

The impact of the appreciating exchange rate on trade exposed industries

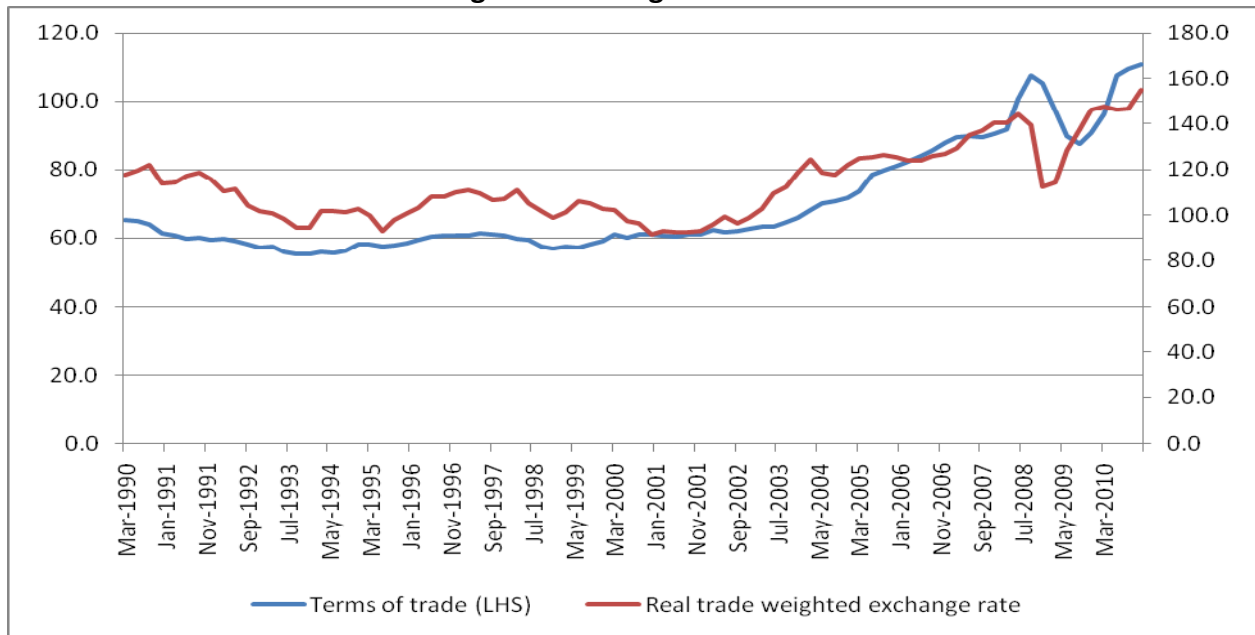
Executive Summary

- The Australian dollar has appreciated strongly against the US dollar and on a trade weighted basis over the last year, recently reaching US\$1.10. This has put pressure on trade exposed sectors.
- A comparison of export volume and value performance by sector to December 2010 (latest available data) provides some indication of the disparate performance of exports across Australian sectors. For example:
 - The *value* of manufactured and services exports increased by only 2.4% and 1.0% respectively in the year to December 2010, whereas resources exports increased by 44.3% and rural exports by 18.9%.
 - In *volume* terms, manufactured exports increased by only 3.9% and services exports contracted 0.4% over the same period, while the volume of resources exports increased by 7.7% and 8.9% for rural exports.
- The impact of the strengthening in the Australian dollar on the profitability of Australian manufacturers (and other trade exposed industries) is strongly influenced by three factors: the extent to which Australian manufacturers rely on export markets; the predominant invoice currency for exported manufactured products and imported materials; and the degree of imported inputs and the exchange rate pass-through in imported input prices.
- Consistent with Australian Bureau of Statistics (ABS) data, Ai Group's survey results show that Australian manufacturers are heavily dependent on export earnings and do not receive commensurate benefits in terms of less costly imported inputs as a result of the stronger exchange rate. Hence profitability of exporters in the manufacturing industry is expected to be further reduced from a sustained appreciation of the Australian dollar.
- Approximately 70.0% of Australian manufacturers surveyed by Ai Group in a forthcoming Manufacturing Industry Report cited the strength of the Australian dollar as an important negative influence on competitiveness over the past three years. This factor is even more important looking ahead as 77.0% of manufacturers consider the Australian dollar as an important constraint on competitiveness over the next three years. These findings are consistent with previous Ai Group research in 2007 which highlighted the importance of a competitive exchange rate to manufacturing export markets.
- With regard to export competitiveness, other Ai Group research suggests only 7.0% of manufacturing CEOs indicate their exports are competitive at an exchange rate above US\$1.00. Moreover, approximately 96.0% of manufacturing CEOs indicated their import competing production is uncompetitive at parity.

