who has charged the Exchange Control department (Excon) of the South African Reserve Bank, with regulation. Excon enforces South African foreign exchange control regulations and makes recommendations to the Minister of Finance as to the appointment of “authorised dealers”.

Authorised dealers are registered banks – either registered South African banks or local branches of foreign banks – that are able to show that they are sufficiently familiar with the exchange control regulations. While an entity may not be an authorised dealer without first being a bank, not all banks are authorised dealers. Authorised dealer are the only entities permitted to trade in foreign exchange instruments in South Africa and all foreign exchange commitments entered into by residents require the authorisation of authorised dealers, who in turn, are required to report such transactions to Excon<sup>18</sup>.

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<sup>18</sup> Exchange Control Regulation 2



“Authorised dealers with limited authority” – or what we typically know as *bureaux de change* – may also be appointed to deal with the foreign exchange requirements of travellers. In addition, “authorised brokers” may advise clients on exchange control risks and regulations and issue instructions on their behalf to the authorised dealers.

**Table 15 – Authorised dealers in foreign exchange**

The offices in the Republic of the under-mentioned banks are authorised to act, for the purposes of the Exchange Control Regulations, as Authorised Dealers in foreign exchange:	
<ul style="list-style-type: none"> <li>▪ ABN AMRO Bank N.V.</li> <li>▪ ABSA Bank Limited</li> <li>▪ Bank of Baroda</li> <li>▪ Bank of China Johannesburg Branch</li> <li>▪ Bank of Taiwan South Africa Branch</li> <li>▪ Barclays Bank PLC, South Africa Branch</li> <li>▪ Calyon</li> <li>▪ China Construction Bank, Johannesburg Branch</li> <li>▪ Citibank, N.A., South Africa</li> <li>▪ Commerzbank Aktiengesellschaft</li> <li>▪ Deutsche Bank AG, Johannesburg Branch</li> <li>▪ FirstRand Bank Limited</li> <li>▪ Habib Overseas Bank Limited</li> <li>▪ HBZ Bank Limited</li> </ul>	<ul style="list-style-type: none"> <li>▪ HSBC Bank plc - Johannesburg Branch</li> <li>▪ Investec Bank Limited</li> <li>▪ JPMorgan Chase Bank (Johannesburg Branch)</li> <li>▪ MEEG Bank Limited</li> <li>▪ Mercantile Bank Limited</li> <li>▪ Nedbank Limited</li> <li>▪ Rennies Bank Limited</li> <li>▪ Société Générale</li> <li>▪ Standard Chartered Bank - Johannesburg Branch</li> <li>▪ State Bank of India</li> <li>▪ The South African Bank of Athens Limited</li> <li>▪ The Standard Bank of South Africa Limited</li> </ul>
The offices in the Republic of the under-mentioned institutions are authorised to act, for the purposes of the Exchange Control Regulations, as Authorised Dealers in foreign exchange with limited authority:	
<ul style="list-style-type: none"> <li>▪ FxAfrica Foreign Exchange (Pty) Ltd</li> <li>▪ Global Foreign Exchange (Pty) Limited</li> <li>▪ Imali Express (Pty) Limited</li> <li>▪ Inter Africa Bureau de Change (Pty) Limited</li> </ul>	<ul style="list-style-type: none"> <li>▪ Master Currency (Pty) Limited</li> <li>▪ Nedtravel (Pty) Limited</li> <li>▪ Tower Bureau de Change (Pty) Limited</li> </ul>

In this project, interviews have been conducted with Excon, authorised dealers and authorised brokers, as well as entities providing export insurance, in an attempt to provide an overview of the services provided to South African firms.

## 8.1 Trade and foreign exchange controls

The Exchange Control Regulations govern all foreign exchange transactions related to exports and imports as well as trade finance. The latter includes borrowing abroad by residents, be it for loans from non-resident banks, short-term trade finance, short-term working capital loans, long-term loans and loans from non-resident shareholders.

The underlying principle of the exchange control regime in South Africa is that companies and individuals are required to substantiate any foreign exchange transaction. In all cases, except the case of advance payments for goods – there are no restrictions on the size of transaction. Essentially all transactions must be supported by documentation showing a “firm and ascertained” foreign exchange commitment or accrual.



Strictly speaking, in the case of a large firm that regularly exports and imports, documentation for each and every transaction would be required. This would imply the accumulation of a significant amount of paper work between the firm and the authorised dealer. Special dispensation is granted in these circumstances to such firms – where the firm is required to keep and monitor their own paper work for each transaction, which is subject to a specified audit process by the firm’s auditor. In essence the dispensation leads to a four-way contract between the firm, their authorised dealer, their auditor and Excon. Excon receives the auditor’s report on an annual basis, and may conduct inspections of the firm’s records. Anything untoward in an inspection by Excon could lead to an investigation.

The Excon department see themselves as relatively accommodating in allowing dispensations of this sort – as they see it as facilitating business of both firms and the authorised dealer – within the boundaries of the regulations.

In terms of Exchange Control Regulation 6(2) no South African firm may open a foreign banking account without the prior approval of Excon. This is to ensure that the foreign exchange proceeds accruing to the company from any source will be transferred to South Africa as soon as possible. Foreign bank accounts include Customer Foreign Currency accounts (CFCs).

All firms or residents are required to sell foreign currency to an authorised dealer within thirty days receiving it, unless the proceeds are paid into a Customer Foreign Currency (CFC) account<sup>19</sup>. This regulation covers not only the proceeds of exports, but also the proceeds of any asset sold abroad.

Where CFC accounts are opened on behalf of a firm, the firm has an additional 180 days within which to repatriate the proceeds and convert the foreign currency to Rands. The CFC accounts cannot be accessed by firms themselves, although they may issue instructions regarding the balances in the CFC account.

Where firms import and export on a regular basis, firms may apply to an authorised dealer for the cost of imports to be off-set against the proceeds of exports within the 180 days. Authorised dealers have the discretion to request this dispensation from Excon on behalf of those clients who have sufficient transactions to qualify for this facility.

Exporters require special authorisation from their bankers before granting credit in excess of six months. The authorised dealer may authorise such credit extension, provided the firm has been able to show that the credit is necessary in the particular trade or that it is needed to protect an existing export market or to capture a new

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<sup>19</sup> The temporary export of goods to Angola, Botswana, Democratic Republic of the Congo, Malawi, Mauritius, Mozambique, Tanzania, Zambia and Zimbabwe, in the case of used equipment required by South African residents to fulfil construction contracts, may be permitted by Authorised Dealers only if the equipment is returned on completion of the contract. In these cases the No Exchange Proceeds (N.E.P.) form must be completed.

export market. Requests for granting credit in excess of twelve months need to be approved by Excon.

In the case of imports, commercial invoices issued by the supplier and transport documents for the transport of goods to SA are required.

Authorised dealers may provide foreign exchange to their customers for the import of goods, together with:

- Bona fide freight charges;
- Insurance premiums;
- Buying commissions and retainer fees payable to agents;
- Other incidental charges directly related to imports; and
- Final settlement of imports against documentary evidence.

