Why Did We Look At the Subject?

8.001 The domestic economic problems experienced by various Asian countries have resulted in a significant downturn in New Zealand trade volumes to the Asian market. Coupled with the downturn in trade, from mid-1997 the New Zealand dollar experienced a rapid and unexpected fall in value against major trading currencies such as the British pound and the United States dollar.

8.002 Both of these two factors presented risks to entities that trade in international markets – among them the state-owned enterprises (SOEs) that buy and sell internationally.

8.003 In this article we look at how SOEs have protected themselves against those risks.

Why Take Out Foreign Exchange Cover?

8.004 When buying and selling goods on the domestic market the main concerns of traders are price and quantity. (This is not to say that the domestic market is unaffected by movements in the value of the New Zealand dollar as domestic sale prices can be driven by international market prices.) However, when trading internationally a third dimension – the prevailing foreign exchange rate – becomes a factor. Although traders may not be able to influence the price or the quantity of demand to any large degree, they are able to bring certainty to the exchange rate through purchasing foreign exchange cover.[1]

8.005 A forward exchange contract is an agreement to buy or sell a quantity of foreign currency at a fixed rate for delivery at an agreed date. The forward rate of exchange is set at the time of the agreement. It is not a forecast of expected future exchange rates but is a mathematically calculated adjustment to current exchange rates based upon the interest rate differential between the two currencies.

1 By "foreign exchange cover" we mean both forward exchange contracts and options to purchase foreign currency.

8.006 Establishing foreign exchange rates effectively eliminates foreign currency fluctuations, enabling traders to know with certainty what their receipts will be if they are able to achieve a predetermined level of sales at the forecast price. Nevertheless, there is a risk associated with the purchase of foreign exchange cover, which increases relative to the length and volume of cover purchased. In addition, normal business volatility means that sales volumes and prices will fluctuate over time. Therefore, the further out one seeks to predict future trading patterns the greater will be the uncertainty.

How Are the Business Risks of Taking Out Foreign Exchange Cover Reported?

8.007 One of the main risks in taking out foreign exchange cover is that if the sales projections are incorrect the trader may be left in a position of having insufficient sales to take advantage of the cover. Cover that is excessively greater than actual sales, and prevailing exchange rates that are lower than the forward exchange contract rate, may result in significant losses being realised.

8.008 Sales that have been made are accounted for as revenue in the Statement of Financial Performance in the period in which the sales occur.[2] The amount at which the sale will be recorded will be based on the exchange rate in the forward exchange contract. Therefore, if the forward rate at the date of sale differs from the rate in the forward exchange contract the result will be reflected in an increase or decrease in the revenue recorded.

8.009 Until the sale actually occurs, financial reporting standards require disclosure of the foreign exchange exposure by way of a note to the accounts.[3] The note to the accounts reports the amount of forward exchange contracts purchased and their fair value – that is, the amount the currency could be sold for at balance date (on the basis that there is no penalty for selling early).

2 SSAP-21, *Accounting for the Effects of Changes in Foreign Currency Exchange Rates*; Institute of Chartered Accountants of New Zealand.

3 FRS-31, *Disclosure of Information about Financial Instruments*; Institute of Chartered Accountants of New Zealand.

8.010 Understanding the implications of the note disclosure requires some knowledge of accounting and foreign exchange transactions.

What Did We Review?

8.011 We identified those SOEs that were purchasing foreign exchange cover, reviewed their foreign exchange risk management policies, and ascertained how the policies had been applied in the 1997-98 financial period. We did not review the management of foreign exchange risk in relation to the principal element of overseas debt.

8.012 We reviewed each SOE's annual report, and where we needed further information we obtained it by discussions with the appropriate staff of the SOE.

How Did We Judge the Foreign Exchange Risk Management Policies?

8.013 We were not concerned just with whether the SOEs had made losses on foreign exchange transactions because gains and losses will be made even when foreign exchange cover is in place. The reason for this is that it is extremely difficult for an organisation to match exactly the movement of the New Zealand dollar against other international currencies, and as a consequence gains and losses will occur even when hedging the exchange rate risk.

8.014 Rather, we were concerned that SOEs had adequate policies to minimise any long-term foreign exchange risk that they faced. Therefore, we sought to establish whether each Board:

- had clearly set out its objectives for managing foreign exchange risk;
- had established policies that gave effect to its objectives;
- was receiving adequate information on a regular basis to ensure that its policies were being complied with; and
- ensures that its treasury policies are regularly reviewed by a suitably qualified external party.

8.015 We did not review the SOEs' treasury management functions in detail.

What Did We Find?