Introduction

Supported by strong demand for Australian resource exports (reflected in the terms of trade) and weakness in the US dollar, the Australian dollar has appreciated strongly over the last year (both against the US dollar and to a lesser extent on a trade weighted basis), recording a new post-float high on a trade-weighted basis and at one point reaching US\$1.10. Chart 1 shows the real trade weighted exchange rate and the rising terms of trade.

Chart 1: Real trade weighted exchange rate and terms of trade indices



Source: RBA data

The strengthening of the Australian dollar looks set to continue as robust economic growth in China underpins the strong demand for Australian resources and the US Federal Reserve is widely anticipated to keep interest rates near zero into next year. Moreover, the gathering pace of economic activity in Australia is expected to result in upward inflationary pressure and possibly further official interest rate rises by the Reserve Bank of Australia (RBA) within the next few months, putting additional pressure on the exchange rate.

While the strong Australian dollar has benefitted businesses that primarily rely on imported materials and Australian tourists, many businesses, especially those in trade-exposed sectors such as manufacturing, some services and tourism, have found it increasingly challenging to remain competitive.

Performance of manufacturing exports relative to other exports

A comparison of export volume and value performance by sector over 2010 (latest available data) provides some indication of the disparate performance of exports across Australian sectors. For example, the value of manufactured and services exports increased by only 2.4% and 1.0%

respectively in the year to December 2010, whereas resources exports increased by 44.3% and rural exports by 18.9% (Table 1).

Table 1: Value of Australia's exports

Exports (\$m)	Rural	Resources	Manufactures	Other	Services
Growth rate	18.88%	44.25%	2.37%	1.64%	0.96%

Source: RBA data, Balance of Payments basis

In volume terms, manufactured exports increased by only 3.9% and services exports contracted 0.4% over the same period, while the volume of resources exports increased by 7.7% and 8.9% for rural exports (Table 2).

Table 2: Volume of Australia's exports

Exports (\$m)	Rural	Resources	Manufactures	Other	Services
Growth rate	8.94%	7.72%	3.86%	-14.11%	-0.38%

Source: RBA data, Balance of Payments basis

Assessing the impact on Australian manufacturers

The impact of the strengthening in the Australian dollar on the profitability of Australian manufacturers (and other trade exposed industries) is influenced by three factors: the extent to which Australian manufacturers rely on export markets; the predominant invoice currency for exported manufactured products and imported materials; and the degree of exchange rate pass-through of imported input prices.

Manufacturing export earnings

The ABS reported that around 61.0% of Australia's manufactured goods were exported in 2006-07, implying that Australian manufacturers depend substantially on overseas markets for earnings. **This is consistent with Ai Group's forthcoming 2011 Manufacturing Industry Survey results which show that 56.0% of Australian manufacturers export from Australia, and 61.0% of them derive up to 50.0% of their sales revenue from exports from Australia.** These figures are much larger

Invoice currency for exports

Data from the ABS shows that more than 70.0% of Australian merchandise exports are invoiced in US dollars, while around 50.0% of merchandise imports are invoiced in the US dollar and about 30.0% in the Australian dollar. Hence, an appreciation of the Australian dollar is likely to lead to a further drop in the export earnings of Australian manufacturers through the impact the exchange rate appreciation has on conversion back to Australian dollars of US dollar invoiced transactions.