In the case of advance payments for imports, the regulations distinguish between capital and non-capital goods. In the case of capital goods, advance payments of up to one third of the cost may be granted automatically by the authorised dealer. This is to facilitate the order of large, often specially designed, capital goods and Excon points out it is an international norm. In the case of larger advance payments, however, such transactions have to be referred to Excon by the authorised dealer.

In the case of non-capital goods, authorised dealers may provide foreign exchange for advance purchases<sup>20</sup> – up to R250 000 per import transaction – if it can be shown that:

- The overseas supplier insists on the up-front payment – (i.e. the order would otherwise be refused) and
- Early payment is normal in the industry or trade concerned.

Small foreign exchange transactions e.g. imports over the Internet may be made by credit and/or debit cards. These are limited to R20 000 per transaction.

## **8.2 Use of financial instruments**

Hedging instruments can be used for speculative and trading purposes. However, the explicit prevention of speculative activity in South Africa means that hedging may only

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<sup>20</sup> On the basis of an order.

be undertaken where “firm and ascertained commitments or accruals” may be shown<sup>21</sup>.

For this reason, where a firm chooses to take forward cover in order to offset or minimise the risk of losses it may be exposed to, the contract is binding and may not be modified. Nor may the firm “move in and out” of a forward cover contract – even should the currency fluctuate - as this would be seen as engaging in speculation. This implies that for forward cover to be a useful instrument, firms need to have committed dates of invoicing and payment associated with their underlying contracts. As is noted below, the nature of business is such that contracts do not always fulfil this condition.

Large corporations, with ongoing import commitments may apply for a special dispensation allowing them to apply for forward cover up to 75% of the value of their anticipated imports, without having to provide documentation for each transaction. Whereas Excon sees itself as “accommodating” in offering dispensation relating to documentation for each trade (discussed above) it describes itself as “very conservative” in allowing the dispensation relating to forward cover, as the latter is an ideal vehicle for speculation. As our interviews reveal, this is a dispensation granted to only a few large firms.

### 8.3 Conclusion

While it is apparent that exchange controls have been relaxed in terms of both thresholds and accommodation in terms of facilitation of trade, the underlying principle of being able to justify each foreign exchange transaction remains. Excon believes that firms have become more compliant - not only as a consequence of years of enforcement and education - but as a result of the cumulative effects of money laundering legislation and corporate governance guidelines.

Interviews with firms reveal that it is not always exchange control *per se* that they object to, but the opportunities that it offers to their dealers to benefit from these controls. The controls on advance payments are a case in point. Excon points out that these controls are in place to ensure that there is not an aggregate imbalance due to the early payment for imports. In practice it means that importing firms are prevented from benefiting from discounts due to early payment. Given the requirements for payment guarantee, this may result in the firm incurring costs associated with providing full Rand guarantees for imports. The benefits accrue to the dealers, rather than to the firm.

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<sup>21</sup> Authorised Dealers must ensure that dealings in hedging instruments are neither undertaken for speculative purposes nor as a means of circumventing Exchange Control Regulations which restrict the export of capital abroad.

In general smaller firms see themselves placed at a disadvantage both by exchange controls and by the commercial decisions taken by their financial providers. Among the contributing reasons are:

- The dispensations offered in terms of easing the administrative burden associated with exchange controls are typically available only to firms with sufficient transactions to warrant such special treatment. It is up to the authorised dealers to identify such firms, and they are likely to make such special effort only for those firms for whose business they are aggressively competing to gain or maintain.
- While Excon engages in a number of seminars to industry representative bodies (including banks) each year, it is possible that the full range of services and analysis of foreign exchange risks may be explained to the smaller firms only by providers who would gain from their business. Most smaller firms do not qualify for this degree of interest by providers.



## **9. Firm use of financial hedging instruments**

### **9.1 Introduction**

A key aspect of the research assignment was to understand how firms respond to exchange risk – both in terms of financial hedges and operational strategies. This section considers the current financial exchange risk management practices of the companies interviewed across the four industry clusters.

The interviews, amongst other things sought to elicit responses on the following:

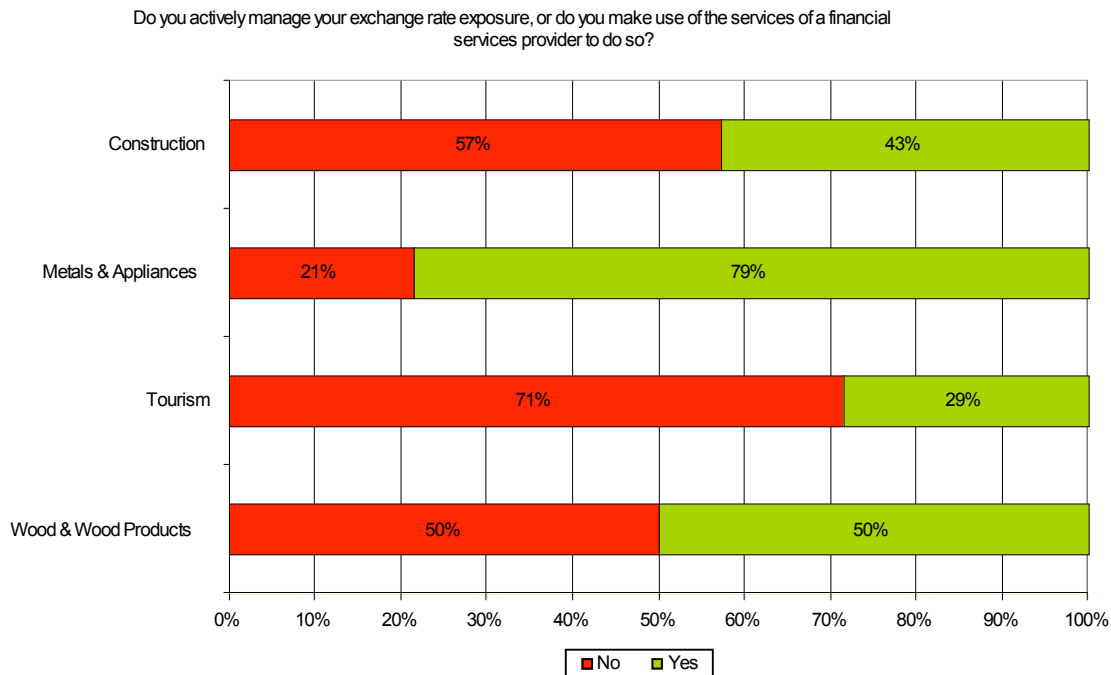
- The level of formal foreign exchange (risk) management;
- The utilisation of financial hedges / instruments;
- The utilisation of other financial services relating to foreign exchange; and
- The utilisation of service providers.

The key findings from the questionnaire are summarised below.