8.016 Of the 15 SOEs we reviewed, four had no foreign exchange risk. Nine out of the remaining 11 SOEs were involved in managing foreign exchange risk to any significant degree.

8.017 Of the nine, seven had taken out foreign exchange cover that related to foreign borrowing costs or capital expenditure purchases. The practices adopted by these seven SOEs in relation to capital expenditure purchases were largely in line with our expectations.

8.018 We were interested most in the remaining two SOEs:

- one had entered into a foreign loan to partially hedge future revenue streams; and
- the other had taken out foreign exchange cover as a hedge against the effect of foreign exchange rate changes so as to give greater certainty of receipts from export sales.

Land Corporation Limited

8.019 The first of those SOEs was Land Corporation Limited (Landcorp), which met our expectations in managing foreign exchange risk in the context of the scope of our review. However, its foreign exchange management was unusual. Landcorp had converted a portion of its domestic debt to a United States dollar loan (of US$25 million) as a hedge against the effect of foreign exchange rate changes on prices for the majority of its products that are sold on the domestic market. It also takes out forward exchange contracts to cover the relatively small proportion of total revenue generated from sales of its products on the international market.

8.020 We accept that the Board entered into the United States dollar loan arrangement having been independently advised that a partial natural hedge does exist with the loan, due to domestic product prices achieved by Landcorp largely being determined on the international market (commonly fixed in United States dollars).

Solid Energy New Zealand Limited

8.021 The second SOE was Solid Energy New Zealand Limited (Solid Energy), which is directly involved in significant sales of its products in international markets ($94.8 million for the year ended 30 June 1998). We would therefore expect the Board of Solid Energy to have sound policies in place to manage foreign exchange risk. The balance of this article assesses the degree to which Solid Energy met our expectations as set out in paragraphs 8.013-8.014.

What Was Our Assessment of Solid Energy's Foreign Exchange Risk Management?

How Much Foreign Exchange Cover Did Solid Energy Have?

8.022 An analysis of Solid Energy's position is shown in Figure 8.1.

Figure 8.1
Solid Energy – Sales and Foreign Exchange Cover

	1997-98 $million	1996-97 $million
Total sales	187.3	208.8
International revenue	94.8	115.6
Total foreign exchange cover held at 30 June	468.0	165.2
Realised[4] (loss)/profit at 30 June	(3.6)	Nil
Unrealised[5] (loss)/profit at 30 June	(138.1)	8.2

4 In this instance when the contracts matured there were insufficient sales to match against the proceeds of the contract and an actual loss of $3.6 million was made.

5 This is unrealised in that a profit or a loss will only occur if all contracts existing at 30 June were closed out at 30 June at the current exchange rates. This is extremely unlikely to occur in the normal course of business but it does give an indication of the extent of risk in the event that no sales are achieved.

8.023 Our initial review of Solid Energy's financial statements raised the following four issues:

- There was a significant increase in the level of foreign exchange cover during the 1997-98 financial year – from $165.2 million at 30 June 1997 to $468.0 million at 30 June 1998. (Part of this increase can be attributed to the different exchange rates at 30 June. If both figures were expressed in United States dollars the increase would have been from US$112.9 million to US$242.4 million.)
- This increase in cover was not supported by an increase in international sales, which decreased from $115.6 million for the year ended 30 June 1997 to $94.8 million for the year ended 30 June 1998.
- A substantial adverse turnaround in the potential exposure of $146.3 million (if all the forward exchange contracts outstanding at 30 June had been closed out at the exchange rate at that date), resulting from turning a potential profit of $8.2 million as at 30 June 1997 into a potential loss of $138.1 million as at 30 June 1998.[6]
- Forward exchange contracts were in place for up to five years. Expected sales this far into the future were based on estimates only and were not underpinned by firm sales contracts.

What Was the Board's Objective in Managing Foreign Exchange Risk?

8.024 The Board's objective is stated to be:

… *to protect CoalCorp* [now Solid Energy New Zealand Limited] *from adverse exchange rate variations, by managing the Corporation's exposure.*

8.025 The foreign exchange exposures recognised in Solid Energy's policy document are:

- budgeted (and forecast) export sales; and
- import commitments of a capital and operational nature.

6 On the same basis the unrealised loss at 30 November 1998 would have been $75 million.

8.026 For Solid Energy this means protection of future income.

What Was the Board Policy for Managing Foreign Exchange Risk?

8.027 The Board's policy for determining the level of its foreign exchange cover is set out in Figure 8.2 below. The exposure is based on forecast export sales and foreign exchange cover is taken out in the ranges specified.