An appreciation of the exchange rate is also expected to reduce the import bill for the manufacturers that rely on imported materials. The reduction in the size of the import bill, in turn, depends on the degree of exchange rate pass-through and the import content in manufactured products.

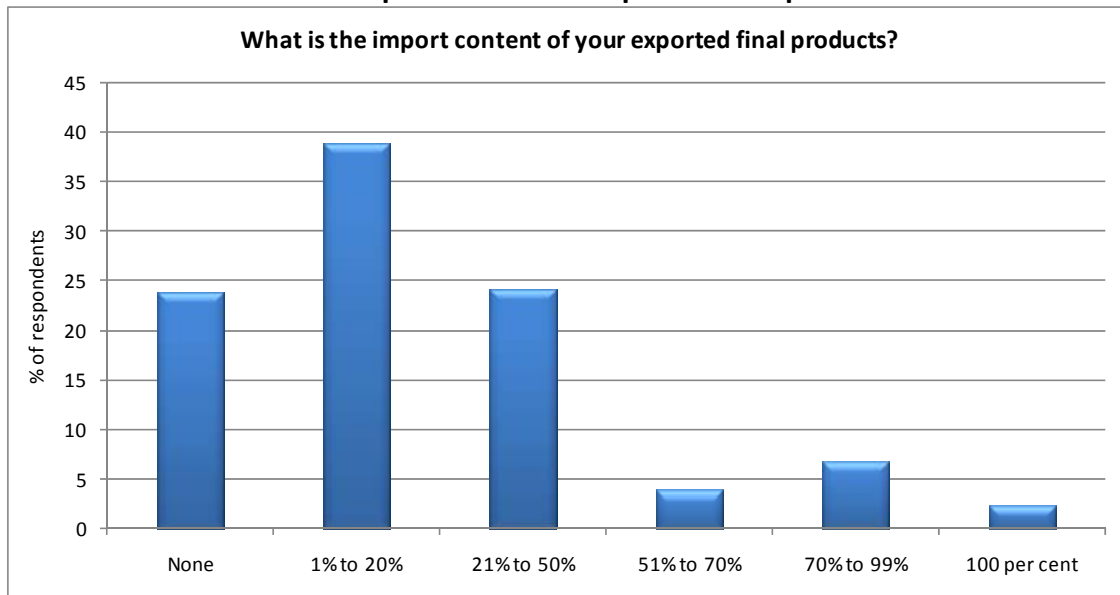
Imported inputs and exchange rate pass-through

The degree of exchange rate pass-through measures the extent to which the price of imported goods (in local currency) changes when the exchange rate fluctuates. Most of the research estimating the degree of exchange rate pass-through across different sectors shows that a 1.0% appreciation of the Australian dollar against the US dollar reduces the Australian dollar price of imports by less than one percent.

For example, at the aggregate economy level, the widely quoted empirical research done by José Campa and Linda Goldberg (Campa and Goldberg, 2005) shows that a 1.0% appreciation of the Australian dollar leads to a 0.56% decline in *aggregate import prices* (in Australian dollars) in the short-run and a 0.67% fall in the long run.¹ The impact for *imported raw materials* specifically, the percentages are 0.61% and 0.90%, respectively.

