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SaskPower U.S. Debt: Hedging Currency Exposure

Professors Walid Busaba and Saqib Khan wrote this case solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality.

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On December 19, 2002, Edward James, a member of the audit and finance committee of the board of directors of the Saskatchewan Power Corporation (SaskPower), was contemplating a complex issue. The management of SaskPower had requested the approval of its 2003 foreign exchange strategy, to manage the long-term currency risk exposure in the utility’s U.S. dollar debt.

SaskPower issued US$619 million of debt in the early 1990s, with maturities ranging from 10 to 30 years. The U.S. dollar exchange rate against the Canadian dollar had since increased (i.e., the Canadian dollar rate had depreciated), increasing the effective burden of the debt and reducing the utility’s net income. By the end of 1999, SaskPower had hedged US$112 million through foreign currency swaps. By the end of 2001, the translation value of the U.S. dollar debt had increased to CA$986 million and represented more than 50 per cent of SaskPower’s long-term debt.

A change in accounting practices was implemented in 2001 in accordance with revised Canadian Institute of Chartered Accountants guidelines. SaskPower was required to recognize as a gain or a loss in the current year any translation differences in the value of its outstanding U.S. dollar debt resulting from fluctuations in the exchange rate during the year. This policy change led to a significant reduction in net income in 2001, followed by a significant increase during the first eight months of 2002. The volatility in earnings had complicated the task of setting rates for electricity and had proved politically difficult to justify. An overarching objective of the proposed foreign exchange strategy was to eventually eliminate all currency exposure in the outstanding U.S. dollar debt.

SaskPower: The Company

SaskPower was a Canadian power company established in 1929. This crown corporation was owned by the provincial government of Saskatchewan and governed by a board of directors.[[1]](#footnote-1) It was the main producer and supplier of electricity in the province, with an installed generation capacity of 4,281 megawatts. In fiscal year 2001, SaskPower serviced 432,000 customers spread over 652,000 square kilometres across Saskatchewan. Around 68.3 per cent of the generated power was sold to industrial users. The company’s distribution network was also tied to the grids of Alberta and Manitoba and to the U.S. state of North Dakota (although no notable sales were recorded across the border).

SaskPower’s revenues in 2001 were CA$1.126 billion, 88 per cent of which came from sales within Saskatchewan. Its expenses were CA$1.097 billion. The cost of fuel and purchased power represented 43 per cent of expenses. Finance charges, which included foreign currency translation losses related to the U.S. dollar debt, represented 16 per cent. Expenses increased by 10 per cent relative to 2000, driven primarily by a 22 per cent increase in the cost of fuels, namely natural gas, and purchased power, which was required due to low river flows and reduced electricity generation (see Exhibit 1).

Origins of U.S. Debt

SaskPower was a capital-intensive, vertically integrated electric power utility. Asset replacement was required even during slow economic times. Like most crown corporations, SaskPower sourced debt through the provincial treasury.[[2]](#footnote-2)

In the 1990s, Saskatchewan was in poor financial health. Canadian financial institutions showed little interest in buying Saskatchewan debt, and the province faced relatively high credit spreads over Canadian treasuries. Therefore, the province deemed it advantageous to borrow in the United States, where its debt was better received and interest rates on long-term debt were significantly lower. SaskPower made five U.S. debt issues between 1990 and 1993, totalling US$619 million in principal, and maturing 10 to 30 years later (see Exhibit 2). The exchange rate at issue averaged CA$1.22 per U.S. dollar, or US$0.82 per Canadian dollar, and the debt was worth CA$755 million.

SaskPower’s all-in cost of its U.S. debt was much lower than the typical equivalent Canadian dollar debt. On average, it was 160 basis points lower, or 17 per cent lower, than what the Canadian dollar debt’s all-in cost would have been. Therefore, the U.S. dollar would need to move up a long way before the Canadian dollar cost of servicing the U.S. debt exceeded what the cost would have been if SaskPower had chosen to borrow in Canadian dollars (see Exhibit 2).

The U.S. dollar debt carried semi-annual coupon payments. The debt was non-callable and non-convertible. Being primarily held by institutional investors, it had little to no market float.