Figure 8.2
Policy for Foreign Exchange Cover

Export Sales Exposure	Forward Exchange Contracts		Option Cover	
	min %	max %	min %	max %
Forecast receipts up to 3 months	35	90	Nil	15
Forecast receipts 4 to 12 months	35	90	Nil	20
Forecast receipts 13 to 24 months	35	80	Nil	Nil
Forecast receipts 25 to 36 months	30	65	Nil	Nil
Forecast receipts 37 to 60 months	30	65	Nil	Nil

8.028 The policy was changed in August 1997 to extend the maximum period of cover from 36 months to 60 months.

How Did the Policy Compare With Others?

8.029 Our experience suggests that taking out foreign exchange cover for a period as long as five years, particularly when sales are uncertain, is unusual and not without cost or risk. We therefore compared the periods and lengths of cover in Solid Energy's policy with those of four Australian coal-mining companies.[7]

8.030 Solid Energy's treasury policy differed from the Australian companies in relation to both the wide degree of discretion given to management (i.e. the width of the bands) and the maximum period of cover. For coal sales, three out of the four Australian companies limited their foreign exchange cover to a three-year projection, and the fourth had a maximum five-year projection.

8.031 As for the level of cover, three out of the four had a maximum cover in the first year of between 70% and 75% and the fourth had a maximum of 100%. The maximum cover in the second and third years was between 50% and 60% for three companies. The fourth company retained a maximum of 100%. The company that takes cover out for up to five years has a maximum cover level of 35% for years four and five.

8.032 In summary, the policy adopted by Solid Energy, although not materially different in relation to the maximum period of cover, gave greater discretion to management in relation to the maximum level of permitted foreign exchange cover.

How Was the Policy Applied in Practice?

8.033 Solid Energy calculated its cover over both contracted sales and forecast other sales – without recognising the different levels of certainty inherent in the two categories.

8.034 Covering contracted sales makes sense because a sales contract establishes certainty over the sale transaction. Therefore, taking out cover over the total value of contracted sales results in the company attaining certainty of revenue for what are ostensibly certain sales.

7 The companies were Portman Mining Limited, Mount Isa Mines Holdings, QCT Resources Limited, and Broken Hill Proprietary Company Limited.

8.035 However, our review revealed that some of the reported "contracted sales" were, rather, estimates based on previous business relationships, and the longer-term projections included anticipated production. Latterly, contract expectations as to price and quantity have not been achieved. Therefore, the certainty that we would normally expect of "contracted sales" did not exist.

8.036 In relation to forecast other sales, we would expect the amount of cover to be lower due to the inherent uncertainty of sales being achieved. We would also expect that, as the sales projections become less reliable the longer the period, the amount of foreign exchange cover would reduce accordingly.

8.037 Solid Energy's policy did have the effect of reducing the level of foreign exchange cover but we would question whether the reduction was sufficient in view of the state of uncertainty of forecast sales.

What Did Management Report to the Board?

8.038 Management prepares a monthly *Foreign Exchange Position Report* for the Board. This report is an effective way of determining whether the Board's policy in relation to the maximum and minimum levels of cover is being complied with. However, in our view the report contains insufficient information for the Board to be aware of the extent of the foreign exchange risk to which Solid Energy is exposed.

8.039 We were told that a forecast revision of the expected result for the year was carried out each quarter. However, we were not able to establish how the revised forecasts of sales were carried through into the monthly reports to the Board and the amounts of foreign exchange cover held.

What Are Our Views on the Reporting?

8.040 We consider that, for the Board to ensure that its foreign exchange risk policy is being complied with, it needs to be provided with sufficient information to determine:

- Whether previously forecast sales have been achieved and future forecast sales are still achievable.

- If the forecasts are not being, or likely to be, achieved what is happening with the foreign exchange cover – is any excess being taken forward to match against future sales, or is it being reversed if too much cover is in place.

8.041 The Board recognised the need for additional information and, at a meeting on 27 August 1997, determined that:

> … *the Company should incorporate a sensitivity analysis in the forecasting to show the impact that a shift in the rate will have on the forecast* [value of the business].

8.042 We were told that the Board was given the information orally. We were not able to locate any formal advice to show that this was so.

8.043 Our analysis of forward exchange contracts outstanding at 30 June 1998 established that substantial purchases of foreign exchange cover – US$176 million (or 87% of the total cover of US$201 million purchased during the year) – were made in the period September to December 1997.[8] Of this amount, US$105 million was purchased for 37 to 60 months following the policy change the previous August (see paragraph 8.028).