The manufacturers that could benefit from a stronger Australian dollar are those who rely heavily on imported materials to manufacture goods which are mainly sold in Australia. The proportion of such businesses in the Australian manufacturing industry is, however, unlikely to be large, as revealed in Charts 2 and 3 below. **Charts 2 and 3, obtained from the Ai Group's forthcoming 2011 Manufacturing Industry Survey, show the import content in Australian made final products. Only 13.0% of Australian manufacturers stated that the level of import content in exported final products exceeded 50.0%, while only 17.0% of manufacturers said that the level of import content in final products sold in Australia exceeded 50.0%. This implies that the strengthening of the Australian dollar is expected to have a net negative impact on the profitability of the industry.**

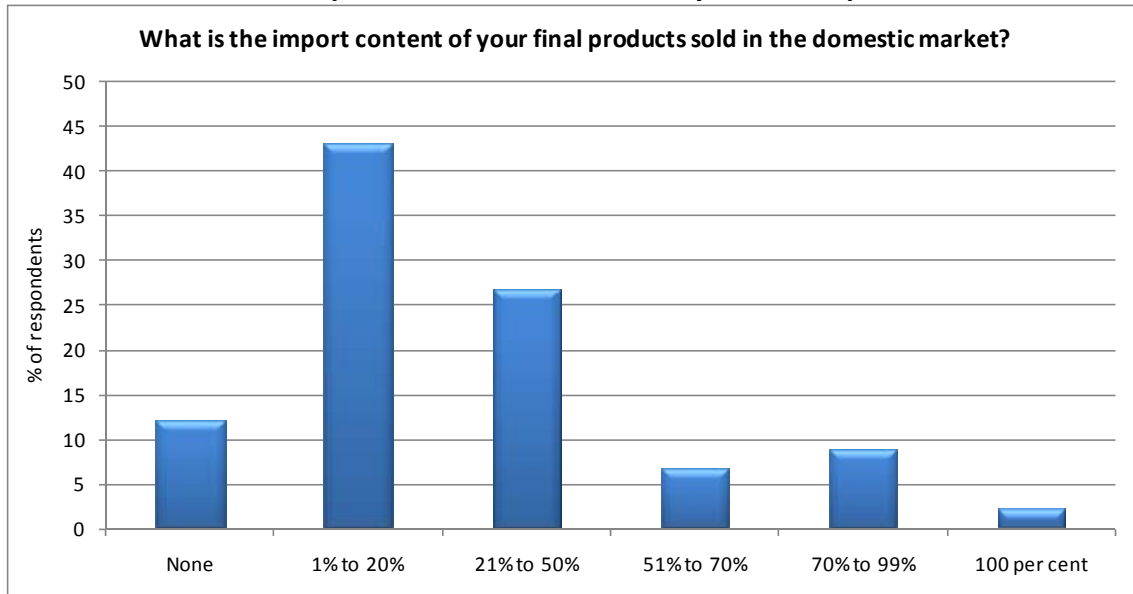
Chart 2: Import content of exported final products



Source: Survey results from forthcoming Ai Group Manufacturing Industry Study

¹ Source: Campa, J. and L. Goldberg, (2005), 'Exchange Rate Pass Through into Import Prices', *Review of Economics and Statistics*, vol. 87, no. 4.