### **9.2 Levels of foreign exchange risk management**

Of the 40 firms interviewed 22 (55%) indicated that they undertake some level of exchange risk management. The levels of management vary across firm size and across the clusters and ranges from simple spot purchasing of foreign exchange to forward contracts or more complex derivative instruments.

The figure below gives some insight to the levels of exchange rate risk management across the four clusters reviewed.

**Figure 41 – Prevalence of exchange rate exposure management**

Evident in the data is that the clusters with the highest export ratios (construction, wood and steel products) as well as the highest potential exposures to exchange rate impact (for instance in respect of commodity prices) have a higher propensity to undertake exchange risk management. Consequently almost 80% of metals and household appliance firms manage their exchange rate exposure.

By way of contrast only 29% of tourism firms undertake any active management of exchange rate exposures. The case studies suggest that the reasons for the low level of active management here have to do with the perceived cost and the lack of appropriate instruments to match the nature of the tourism business. In particular the large volume but low-value of individual transactions was cited as a key obstacle to effective hedging.

### 9.3 Utilisation of financial hedges/instrument

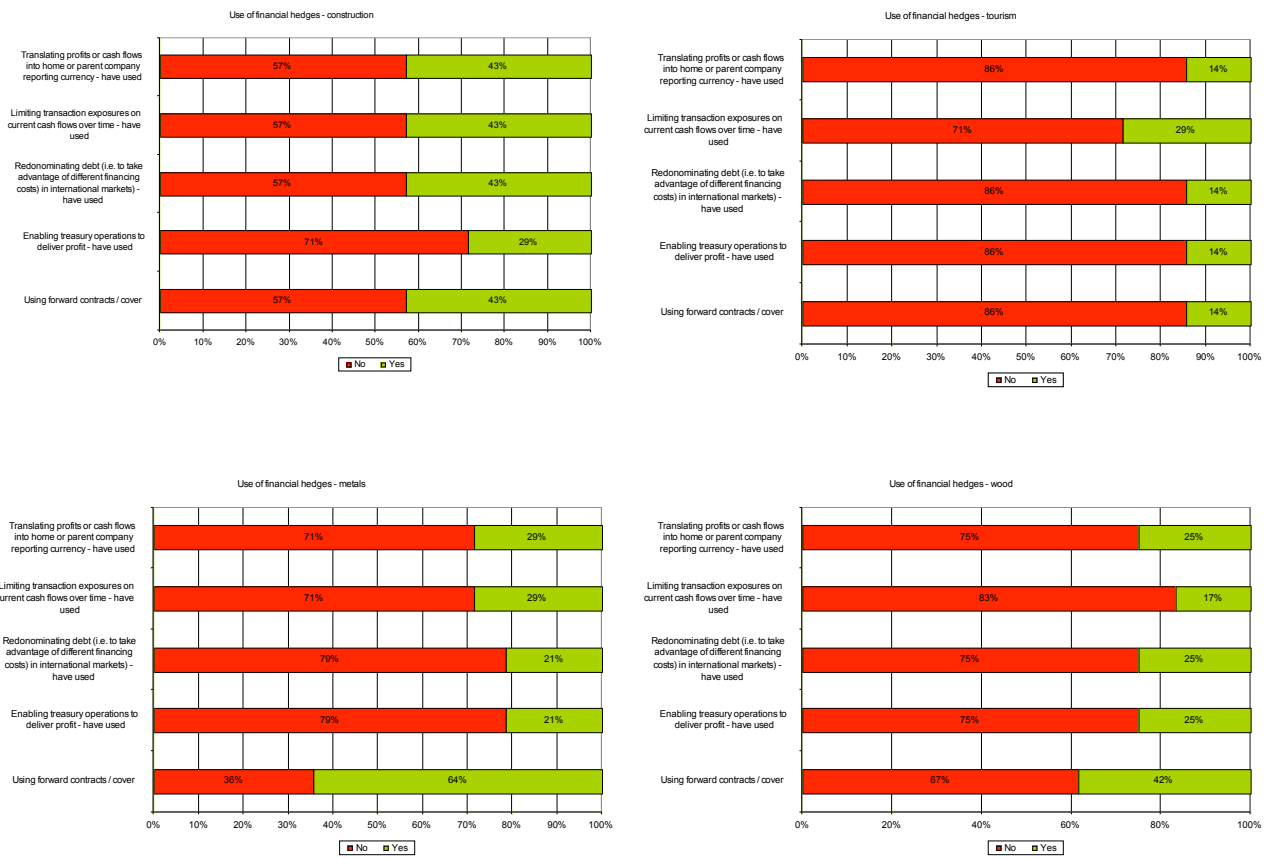
Overall the firms interviewed do not adopt a sophisticated exchange rate management approach or utilise complex hedging instruments. Indeed across all the interviews only one firm indicated that it utilised options. By far the most common hedging instrument utilised is forward exchange contracts.

In some clusters a range of other financial instruments was actively used to manage exchange related risks. These instruments involve managing the translation of profits or cash flows into domestic currency, managing exposures on cash flows, re-

denominating debt and utilising treasury to deliver a profit. Such utilisation involves managing forex as a source of revenue.

Figure 40 illustrates the range of financial hedges adopted across the four clusters reviewed.

**Figure 42 – Financial hedges adopted**



Evident in the above analysis is that the main financial instrument utilised across the clusters is forward contracts or forward cover (the last bar in each graphic). The exception is Tourism where cash flow management appears to be the main financial instrument to manage risks. This is supported by the case studies which indicate that Tourism firms typically focus on securing transactions and collecting payment upfront in order to avoid any adverse currency impact.

In terms of instruments such as cash flow translation or re-denominating debt, construction has the most sophisticated approach. This relates in part to the large value of offshore contracts undertaken by the large firms in this cluster as well as the establishment of offshore subsidiaries.

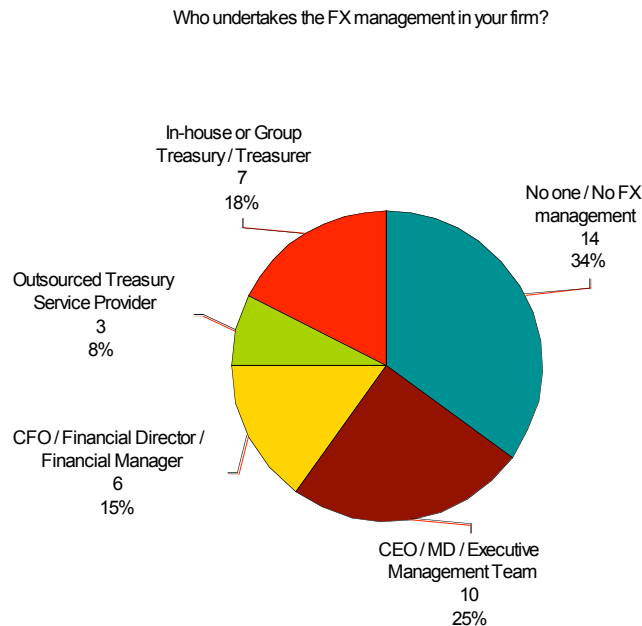


## 9.4 Management of foreign exchange risk

Across the 40 firms interviewed, 14 (34%) indicated that they do not undertake any foreign exchange management – not even basic forex purchasing transactions.