8.044 We were surprised that the Board was not consulted before taking out these significant increases in cover. We would have thought that the increases were so substantial that management would first have discussed them with the Board.

8.045 In addition, we had the following concerns about the monthly reports submitted to the Board:

- The options purchased by Solid Energy were "2:1 single strike" options. These were valued in the monthly schedules at the value should Solid Energy exercise the "strike" option. However, if the exchange rate falls below that shown in the option the bank has the right to "strike" the option at twice the amount shown in the monthly reports to the Board.
- In the October 1997 report contracted sales for the 3-4 year and 4-5 year bands for the month of October 1997 were shown as US$45.9 million and US$31.8 million respectively. Yet in the reports for November and December 1997 there

8 September US$37 million, October US$89 million, November US$6.5 million, and December US$43.5 million.

were no contracted sales for these two periods. The January 1998 report showed contracted sales for the 3-4 and 4-5 year bands as US$6.6 million and US$2.2 million respectively. In the February 1998 report the corresponding figures fell to US$5.7 million and US$215,000. The March 1998 report showed contracted sales of US$3.8 million in years 3-4 and none in years 4-5. At 30 June 1998 the monthly report showed no contracted sales beyond 3 years. This situation continued after 30 June 1998.

- When we asked the reason for the changed figures management said that errors had occurred. Ignoring the split between contracted and projected sales, total forecast sales were relatively consistent. However, that left large fluctuations unexplained (i.e. a decrease in the 5-year forecast of $14 million between October and November 1997, and an increase of $57 million between November and December 1997).
- It was difficult to determine whether the percentage levels within the bands in the Board policy had been complied with. This was a result of the bands shown in the reports being different to those in the policy. In addition, the percentage calculations combined the forward exchange contracts and options, whereas the policy dealt with these categories separately.
- We noted significant fluctuations in the forecast sales figures between the bands from month to month. The report did not explain the fluctuations.

Was the Board's Policy Complied With?

8.046 The Board's policy on foreign exchange risk was often not complied with during the period March 1997 to November 1998.[9]

8.047 In relation to forward exchange contract cover, the maximum level of cover had been exceeded in some bands, in July, August, October and November 1997, and in January, February, April, June, July, August, September, October and November 1998.

9 The following reports were not available for this period: April, May, September 1997; March and May 1998.

8.048 In relation to option cover, both the level of cover within the bands as well as the period had been exceeded. The levels of cover were exceeded throughout the period January to December 1998 with the exception of June. The period of cover was also exceeded for the whole period we reviewed – March 1997 to November 1998. Cover for periods from 1 to 5 years ranged from $10 million to $40 million. This is contrary to the Board policy, which allows option cover for a maximum of 12 months.

8.049 Solid Energy's Chief Financial Officer told us that before February 1998, when the policy was breached, no formal report was made to the Board additional to the regular monthly report. We would have expected the Board to receive details of the extent to which it was exposed, and management's recommended path of action, if any, to return to compliance with the policy.

8.050 In February 1998 the Board considered closing out some forward exchange contracts but deferred action to await further developments in the market. In April 1998 the Board discussed the level of foreign exchange cover but again decided not to close out any contracts.

On What Basis Did Solid Energy Determine the Level of Foreign Exchange Cover?

8.051 Solid Energy calculated the amount of foreign exchange cover based on forecast export sales (both contracted and projected) in its five-year business plan, taking account of both the prevailing and likely forward exchange rate.

8.052 The forecast sales included significant growth in export revenues anticipating completion of the Mount Davy mine and the West Coast jetty. There were two problems in including revenue from these projects:

- the projects had not been approved at the time the cover was taken out; and
- as the projects were still being developed, there was a lack of certainty about their completion dates and, therefore, when they would start generating additional revenue.

8.053 We were advised that management decided in 1997 to increase the foreign exchange cover to the maximum levels permissible under the various categories in the policy. The reason given was that the quantity of coal that Solid Energy was selling at the price it was receiving was considered to be an adequate return on capital invested. The intention was to fix the exchange rate so that there was greater certainty of receipt of revenue from export sales.

8.054 In making that decision, management reduced the company's ability to accommodate a downward movement in either the quantity of coal sold or the price received before having an excess of foreign exchange cover. Foreign exchange cover is generally taken out because there is some certainty that the sale will be made and the cover will be fully utilised.