Chart 3: Import content of domestically-sold final products

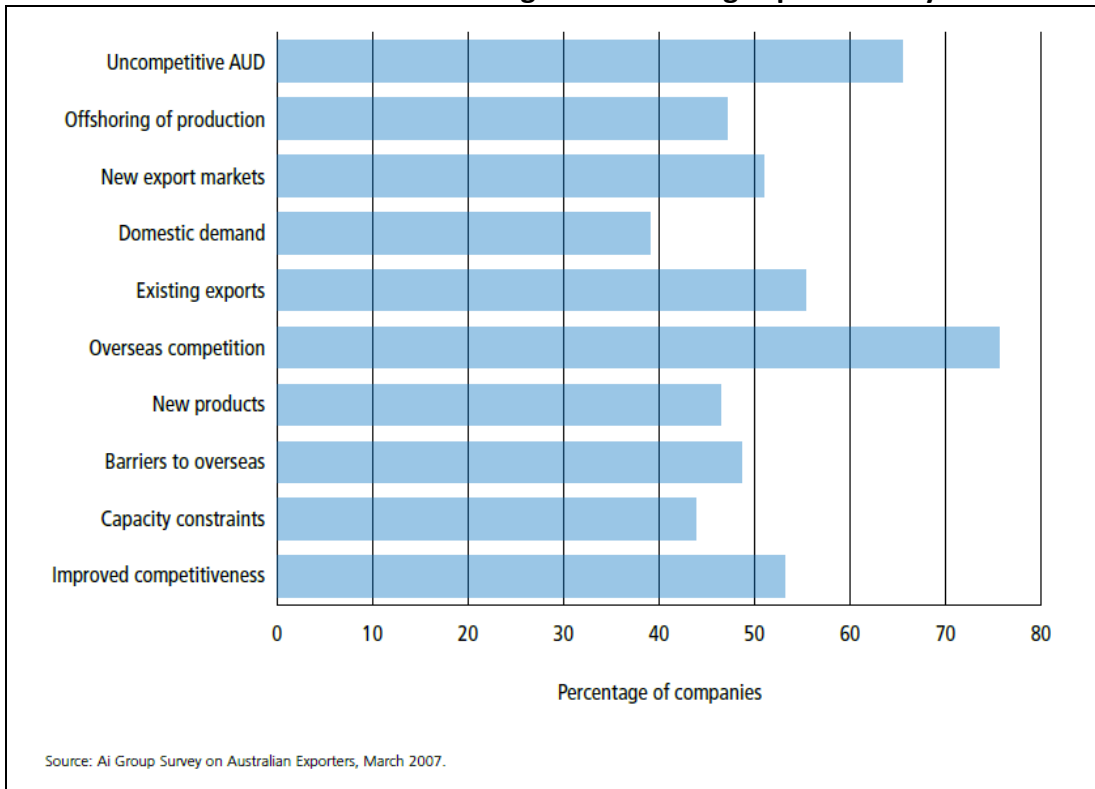


Source: Survey results from forthcoming Ai Group Manufacturing Industry Study

The above analysis indicates that, assuming no changes in the volumes of exports and imports, a 1.0% appreciation of the Australian dollar will reduce the export earnings (in Australian dollars) of manufacturers by close to 1.0%, and lower the import bill (in Australian dollars) by less than 1.0%. This implies that the revenue and profitability of exporters in the manufacturing industry is expected to be reduced from a sustained appreciation of the Australian dollar.

Net impact on export competitiveness

Consistent with this analysis, **70.0% of Australian manufacturers surveyed by Ai Group in the forthcoming 2011 Manufacturing Industry Survey cited the strength of the Australian dollar as an important constraint on competitiveness over the past three years, and 77.0% of manufacturers considered the Australian dollar as an important constraint on competitiveness over the next three years.** These findings are consistent with previous Ai Group research in 2007 which highlighted the importance of a competitive exchange rate to manufacturing export markets (see Chart 4 below).