Accounting Policy Change and Exchange Rate Uncertainty

At the time, the accounting standard that SaskPower followed was the Canadian version of the generally accepted accounting principles (GAAP). Foreign exchange translation adjustments that resulted from year-end revaluation of the U.S. debt were amortized over the remaining term of the debt. The Canadian dollar’s value deteriorated for most of the 1990s, which meant that the U.S. dollar appreciated in value (see Exhibit 3), creating a build-up of unrealized foreign exchange losses. A portion of these losses was amortized annually, although these were non-cash charges—no additional funds were required until the debt matured. The amortization was an amount of multi-million dollars per year; however, it was offset by significant reductions in actual finance charge payments as SaskPower’s debt declined sharply over the 1990s. The amortized exchange losses were CA$8 million for 1999 and CA$9 million for 2000. At the end of 1999, unamortized foreign exchange losses were CA$97 million.

In 2001, SaskPower adopted a new accounting policy in accordance with revised Canadian Institute of Chartered Accountants guidelines. The new policy required all foreign currency translation differences to be recognized and recorded as a gain or loss in the current year. The purpose of this policy shift was to bring Canadian accounting practices in line with those of Europe and the United States. This change had a significant effect on SaskPower’s financial results in 2001, increasing finance charges by CA$31 million and reducing net income to CA$29 million (see Exhibit 4).[[3]](#footnote-3) Repercussions of the accounting policy change were rather fundamental. Stakeholders started questioning why SaskPower had U.S. debt in the first place.

Some of the unrealized foreign exchange losses were reversed during the first eight months of 2002. The Canadian dollar increased from US$0.6279 on December 31, 2001 to US$0.6415 on August 30, 2002 (i.e., the U.S. dollar dropped from CA$1.5926 to CA$1.5588), resulting in a year-to-date foreign exchange gain of CA$15.5 million. Estimates for foreign exchange gains for the year were approximately CA$15 million, based on a forecast closing rate of CA$1.00 = US$0.64. However, this estimate was highly unreliable due to the recent volatility in the exchange rate, the disagreement among foreign exchange analysts on the value of the Canadian dollar, and past forecast errors.[[4]](#footnote-4) With each US$0.01 change in the value of the Canadian dollar translating into a change of approximately CA$12 million (increase or decrease) in SaskPower’s net income, possibilities were wide-ranging (positive or negative) for the year’s results.

These foreign exchange gains or losses complicated the setting of electricity rates. In most utilities, the total asset base was allowed to earn an approved rate of return, referred to as a “return on rate base.” SaskPower used a less formal process but still required approval from the government. The process focused on the *expected* net income that would result from the approved rate adjustment. Finance charges would normally be predictable if they were based on long-term, fixed rate debt. However, the significant exposure to the U.S. dollar generated large, unpredictable swings in net income, which could not be accommodated in the rate-setting process.

Plan of Action

Market sentiment about the Canadian dollar was negative towards the end of 2002, with expectations of additional weakness. There was extensive discussion in the business press of the differences between the Canadian and American economies, where the focus was tax policy and general fundamentals. The tone of the discussion on the Canadian economy seemed bearish. Given this outlook, and in order to manage the volatility in net income caused by the U.S. debt, SaskPower’s treasury group entertained, and then promoted, the strategy of hedging all the U.S. debt. Currency swaps emerged as the most appropriate hedging tool.

Currency Swaps

Foreign currency swaps were derivative instruments that allowed an entity to change the currency denomination of its assets (cash inflows) or liabilities (cash outflows). A company, for example, could swap the remaining interest and principal payments on an outstanding debt for equivalent interest and principal payments in another currency, effectively transforming the existing debt into a comparable-value debt that was denominated in the other currency. Currency swaps were over-the-counter contracts negotiated between a company and a financial institution.

A currency swap could be structured in several forms. For example, it could involve the swapping of a newly-issued debt for an equal-value debt in another currency. In this case, the counterparties at the outset exchanged the debt issue proceeds for an equivalent amount in the other currency. Then, they exchanged interest and principal payments over the term of the debt. A swap could also involve the remaining interest and principal payments on an outstanding debt, or it could involve swapping only interest payments.

Plain vanilla currency swaps called for the exchange of fixed interest payments in one currency for fixed interest payments in another currency (with or without an exchange of the principal). Currency swaps could also involve the swapping of fixed interest payments in one currency for floating, or adjustable, payments in another currency. The floating payments, in this case, would be indexed to a benchmark short-term interest rate in the respective currency. Given the nature of SaskPower’s assets, management considered swapping its outstanding long-term, fixed-rate U.S. dollar debt for Canadian dollar debt with equal term and similarly fixed interest rates.

Hedging Options

SaskPower’s management recommended a hedging program to its board of directors as part of the company’s 2003–2007 business plan. Convinced that the status quo, or simply doing nothing, was not an option, management provided two possible hedging options for the company to pursue in regard to managing its U.S. debt.