8.055 The downturn in the Asian economy during 1997 and 1998 meant that both the demand for and the price of coal has fallen. Solid Energy is now in a position where contracts are currently not always being fulfilled. Not only is it having difficulty meeting its "contracted sales" targets, but the downturn also means that it is not able to meet the level of projected sales on which the foreign exchange cover is based.

8.056 The monthly reports to the Board from June to November 1998 show the five-year forecast sales being revised downwards. The forecast international sales and the foreign exchange cover are shown in Figure 8.3 on the next page. In the November report, the foreign exchange cover for the first three years significantly exceeds the forecast sales.

Will Solid Energy Be Able To Make Use of the Foreign Exchange Cover?

8.057 Solid Energy is now in a position where it has purchased foreign exchange cover well in excess of the level of international sales it is currently expecting to attain. Over-optimistic sales targets have meant that Solid Energy is now facing the risk that it will incur substantial actual losses in the event that sales fall short of the level of cover taken out.

8.058 This risk is very real, especially since international coal sales are depressed. The year-to-date position in the 30 November 1998 management accounts showed a budget sales forecast of US$24.3 million yet only US$14.1 million had been achieved.[10]

Figure 8.3
Forecast International Sales and Foreign Exchange Cover

	Year 1 US$ million	Year 2 US$ million	Year 3 US$ million	Year 4 US$ million	Year 5 US$ million
Forecast international sales –					
as at June 1998	65	85	113	135	148
as at October 1998	50	74	111	128	135
as at November 1998	49	55	50	49	48
Foreign exchange cover –					
as at June1998	70	71	91	53	12
as at October 1998	75	87	62	50	Nil
as at November 1998	80	82	70	40	Nil

Has Solid Energy's Foreign Exchange Policy Been Regularly Reviewed?

8.059 An external review of Solid Energy's treasury policies (which include the foreign exchange risk management policy) has been undertaken only twice since the company was established as an SOE in 1987 – in 1995, and in 1997 when the company asked Southpac Limited (Southpac) to do a review.

10 The exchange rate that Solid Energy used to convert from New Zealand dollars to United States dollars was 0.63.

8.060 One of Southpac's recommendations was that Solid Energy adopts a benchmark[11] to assess performance. Southpac recommended that the benchmark comprise 50% of foreign exchange cover over contracted revenue with the remaining 50% being purchased at the time of the transaction. A different benchmark was to be applied for other non-contract revenue projections, which Southpac proposed should be the minimum cover levels in the company's current treasury policy. The Board did not accept Southpac's recommendation.

8.061 Separate advice was sought from Bancorp Treasury Services Limited (Bancorp), which had a differing view in relation to the benchmarking – it recommended a composite benchmark in excess of 50%.

8.062 Solid Energy's treasury policies require that:

- An annual audit of the treasury systems be undertaken. We were advised that internal audit has conducted two audits, so that the requirements of this policy have not been met. The Board determines the annual internal audit programme.
- The maximum and minimum levels of foreign exchange cover should be reviewed at least every 12 months. We found no formal evidence that the Board had made this annual review.

What Is Currently Being Done To Mitigate the Foreign Exchange Risk?

8.063 A new Board has been appointed.

8.064 The new Board has instituted a strategy to manage the foreign exchange risk over the next 12 months. The Board is currently reviewing its treasury policies with the assistance of a newly appointed adviser.

11 A "benchmark" is a measure against which the company's performance in relation to foreign exchange can be assessed. In this instance benchmarking means that the company would calculate the level of revenue from a benchmark foreign exchange policy and compare it to the actual revenue received using the actual policy.

Conclusions

How Are SOEs Managing Foreign Exchange Risk?

8.065 The majority of SOEs did not purchase foreign exchange cover to hedge future revenue streams to any significant degree. Of those that did, one (Solid Energy) did not meet all our expectations – particularly in relation to the adequacy of the information that was supplied to the Board.

What Are the Lessons for Others?

8.066 We believe that, when considering how to manage foreign exchange risk, Boards should:

- Set out their objectives as to what and why they are aiming to manage.
- Ensure that polices and procedures are sufficiently detailed to give effect to the objectives.
- Require that they receive sufficient information to enable them to understand clearly and fully the exposure that their company has to foreign exchange risk. This information should include known and anticipated changes in business conditions and the effect that these could have on the company's exposure.
- Require that, where the policies are not being complied with, the Board be advised immediately of the extent of the exposure as well as an action plan to ensure a return to compliance.
- Provide for a suitably qualified external party to periodically review the policies. This review should include a comparison with other participants in their industry, as well as current trends in foreign exchange management. Any changes to the policies should be subject to detailed analysis in light of any known or anticipated changes in business conditions.