Figure 41 indicates that of the firms who do undertake foreign exchange management the largest proportion assign this task to the CEO / MD / executive management team or to the CFO / Financial director or manager. Typically these are medium-sized to large firms.

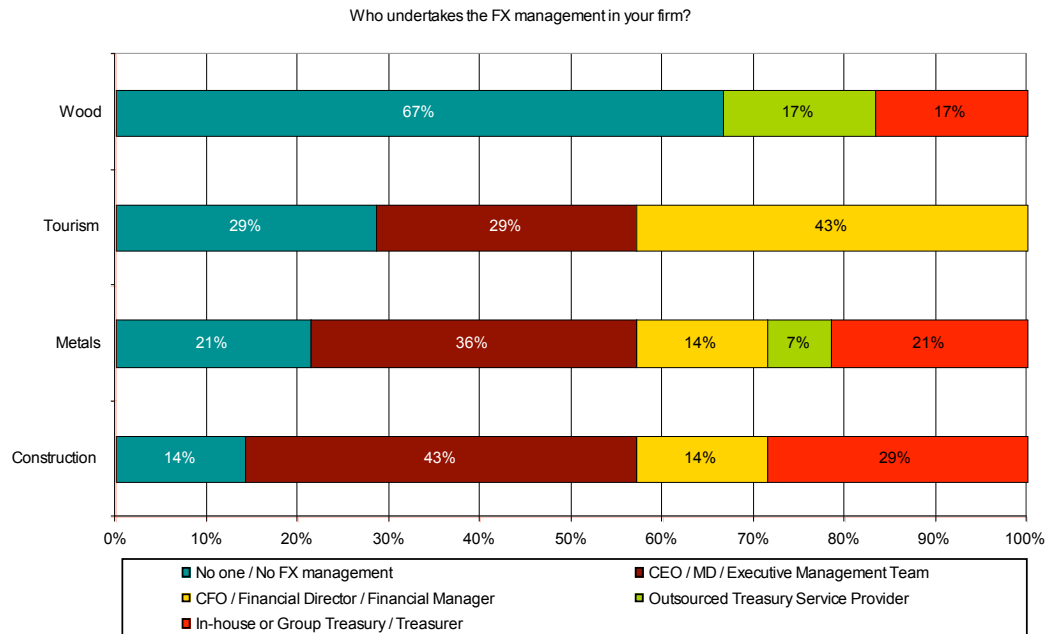
**Figure 43 – Foreign exchange management function in the firm**



Only 18% of the firms interviewed have in-house or group treasury functions – in most instances these are large firms or corporates with huge revenues and extensive international operations. The level of outsourcing amongst the firms is very low with only three firms indicating that they make use of an outsourced treasury service provider.

Figure 42 provides some insight into the variation of foreign exchange management approaches across the four clusters.

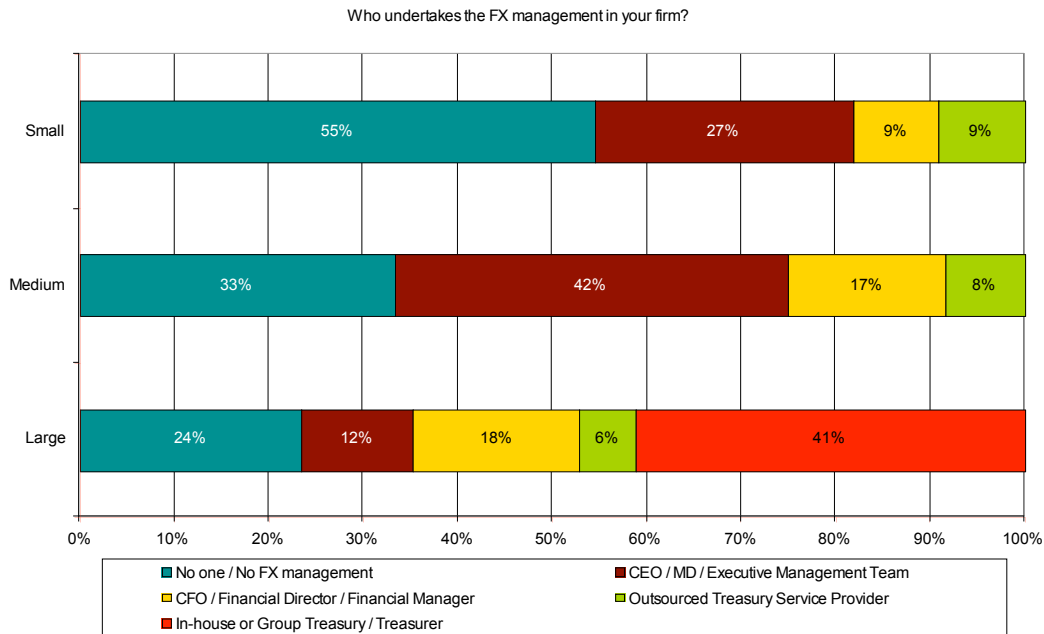
**Figure 44 – Foreign exchange management function by cluster**



Evident is that in the construction, wood and steel clusters, a formal foreign exchange management function, in many cases a full-time treasury, exists in a number of firms. The propensity for the CEO/MD/Executive management team to be directly involved in foreign exchange management issues depends on how important foreign exchange issues are in the firm concerned.

As already indicated, the level of foreign exchange management is strongly related to the size of the firms. Evident in Figure 43 is a concentration of in-house or group treasury functions amongst large firms across the four clusters.

**Figure 45 – Foreign exchange management function by size of firm**



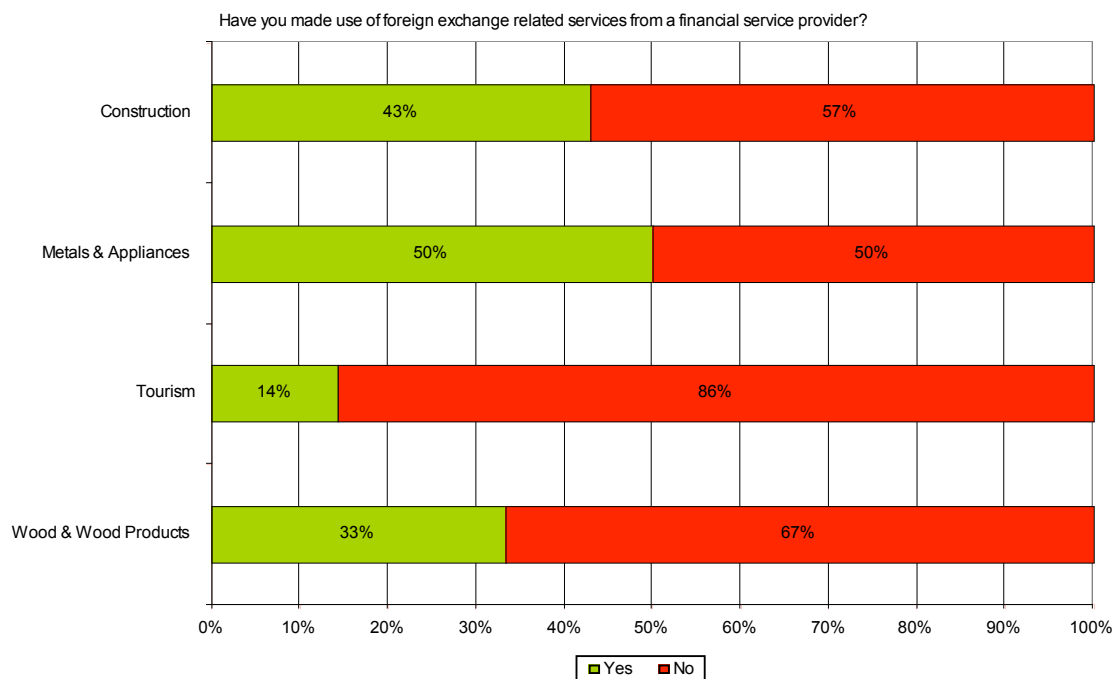
## 9.5 Relationship with service providers