Option 1: Lock In All Remaining U.S. Debt Now

This option would eliminate the foreign exchange risk by converting all future U.S. debt payments, starting at the beginning of 2003, to fixed Canadian dollar payments. In return, SaskPower would give up the upside potential if the Canadian dollar were to appreciate. Even though market conditions had changed drastically since the U.S. debt was issued, the hedged all-in costs based on swap rates in December 2002 would have been near the costs that SaskPower would have paid if it had originally borrowed in Canadian dollars (see Exhibit 5).

Option 2: Phase-In Hedges Over the Period Remaining Until December 31, 2005

This option would eliminate the foreign exchange risk before the end of the five-year business plan. SaskPower would be susceptible to currency movements in the interim—the exposure would decrease as swaps were gradually entered into—but could benefit from a strengthening of the Canadian dollar. The key elements of this strategy were as follows:

* During the phase-in period, the company’s treasurer was to set a target range for the quarterly foreign exchange rate based on a consensus forecast, which incorporated forecasts from a number of different agencies. Swaps would then be executed when the market exchange rate (Bank of Canada mid-noon rate) traded outside of the range. For added flexibility, the treasurer had the discretion to execute a swap if the exchange rate was within the target range, depending on the time remaining in the quarter, current market conditions, and the amount hedged to date.
* The unhedged principal amounts of the first three debt issues (maturing in 2003, 2008, and 2013), totalling US$207 million, would be fully hedged by the end of 2003. Priority would be given to these debt issues for two reasons: dealer spreads were tighter for swaps with shorter maturities; and the hedged all-in costs for these issues at the swap rates in December 2002 would be near the original equivalent Canadian dollar costs for these issues (see Exhibit 5). Thereafter, an annual hedging target would be set to ensure that the remaining US$300 million debt issues were covered by December 31 of 2005.

Whichever option was chosen, SaskPower would structure the swaps in sums of US$25–50 million, solicit quotes from multiple dealers, and spread the deals over many banks to reduce credit risk.

the decision

Having read the management team’s recommendations and reviewed the data provided, James agreed with management that a course of action needed to be taken—doing nothing was not an option.

He pondered the details of a proposed swap for US$25 million of the 2008 debt issue. The U.S. dollar principal amount would be swapped for CA$35.6 million, and the 7.125 per cent coupon rate on the U.S. dollar principal, starting with the payment on September 15, 2003, would be swapped for an 8.875 per cent coupon rate on the Canadian dollar principal (see Exhibit 6).

However, to ensure the most effective financial position for SaskPower, James had to decide between hedging option 1 or option 2.

Exhibit 1: Consolidated Financial Statements for fiscal year 2001

|  |  |  |
| --- | --- | --- |
| Consolidated Statement of Income and Reinvested Earnings (in CA$ million) | | |
|  |  |  |
| For the year ended December 31 | **2001** | 2000 |
|  |  | (Restated) |
| **Revenue** |  |  |
| Electric Sales |  |  |
| Domestic | **994** | 952 |
| Export | **109** | 128 |
| Other | **23** | 21 |
| **Total revenue** | **1,126** | 1,101 |
| **Expenses** |  |  |
| Fuel and purchased power | **468** | 384 |
| Operating, maintenance, and administration | **254** | 264 |
| Depreciation and amortization | **156** | 151 |
| Taxes | **26** | 24 |
| Future asset removal and site restoration | **12** | 14 |
| **Total Expenses** | **916** | 837 |
| Income before finance charges | **210** | 264 |
| **Finance Charges** |  |  |
| Interest expense and other | **148** | 131 |
| Foreign exchange losses | **44** | 27 |
| Allowance for funds used during construction | **(11)** | (2) |
| **Total finance charges** | **181** | 156 |
| Net income | **29** | 108 |
| Reinvested earnings, beginning of year | **467** | 428 |
| Dividend declared | **(16)** | (69) |
| **Reinvested earnings, end of year** | **480** | 467 |
|  |  |  |