Chart 4: Factors influencing manufacturing export activity

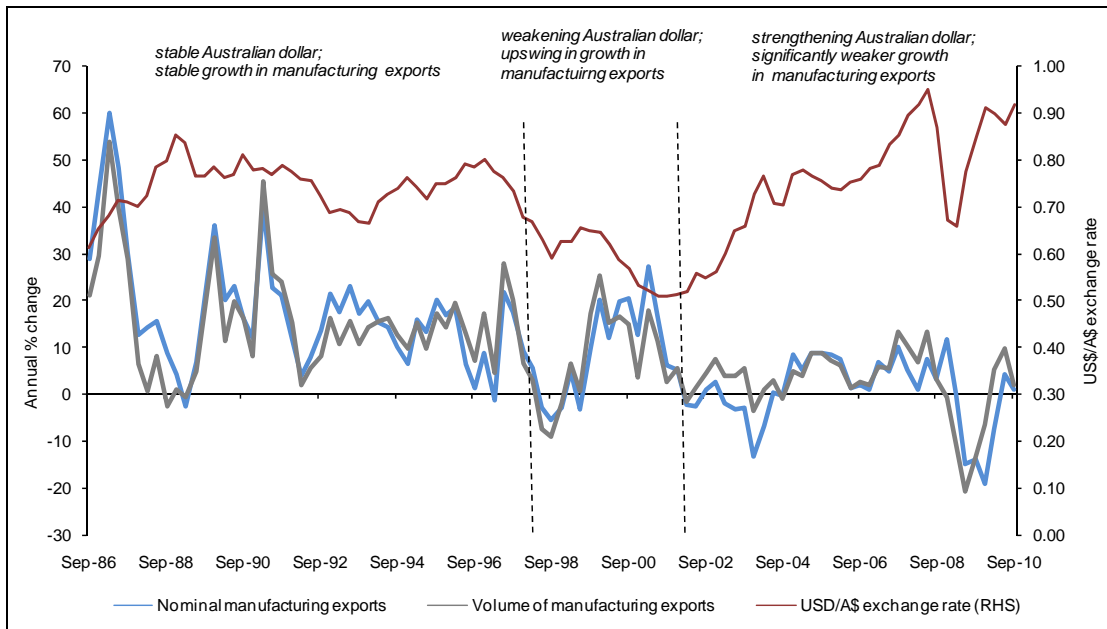
The broad inverse relationship between the level of the US to Australian dollar exchange rate and earnings from manufacturing exports can be uncovered from the data (see Chart 5). This is supported by empirical estimates of the elasticity of export demand with respect to exchange rate movements. Norman (2007) estimated the price elasticity of Australian manufactured exports to be between -0.33 to -0.54 (depending on the type of econometric model applied). This means that a 10.0% appreciation in the real exchange rate could lead to a decrease in manufacturing export values of between 3.3% and 5.4%. Other estimates suggest an even larger (long-run) elasticity.²

Using Norman's upper elasticity estimate of -0.54, we can arrive at an indicative estimate of the dollar impact of the real exchange rate appreciation on manufacturing export values, other factors constant. The real trade weighted index has appreciated approximately 12.3% since the trough in the rate during September 2008. This implies a 6.5% decline in manufacturing export values over that period, equivalent to around \$2 billion in 2010 terms.

The profitability of import-competing manufacturers will also be adversely affected by a strengthening of the Australian dollar, as the Australian dollar price of import substitutes is likely to fall, albeit by less than the full extent of the appreciation in the currency.

² Source: Norman, D (2007), 'Modelling Manufactured Exports: Evidence from Australian States', *Australasian Journal of Regional Studies*, vol. 13, no. 2.

Chart 5: The negative impact of a strengthening Australian dollar on the export revenue and export volume of Australian manufacturers



Source: ABS and RBA data

Strong exchange rate detrimental to services and construction industries as well

Further evidence on the negative impact of the stronger Australian dollar on manufacturers is available in the recent **Ai Group National CEO Survey Business Prospects in 2011**, which identified the AUD/USD exchange rate range that exports and import competing becomes uncompetitive for businesses across the sectors.

This Ai Group report found that 93.0% of manufacturing CEOs indicated their exports are uncompetitive at the prevailing AUD/USD exchange rate of approximately US\$1.00. This compares to 87.0% of services sector CEOs and 82% for construction. **Put another way, only 7.0% of manufacturing CEOs indicated their exports are competitive at an exchange rate above US\$1.00.** Moreover, approximately 96.0% of manufacturing CEOs indicated their import competing production is uncompetitive at the exchange rate of approximately US\$1.00. The full distribution of levels of the exchange rate at which exports and import competing becomes uncompetitive is provided in Appendix A.