Of the 40 firms interviewed only 15 (38%) indicated that they made use of a financial service provider to provide exchange related services. This low level may in part be due to differing interpretations of the question with many firms interpreting it to mean forward contracts or related transaction services.

However, as is evident from the case studies, most firms will have dealt with a financial service provider (or at least a bank) at some point – even if only to repatriate foreign exchange or to buy / sell currency.

Figure 44 shows the percentage of firms in each cluster that indicated that they made use of a financial service provider for exchange related services.

**Figure 46 – Use of financial service providers for exchange-related services**



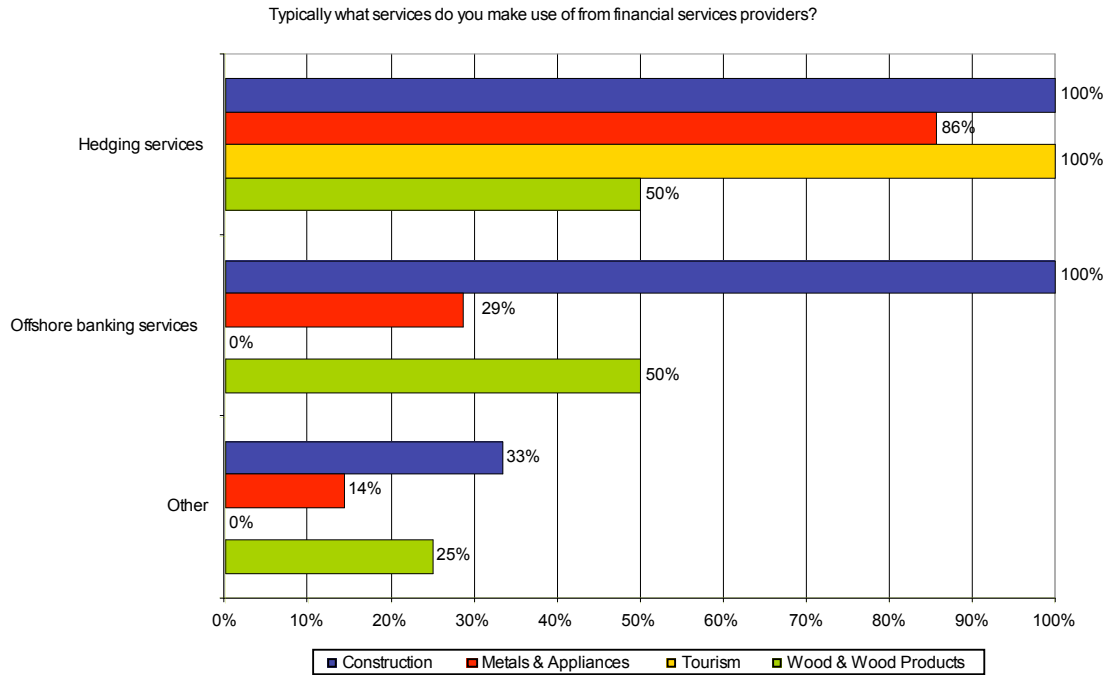
The overall utilisation of financial service providers across the clusters is generally low, with metals and household appliances showing the highest propensity at 50%.

As already indicated this may be a consequence of differing interpretations of the question and appears to be too low given the case study information gathered. It is likely that most firms (especially those exporting or importing) would at least have had to deal with a bank at some point.

Of the firms that did indicate the utilisation of financial service provider, 80% indicated that they made use of hedging services such as forward contracts. 47% of the respondents made use of off-shore banking facilities. 20% utilised other services, which encompass advisory services; letters of credit and forex purchasing or selling.

Figure 45 indicates the types of exchange-related services being used by firms in each of the four clusters.

**Figure 47 – Types of exchange related services used from financial service providers**



*Other includes: advisory services; letters of credit; forex purchase/sell*

The one tourism firm that indicated use of a financial service provider uses hedging services. Firms in the construction cluster utilise mainly hedging services as well as offshore accounts. Firms in the metals and appliances cluster utilise mainly hedging services with limited offshore banking. Wood sector firms utilise both hedging and offshore banking services but to lesser degree than construction and metals.

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Department of Trade and Industry: [www.thedti.gov.za](http://www.thedti.gov.za) (Accessed 20 May 2006)

EuroMonitor International:

[www.euromonitor.com/reportssummary.aspx?folder=Domestic\\_Electrical\\_Appliances\\_in\\_South\\_Africa&industryfolder=Domestic\\_electrical\\_appliances#exec](http://www.euromonitor.com/reportssummary.aspx?folder=Domestic_Electrical_Appliances_in_South_Africa&industryfolder=Domestic_electrical_appliances#exec)

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Various websites of potential companies (for confidential reasons these would not be reflected here, but is available subject to motivation).