Exhibit 1 (continued)

|  |  |  |
| --- | --- | --- |
| Consolidated Statement of Financial Position (in CA$ million) | | |
|  |  |  |
| As at December 31 | **2001** | 2000 |
|  |  | (Restated) |
| **Assets** |  |  |
| **Current Assets** |  |  |
| Cash and cash equivalents | **203** | 68 |
| Accounts receivable and unbilled revenue | **142** | 153 |
| Materials, fuel and supplies | **105** | 105 |
|  | **450** | 326 |
| **Property, plant, and equipment** |  |  |
| Property, plant, and equipment | **5,158** | 4,982 |
| Less: Accumulated depreciation | **2,126** | 1,976 |
| Contributions in aid of construction | **231** | 224 |
|  | **2,801** | 2,782 |
| Construction in progress | **270** | 97 |
|  | **3,071** | 2,879 |
| **Other assets** | **71** | 19 |
| **Total assets** | **3,592** | 3,224 |
| **Liabilities and equity** |  |  |
| **Current liabilities** |  |  |
| Accounts payable and accrued liabilities | **234** | 205 |
| Dividend payable | **7** | 17 |
|  | **241** | 222 |
| **Long-term debt** |  |  |
| Recourse debt | **1,918** | 1,661 |
| Non-recourse debt | **91** | - |
| Equity in sinking funds | **(98)** | (77) |
|  | **1,911** | 1,584 |
| **Other liabilities** | **300** | 291 |
| **Total liabilities** | **2,452** | 2,097 |
| **Equity** |  |  |
| Equity advances | **660** | 660 |
| Reinvested earnings | **480** | 467 |
| **Total equity** | **1,140** | 1,127 |
| **Total liabilities and equity** | **3,592** | 3,224 |

Source: Company documents.

Exhibit 2: Breakdown of U.S. Dollar Debt

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Coupon**  **Principal**  **Maturity** | **Issue Settlement Date** | **US$ All-in Cost at Issue** | **Estimated All-in Cost for CA$ Debt at Issue\*** | **US$ Rate at Issue** | **Approximate Breakeven US$ Rate\*\*** |
| * 6.625% * US$50 million * July 15, 2003\*\*\* | July 20, 1993 | 6.74% | 8.50% | CA$1.28 | CA$1.47 |
| * 7.125% * US$194 million * March 15, 2008\*\*\*\* | March 22, 1993 | 7.25% | 9.06% | CA$1.25 | CA$1.43 |
| * 7.375% * US$75 million * July 15, 2013\*\*\*\*\* | July 20, 1993 | 7.55% | 9.25% | CA$1.28 | CA$1.47 |
| * 9.375% * US$100 million * December 15, 2020 | December 20, 1990 | 9.53% | 11.15% | CA$1.15 | CA$1.33 |
| * 8.500% * US$200 million * July 15, 2022 | July 21, 1992 | 8.60% | 9.80% | CA$1.19 | CA$1.35 |

Note:

\* This is the estimated all-in-cost if SaskPower had originally issued Canadian dollar debt. Estimates were provided in the original deal term sheets. The rate for the 2008 issue was interpolated based on the 10-year and 20-year Government of Canada rates, plus a spread based on the other four issues (to adjust for credit and issue costs).

\*\* This is the US dollar rate that would bring the Canadian dollar cost of the U.S. dollar debt equal to the estimated cost of SaskPower originally issuing Canadian dollar debt.

\*\*\* US$42 million of this amount was hedged by currency swaps, and US$8 million by coupon swaps.

\*\*\*\* US$70 million of this amount was hedged by currency swaps, and US$75 million by coupon swaps.

\*\*\*\*\* US$75 million of this amount was hedged by coupon swaps.

Source: Company documents.

exhibit 3: Canadian Dollar Exchange Rate versus the U.S. Dollar, 1991–2002

Source: Company documents.

Exhibit 4: Impact of Revised Accounting Treatment of Foreign Currency Translation

**Impact on Financial Results of 2001**

(in CA$ million)

**Revised**

**Standards**

**Previous**

**Standards**

**Change**

Finance Charges

181

150

31

Net Income

29

60

(31)

Equity

1,140

1,292

(152)

**Restatement of Prior Period Financial Statements Using the New Accounting Standards**

*(*in CA$ millions)

2000

1999

1998

1997

**2000 Annual Report**

Finance Charges

138

155

169

176

Net Income

126

114

140

132

Equity

1,248

1,191

1,140

1,077

**2001 Annual Report with prior years restated**

Finance Charges

156

95

215

200

Net Income

108

174

94

108

Equity

1,127

1,088

977

959

**Impact of Accounting Change**

Finance Changes

18

(60)

46

24

Net Income

(18)

60

(46)

(24)

Equity

(121)

(103)

(163)

(118)

**US$ per CA$1.00**

Beginning of Year

$0.6929

$0.6523

$0.6997

$0.7296

End of Year

$0.6666

$0.6929

$0.6523

$0.6997

Change

($0.0263)

$0.0406

($0.0474)

($0.0299)

Source: Company documents.