Hedging practices among Australian manufacturers

Hedging against unforeseen currency movements is one way of dealing with exchange rate risk. The Commonwealth Bank of Australia (CBA) *Aussie Dollar Barometer* publication indicates businesses have responded to the spike in AUD/USD volatility experienced in recent years by steadily increasing currency hedging. More than half (59.0%) of businesses surveyed by the CBA are now planning to hedge their AUD/USD exposures compared to 41.0% of businesses one year ago. Also, a greater proportion of exposures will be hedged — 69.0% now compared to 57.0% one year ago.

This is consistent with Ai Group research. Businesses are active in currency risk management in order to protect their operations from the negative impact of exchange rate fluctuations. **The Ai Group's forthcoming 2011 Manufacturing Industry Survey found that businesses used forward exchange contracts (39.0%) as their main hedging instrument.** This was followed by 20.1% of businesses nominating natural hedges (e.g. mitigating currency risk through offshore investments and imported inputs) and 19.1% nominating the use of foreign currency options or swaps.

For businesses that did not actively hedge, the survey sought to ascertain the underlying factors influencing their decision making. **A relatively high proportion of businesses agreed with the proposition that hedging arrangements are too costly (35.3%) with a similar high proportion agreeing that their decision had been influenced by not knowing enough about hedging (32.7%).** A lower, although still sizeable proportion of businesses indicated that their decision reflected agreement with the proposition that fluctuations in the exchange rate even out across their business operations (27.9%) and that fluctuations in the exchange rate cancel out over time (26.4%).

Conclusion

This Economics Research Notes has outlined the negative impact on trade exposed industries of the recent exchange rate appreciation, highlighting that export volumes and values have been negatively impacted and will continue to do so. Moreover, imported input price decreases are not expected to offset the reduced export earnings, resulting in a negative impact on revenues and profitability. The exchange rate is expected to remain elevated as the demand for resources and international interest rate differentials mean that demand for Australia's currency exceeds supply. This is likely to put further pressure on the competitiveness and profitability of Australian manufacturing and other trade exposed sectors.

Contact

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Appendix A: Impact of higher exchange rate – Ai Group National CEO Survey responses

This appendix outlines the AUD/USD exchange rate ranges that exports and import competing becomes uncompetitive for businesses across the sectors. This information is sourced from the Ai Group National CEO Survey Report – *Business Prospects in 2011*.

Level of AUD/USD:	Exports:			Import competing:		
	Manufacturing	Services	Construction	Manufacturing	Services	Construction
0.5-0.6	4.7	3.3	0.0	9.3	3.6	0.0
0.61-0.7	2.3	6.7	0.0	17.1	10.7	16.7
0.71-0.8	25.6	6.7	18.2	28.6	28.6	41.7
0.81-0.9	32.6	53.3	45.5	25.7	39.3	33.3
0.91- 1.00	27.9	16.7	18.2	15.7	17.9	8.3
1.01-1.10	5.8	13.3	9.1	2.9	0.0	0.0
1.11-1.20	1.2	0.0	9.1	0.7	0.0	0.0
Total %	100	100	100	100	100	100

Source: Ai Group national CEO Report, *Business Prospects in 2011*.

The table shows that 93.0% of manufacturing CEOs indicate their exports are uncompetitive at the prevailing AUD/USD exchange rate of approximately US\$1.00. This compares to 87.0% of services sector CEOs and 82.0% for construction. Put another way, only 7.0% of manufacturing CEOs indicate their exports are competitive at an exchange rate above US\$1.00.

The negative impact of a high exchange rate on competitiveness is also evident when we compare the results for import competing production.

This survey indicates 100% of services and construction sector CEOs indicate that their import competing production is uncompetitive at the prevailing AUD/USD exchange rate of approximately US\$1.00. Approximately 96.0% of manufacturing CEOs indicate their import competing production is uncompetitive at the AUD/USD exchange rate of approximately US\$1.00.