## 11. List of interviewees

Organisation	First name	Surname
1. Africon	Fanus	Le Roux
2. Alstom John Thompson	Garth	Van Nierop
3. Amalgamated Appliances	Clive	Caplan
4. BKS Engineering and Management	Jeremy	Wood
5. Brownbuilt / Global Roofs	Flynn	Benecke
6. Barloworld Rotor Tube	Arnot	Snyder
	Alan	Oswald
7. Budget Car Rental	Alan	Coward
8. Cadac	Simon	Nash
9. Cape Gate Holdings	Erwin	Balde
10. Clotan Steel	Rocco	De Villiers
11. Clyde Steel	Kim	Willson
12. Export Credit Insurance Corp.	Benoit	Fugah
	Chris	Thirion
13. Credit Guarantee	Mike	Truter
14. Cullinan Holdings	Quentin	Southey
15. Darbel	Walter	Liebisch
16. EFCO Furnaces SA	Dave	Terry
17. Firstrand Banking Group	Louis	Jordaan
18. Forex Brief	Warren	Brown
19. Gap Project Engineers	Nicholas	Boyle
20. Gordon Fraser	Frank	Nightingale
21. Grinaker-LTA	Dennis	Brown
22. Hans Merensky	Rian	Du Toit
23. House of Montani	Philip	Maisel

Organisation	First name	Surname
24. Imperial Holdings	Tak	Hiemstra
25. Jeffares and Green Cons. Eng.	Chris	Robinson
26. Kagiso	Sharon	Fraser
27. Kingfisher	Brian	Newton
28. Legacy Hotels and Resorts	Neil	Yates
29. Macsteel	Jules	Urdang
30. Mitek	Herman	Lombard
31. Natal co-operative	Rein	Franz
32. Nu-world Industries	Bruce	Haikney
	Graham	Hindle
	Michael	Goldberg
33. PSG	Willem	Piek
34. Rennies Bank	Gavin	Bower
35. Reliff Joinery	Peter	Kyle
36. Rovos Rail	Natalie	Brown
37. Sappi	Craig	McLeary
38. Sonae Novobord	William	Morkel
39. South African Reserve Bank	Alick	Bruce-Brand
40. Standard Bank	Billy	Viljoen
	Keenan	Michael
41. Stocks and Stocks	Stephen	Pell
42. Swartland	Attie	Van den Berg
43. The Don Group	Lethibela	Mokela
44. Thebe Tourism	Jeff	Squire
45. Treasury One	Hennie	De Klerk
46. Valley Irrigation	Tobie	Du Toit
47. Van Acht Wooden Windows and Doors	Deon	De la Harpe
48. VKE International Cons. Eng.	Jeremy	Wood
49. Woodstreet	Yegas	Naidoo

<b>Organisation</b>	<b>First name</b>	<b>Surname</b>
50. Yorkcor	Rob	Douglass



## 12. Appendices

### Appendix 1: Charter of Best Practices in Treasury Management

#### 1. Risk management strategy

##### 1.1 Risk organisation

**Principle no. 1: Role of the board**

The responsibility for understanding the risks run by the company, and ensuring that they are appropriately managed, is placed clearly with the board of directors.

**Principle no. 2: Role of the executive committee (EXCO)**

The board of directors must approve risk management strategies, but will delegate authority for day-to-day decisions to an executive committee/treasury so that risk can be effectively managed in the company.

**Principle no. 3: Role of the risk management group**

In certain organisations the risk management group may equate to the treasury.

A risk management group, including members of the executive committee, should be responsible for defining the company's risk management policies and ensuring that the risk strategy is implemented through the development of appropriate procedures and investment in skills and systems.

**Principle no. 4: Risk management policies**

Risk management policies must be prepared by the risk management group and reviewed and approved, on a regular basis by the executive committee, which in turn must submit them to the board of directors for adoption. The risk management group should be provided with adequate resources and systems to enable them to implement these policies effectively.

**Principle no. 5: Support for the risk management group**

The group organisation structure should have clear reporting lines and responsibilities to enable the executive committee to monitor and control activities.

**Principle no. 6: Delegation of risk authority**

The group organisation should provide a risk framework by which authority is delegated to business units/subsidiaries, within clear mandates set by the board and the executive committee.

#### 2. Risk management function

**Principle no. 7: Role of the risk management function**

There should be an independent risk management function with clearly defined responsibilities, reporting directly to the risk management group.

**Principle no. 8: Role of the head of risk**

There should be a head of the risk management function that is responsible for ensuring day-to-day measurement, monitoring and evaluation of risk across the company.

**Principle no. 9: Prudent selection of risk management instruments**

The risk management function should only assume the management of risk, using risk management instruments and techniques of which it has proven ability to independently:

- Identify, quantify and re-value the risk of the instruments ongoing;
- Trade the component parts of the risk management structure efficiently; and
- Are able to report the results of comprehensively.

**Principle no 10: Ethical behaviour of the risk management function**

The risk management function should in its dealing with banks and other counter parties adhere to the ethical standards determined by the French code of Conduct as adopted by IGTA.

**3. Risk measurement, reporting and control**

*3.1 Market risk measurement*

**Principle no. 11: Valuation**

All positions should be independently valued at fair value using approved policies and procedures at least daily/weekly.

**Principle no. 12: Risk decomposition**

Market risk components inherent in any product should be identified to provide a basis for ensuring that market risk measurement is accurate.

*3.2 Credit risk measurement*

**Principle no. 13: Netting**

Companies should net credit exposures only where supported by the appropriate legal netting agreements.

**Principle no. 14: Creditworthiness**

The EXCO should be responsible for the evaluation of customer and counterparty creditworthiness and the setting of individual credit limits.

*3.3 Liquidity risk measurement*

**Principle no. 15: Cash management**

Short-term projected cash flows for each currency should be measured and monitored in order to anticipate future funding requirements.

**Principle no. 16: Funding strategies**

Alternative strategies to meet liquidity needs arising from either a loss of market liquidity or market access should be incorporated into the company's contingency liquidity planning process.

**Principle no. 17: Liquidity assurance and compliance reporting**

Assuring the liquidity of the company by whatever means available should be the first priority of treasury. However, in the event where a liquidity crisis become likely, it is the duty of the Treasurer to immediately notify the board officially of the situation.

### *3.4 Risk monitoring and aggregation*

#### **Principle no. 18: Risk consolidation and monitoring**

Market, credit and liquidity risks should be aggregated on a company-wide basis and monitored against company-wide guidelines or limits on a daily basis.

#### **Principle no. 19: Limit review procedures**

Risk limits should be re-examined in connection with market conditions and any changes in trading strategy.

#### **Principle no. 20: New product evaluation and authorisation**

A formal process should be established for new product trading which details the rationale for the use of the product, alterations required to existing policy documents, a valuation process, a list of potential counterparties and assurances that adequate controls and procedures, systems and risk analysis techniques are in place.

## **4. Operations**

### *4.1 Front office*

#### **Principle no. 21: Authorisation**

Management should set clear levels of authority for committing the company to different types of transactions.

#### **Principle no. 22: Trade capture**

Controls need to be in place to ensure the completeness, accuracy and timeliness of trade capture.

### *4.2 Middle and back office*

#### **Principle no. 23: Valuations**

Formally documented and approved policies and procedures should be used for the revaluation of positions. Valuations should be based on appropriate bid or offer level obtained from a recognised provider of market data. This should be in compliance with internationally accepted accounting standards.

#### **Principle no. 24: Profit and loss reporting**

Preparation of profit and loss statements for the company's portfolios should be performed on a daily/weekly basis.

#### **Principle no. 25: Price verification**

Prices and rates used for revaluation should be taken from independent sources. Where in-house prices are used, independent review procedures should be in place, including independent models.

#### **Principle no. 26: Trade processing**

Approved transactions should be processed in a timely manner, with an audit trail that links the transaction to the initiator.