Exhibit 5: Estimated Original Canadian Dollar All-in Costs versus the Would-be Hedged All-in Cost

|  |  |  |
| --- | --- | --- |
| **U.S. Dollar Debt Issue** | **Estimated All-in Cost for Canadian Dollar Debt at Issue\*** | **Would-Be Hedged  All-in Cost\*\*** |
| * 6.625% * $50 million * July 15, 2003\*\*\* | 8.50% | 7.697% |
| * 7.125% * $194 million * March 15, 2008\*\*\*\* | 9.06% | 9.120% |
| * 7.375% * $75 million * July 15, 2013\*\*\*\*\* | 9.25% | 9.195% |
| * 9.375% * $100 million * December 15, 2020 | 11.15% | 11.671% |
| * 8.500% * $200 million * July 15, 2022 | 9.80% | 10.647% |

Note:

\* This is the estimated all-in cost were SaskPower originally to issue Canadian dollar debt. Estimates were provided in the original deal term sheets. The rate for the 2008 issue was interpolated based on the 10- and 20-year Government of Canada rates, plus a spread based on the other four issues (to adjust for credit and issue costs).

\*\* The would-be hedged all-in cost was based on estimated market swap quotes in December 2002 and based on all future debt-related flows on the swapped flows.

\*\*\* US$42 million of this amount was hedged by currency swaps, and US$8 million by coupon swaps.

\*\*\*\* US$70 million of this amount was hedged by currency swaps, and US$75 million by coupon swaps.

\*\*\*\*\* US$75 million of this amount was hedged by coupon swaps.

Source: Company documents.

Exhibit 6: U.S. Dollar–Canadian Dollar Swap Agreement

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Principals: | US$25,000,000 |  | |  | |
|  | CA$35,600,000 |  | |  | |
|  |  |  | |  | |
| Coupon rates: | 7.125% on US$ principal | |  | |  | |
|  | 8.875% on CA$ principal | |  | |  | |
|  |  |  | |  | |
| Coupon frequency: | Half coupon rate, paid semi-annually |  | |  | |
|  |  |  | |  | |
| First settlement date: | September 15, 2003 |  | |  | |
|  |  |  | |  | |
| Last settlement date: | March 15, 2008 |  | |  | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **SWAP CASH FLOWS** | | |
| Date |  | SaskPower Will Receive |  | SaskPower Will Pay |
| September 15, 2003 |  | US$890,625 |  | CA$1,579,750 |
| March 15, 2004 |  | US$890,625 |  | CA$1,579,750 |
| September 15, 2004 |  | US$890,625 |  | CA$1,579,750 |
| March 15, 2005 |  | US$890,625 |  | CA$1,579,750 |
| September 15, 2005 |  | US$890,625 |  | CA$1,579,750 |
| March 15, 2006 |  | US$890,625 |  | CA$1,579,750 |
| September 15, 2006 |  | US$890,625 |  | CA$1,579,750 |
| March 15, 2007 |  | US$890,625 |  | CA$1,579,750 |
| September 15, 2007 |  | US$890,625 |  | CA$1,579,750 |
| March 15, 2008 |  | US$890,625 + US$25,000,000 |  | CA$1,579,750 + CA$35,600,000 |
|  |  |  |  |  |

Source: Company documents.

1. Crown corporations are wholly owned federal or provincial organizations structured like private or independent companies. Among them are important enterprises such as the Canadian Broadcasting Corporation, VIA Rail, Canada Post, and the Bank of Canada, as well as various provincial electric utilities. Crown corporations have greater freedom from direct political control than government departments and, as long as crown corporations have existed, there has been debate about their structure, accountability, and role in the economy; Allan Tupper, “Crown Corporation,” Historica Canada, last edited December 17, 2013, accessed October 30, 2017, www.thecanadianencyclopedia.ca/en/article/crown-corporation. [↑](#footnote-ref-1)
2. SaskPower does not pay for this service; all costs are included in the final debt rate. [↑](#footnote-ref-2)
3. Results for the year 2000 were restated, and CA$121 million of unrealized exchange losses were written off against retained earnings. [↑](#footnote-ref-3)
4. In 2002, between July 22–23, 2002, the Canadian dollar lost 1.87 U.S. cents in value, relative to the U.S. dollar—a loss of 3 per cent over two days. [↑](#footnote-ref-4)