#### **Principle no. 27: Confirmation**

All transactions should be confirmed independently of the trading function with the trading counterparty within defined time constraints.

**Principle no. 28: Settlements**

All cash and security movements should be properly authorised by senior staff and be executed by staff independent of the trading, trade processing and reconciling functions.

**Principle no. 29: Reconciliation**

Independent reconciliations should be carried out with third parties on a regular basis (consistent with the level of transactions) and internal reconciliations should be performed as appropriate.

*4.3 Company-wide*

**Principle no. 30: Recruitment and staffing**

The company should ensure that all treasury management, trading, operations, risk management and auditing activities are undertaken by professionals in sufficient number and with appropriate experience, skill levels and degree of specialisation.

**Principle no. 31: Training**

The requisite skills, training and experience for each level of treasury resource should be aligned to the output expected from an employee on that level (as defined in the education framework proposed to the International Group of Treasury Associations (IGTA))

**Principle no. 32: Compensation policies**

Compensation levels should reflect the skills required in each area of the business: compensation policies should not encourage behaviour that is inconsistent with the company's goals.

**Principle no. 33: Internal audit**

An internal audit function should be set up by the board to examine, evaluate and report on accounting and other controls over operations. Internal audit should be specifically charged with assessing, for each area it examines, the adequacy or otherwise of the IT and other systems in operation, in relation to the risk management strategy adopted.

**Principle no. 34: Legal documentation**

Relationships with all custodians, brokers, trading counterparties and customers should be determined and appropriate legal documentation should be in place before any business commences. This should also apply where a group of companies under common ownership transacts and/or deals between its members.

**Principle no. 35: Business continuation**

The board must ensure that adequate and comprehensive business continuation plans have been established and tested to address any disruption to normal business operations.

## 5. Risk management systems

### **Principle no. 36: Data storage**

The data architecture should define the data storage requirements of the company, including structure, level of detail and location.

### **Principle no. 37: Level of sophistication**

The technical architecture should define the level of sophistication required for treasury management, including the appropriate use of emerging technologies and package solutions.

### **Principle no. 38: System and model security**

The technical architecture should define the required levels of security, to ensure integrity and confidentiality of the company's information, systems and models.

### **Principle no. 39: Back-up, recovery and contingency planning**

The technical architecture should define adequate back-up and recovery procedures to ensure the company can withstand failures of hardware, software or telecommunications with an acceptable level of disruption. Full contingency plans should be in place in the event of failure.

### **Principle no. 40: IT developments**

All treasury IT developments, whether bespoke or package-based, should be specified, developed and implemented in a controlled manner.

*Source: ACTSA*

## Appendix 2: Exchange rate exposure survey

Impact of the exchange rate on firm growth and employment.

The survey is directed to the Chief Executive Officer (CEO)/ Managing Director (MD) and the Chief Financial Officer (CFO) or Financial Manager (FM). It seeks information on the importance of exchange rate strength or volatility to the overall company and its operations and what steps the firm actually takes to manage risks associated with the exchange rate.

Throughout the survey, you will be asked to relate your attitudes and your firm's business practices to exchange rate volatility and strength or weakness.

**DEFINITIONS**

**Exchange rate Volatility:** The level of fluctuation in the ZAR exchange rate against other major trading currencies

**Exchange Rate Strength:** The relative strength of the ZAR against other major trading currencies

**PROFILE:**

Sub-Sector: \_\_\_\_\_

**No. of employees in South Africa**

Permanent \_\_\_\_\_ N on-permanent \_\_\_\_\_

**Annual turnover:**

SA R \_\_\_\_\_ Other R \_\_\_\_\_

No of local branches \_\_\_\_\_ International \_\_\_\_\_

### SECTION A: INTRODUCTION

Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	No opinion
----------------	----------------	-------------------	-------------------	------------

1.	Exchange rate issues have become more important in recent years.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	My firm has experienced difficulties arising from exchange rate volatility.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	My firm has experienced <i>difficulties</i> arising from exchange rate strength.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	My firm has experienced <i>advantages</i> arising from exchange rate strength.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	My firm's profitability would be higher in the absence of exchange rate volatility.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	My firm's profitability would be <i>higher</i> in the absence of exchange rate strength.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	My firm's profitability would be <i>lower</i> in the absence of exchange rate strength.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	My firm has foregone market opportunities in a country because of exchange rate volatility.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	My firm has <i>foregone</i> market opportunities in a country because of exchange rate strength.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	My firm has <i>accessed</i> market opportunities in a country because of exchange rate strength.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Exchange rates, growth and unemployment

Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	No opinion
----------------	----------------	-------------------	-------------------	------------

11. My firm treats the ability to manage exchange rate risk as a strategic competitive advantage.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. My firm has experienced significant competitive <i>disadvantage</i> because of currency movements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. My firm has experienced significant competitive <i>advantage</i> because of currency movements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. My firm considers exchange rate risk as important in locating production or making direct investments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. My firm has increased the scale of an investment outside SA because of exchange rate volatility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. My firm has increased the scale of an investment outside SA because of exchange rate strength.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. My firm has increased the scale of an investment INSIDE SA because of exchange rate strength.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. My firm has increased the imports of capital equipment and other inputs because of exchange rate strength.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Exchange rate strength is a <i>benefit</i> in expanding my business <b>outside</b> SA.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Exchange rate strength is a <i>barrier</i> to expanding my business <b>outside</b> SA.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Exchange rate volatility is a <i>barrier</i> to expanding my business <b>outside</b> SA.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Exchange rate strength is a <i>barrier</i> to expanding my business <b>inside</b> SA.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Exchange rate strength is a <i>benefit</i> in expanding my business <b>inside</b> SA.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Exchange rate volatility is a <i>barrier</i> to expanding my business <b>inside</b> SA.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**SECTION B: IMPORTANCE OF THE EXCHANGE RATE ON YOUR FIRM?**

	Very important	Somewhat important	Not too important	Not at all important
25. Please rate the following factors on the growth and employment decisions in your firm:				
a. economic growth/market opportunity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. exchange rate volatility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. exchange rate strength	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. wage levels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. labour/management relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. political risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. legal environment (property rights, bankruptcy law, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. depth and strength of financial markets and institutions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. availability and cost of foreign currency derivatives for hedging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. tax incentives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. other (please describe) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26. Overall, how do you rate the importance of exchange rate strength / volatility relative to other risks—for example, those listed in question 25?

- Very important                       Not too important  
 Somewhat important                       Not at all important



## Exchange rates, growth and unemployment

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27. Please rate the importance of the following types of exchange rate movements to your firm's profitability:

	Very important	Somewhat important	Not too important	Not at all important
a. short-term foreign currency volatility (less than 10% change on annual basis)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. sustained strength or weakness of the currency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Exchange rate crises, i.e., sudden large adjustments of 25% or more	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Uncertainty regarding the consensus view about the exchange rate over the next year	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

28. What percentage of your annual turnover do you export? \_\_\_\_\_%

29. What percentage of the value of your total inputs is imported? \_\_\_\_\_%

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	No opinion
30. My firm's sophistication in managing exchange rate strength / volatility has increased significantly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Only changes in exchange rate that are inconsistent with relative inflation are important to my firm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. My firm is more confident in exporting to or importing from countries where:					
a. contracts are made in a stable currency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. the currency is managed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. the currency is pegged to the dollar, the euro, or the yen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. makes no difference	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

33. Do you actively manage your exchange rate exposure, or do you make use of the services of a financial services provider to do so?

Yes  No

If the answer to **question 33 is Yes**, please proceed to **SECTION C**, otherwise skip to **SECTION D**.

**SECTION C: FINANCIAL MANAGEMENT OF EXCHANGE RATE**

	Have used Y/N	Very important	Some what important	Not too important	Not at all important	Was it effective? Y/N
34. This question tests the importance of financial hedges						
a. Translating profits or cash flows into home or parent company reporting currency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Limiting transaction exposures on current cash flows over time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Redenominating debt (i.e., to take advantage of different financing costs) in international markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Enabling treasury operations to deliver profit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Other (please describe) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

35. Are there any regulations which are obstacles to your management of the currency? If so, please describe them and how they impact.

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36. Typically what services do you make use of from financial services providers?
- a. Hedging services
  - b. Offshore banking service
  - c. Other (please specify) \_\_\_\_\_
  - d. None

37. Could you provide us with the names of your service providers?

\_\_\_\_\_

38. Explain how you came to use their services \_\_\_\_\_

**SECTION D: OPERATIONAL MANAGEMENT OF EXCHANGE RATE**

Have used Y/N	Very important	Somewhat important	Not too important	Not at all important	Was it effective? Y/N
---------------	----------------	--------------------	-------------------	----------------------	-----------------------

39. Importance of the following strategies for dealing with exchange rate strength / volatility...

- |   |                          |                          |                          |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| a. adjusting country prices to maintain revenues in the primary (parent/holding company) reporting currency | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. shifting production or sourcing among existing locations   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. invoicing transactions in primary reporting currency   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. matching assets and liabilities in individual countries to establish operational hedges                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e. investing in many different countries to achieve more diversified exchange rate exposures                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f. matching revenues and costs in particular currencies   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

g.	shifting financing to currencies outside the country under currency stress	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h.	shifting to domestic market focus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i.	importing more capital goods to improve productivity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j.	importing a greater share of inputs for production	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k.	shifting to flexible labour contracts / temporary employment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l.	Other (please describe) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**SECTION E: EFFECT OF EXCHANGE RATE VOLATILITY OR STRENGTH ON COMPANY**

40. Has your firm experienced any change in output due to exchange rate strength / volatility over the last 5 years?

Yes       No

Significant Decrease  (>10%)	Moderate Decrease  (<10%)	None	Moderate Increase  (<10%)	Significant Increase  (>10%)
---------------------------------------	------------------------------------	------	------------------------------------	---------------------------------------

If Yes, what was the nature of this change?                             

41. Has your firm experienced any change in revenues due to exchange rate strength / volatility over the last 5 years?

Yes       No

Significant Decrease  (>10%)	Moderate Decrease  (<10%)	None	Moderate Increase  (<10%)	Significant Increase  (>10%)
---------------------------------------	------------------------------------	------	------------------------------------	---------------------------------------

If Yes, what was the nature of this change?                             

42. Has your firm experienced any change in employment levels due to exchange rate strength / volatility over the last 5 years?

Yes       No

Significant Decrease (>10%)	Moderate Decrease (<10%)	None	Moderate Increase (<10%)	Significant Increase (>10%)
-----------------------------------	--------------------------------	------	--------------------------------	-----------------------------------

If Yes, what was the nature of this change?

**SECTION F: GENERAL DISCUSSION**

43. Can you describe the exchange rate effects on your firm over the past ten years – say from the late 1990's when we experienced a number of exchange rate shocks until December 2001 - when the Rand was at an all time low - to the mid 2000's where the exchange rate is seen as relatively stable, but strong?
44. Can you say whether, in general, a period of volatility is more problematic for your firm than a period of sustained strength of the Rand?
45. Please describe, if any, differences in how you manage periods of currency volatility and strength.

**THANK YOU FOR YOUR TIME**

### Appendix 3: Data used for correlation of export and employment

Export & employment correlation by sub-sector					
Sub-sector	Exports (R)	Employment	Pearson	Export % of output	Import penetration
<b>12 Forestry and logging</b>					
1996	83,249,516	54,957	0.823	2.5%	3.6%
1997	51,330,177	57,188		1.6%	4.5%
1998	76,186,671	58,945		2.1%	4.6%
1999	77,907,244	61,623		2.0%	3.7%
2000	134,663,981	63,791		3.0%	3.9%
2001	194,613,665	63,257		3.9%	3.8%
2002	336,296,715	69,022		5.7%	3.3%
2003	266,594,744	81,063		4.7%	3.5%
2004	273,082,089	76,553		5.3%	3.5%
% change	228.03%	39.30%			
<b>32 Wood and wood products</b>					
1996	5,050,726,144	165,959	0.749	30.6%	25.9%
1997	4,304,077,779	164,575		25.6%	25.8%
1998	5,028,358,502	173,826		27.4%	26.8%
1999	6,637,299,852	176,490		31.8%	25.9%
2000	8,645,214,566	185,122		33.9%	24.3%
2001	9,521,030,870	177,931		34.7%	25.3%
2002	12,353,090,628	179,560		37.3%	27.0%
2003	10,951,919,729	177,957		33.3%	25.1%
2004	11,112,950,643	192,971		32.3%	25.3%
% change	120.03%	16.28%			
<b>39 Furniture and other items NEC and recycling</b>					
1996	8,434,685,822	73,105	-0.064	73.2%	22.6%
1997	5,203,732,657	69,228		73.2%	19.1%
1998	5,447,700,512	64,103		42.0%	21.6%
1999	11,312,720,783	62,757		42.9%	21.5%
2000	13,784,480,689	63,687		86.4%	25.1%
2001	16,540,258,207	63,867		93.5%	31.6%
2002	21,294,422,963	68,791		101.0%	30.8%
2003	12,806,292,299	64,150		117.5%	22.1%
2004	12,700,136,218	77,208		66.6%	23.4%
% change	50.57%	5.61%			
<b>35 Metal products, machinery and household appliances</b>					
1996	25,570,685,492	276,446	-0.796	50.2%	57.0%
1997	25,736,988,875	267,753		47.8%	54.9%
1998	28,927,686,860	251,383		50.7%	58.1%
1999	33,144,606,263	232,894		54.3%	55.5%
2000	40,990,778,731	219,049		57.5%	56.6%
2001	52,315,644,056	221,688		61.4%	58.6%
2002	60,457,909,289	228,895		58.6%	59.3%
2003	59,761,653,451	223,176		56.8%	56.7%
2004	74,947,942,912	215,587		59.4%	56.2%
% change	193.10%	-22.01%			