
ALLIANCE DESIGN CONCEPTS: FOREIGN EXCHANGE RISK

Ryan Orchard wrote this case solely to provide material for class discussion. The author does not intend to illustrate either effective or ineffective handling of a managerial situation. The author may have disguised certain names and other identifying information to protect confidentiality.

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Andrew Wagstaff, the operations manager at Alliance Design Concepts Inc. (Alliance) in Edmonton, Canada, contemplated the business's price quotation and equipment procurement processes and bemoaned the impact that fluctuations in the exchange rate to convert from Canadian dollars (CAD) to United States dollars (USD) could have on profitability. Specifically, fresh in Wagstaff's mind was a quote to a customer that was made on October 7, 2013, for \$7,500 (CAD), when one CAD traded for 0.97 USD, but was not closed out until Alliance paid its American supplier in USD for purchased equipment, which was in February 2014, when one CAD traded for 0.89 USD. This exchange rate fluctuation represented a direct 8.2 per cent decrease in the pre-tax margin on the equipment. It seemed to Wagstaff that, among other things, a strategy for dealing with exchange rate risk was going to be needed.

ALLIANCE DESIGN CONCEPTS

Alliance Design Concepts was formed in Edmonton in 2011 by Todd Rea and Dwayne Plishka, who at the time combined their more than 40 years of industry experience to fill what they perceived to be a gap in the local market by offering comprehensive audio, video & lighting integration and live production services.¹ The company competed on the basis of the quality of products and services, as well as its ability to maintain strong relationships with customers, due to the small size of the company. By 2014, Alliance had annual revenues exceeding \$700,000 (CAD) and offered two main types of services: (1) the design and installation of audio and video system solutions (described below) and (2) live production services, where it provided audio and/or video equipment and production for live performances. The scope of this case study will be the design and installation of audio system solutions.

Audio System Solutions

An *audio system* refers to a system of equipment (e.g., speakers, amplifiers and sound mixing boards) and hardware (e.g., cabling) for sound amplification; an audio system *solution* thus involves performing a site assessment followed by the design, installation and ongoing support of an audio system that has been configured to consider specific room acoustics and event types. For example, consider a common customer

¹ Alliance Design Concepts Inc. website, <http://alliancedesign.ca>, accessed June 6, 2014.

type, a place of worship (such as a church), that required either a new or improved audio system. An Alliance representative would visit the customer at their facility and prescribe, based on the specific facility and customer needs, an audio system solution, which included the appropriate equipment (e.g., speakers and possibly an amplifier and/or mixing board), installation and configuration, and after-sales support. The size and scope of jobs varied significantly, and thus quotations ranged from thousands of dollars to hundreds of thousands. Alliance had a strong reputation in this niche market and experienced growth and success without the help of any advertising. Of note is that these types of customers (places of worship) tended to be budget-driven (i.e., they had a firmly defined cost range that they could consider), and decisions were typically required to pass through a committee for approval. However, these customers also tended to agree that high-quality equipment and installation work was well worth the investment in the long run, which was a key selling point of Alliance.

Equipment Suppliers

The equipment used in audio system solutions (i.e., speakers, etc.) was sourced from a small number of key suppliers with whom Alliance was in good standing and to whom it showed strong loyalty. (For one major supplier, Alliance was one of only a very few authorized dealers in Western Canada.) The supplier that Alliance sourced most of its equipment from was based in the United States and required payment in USD. (Note that it is considered to be the norm for sellers to be paid in their home nation's currency,² so for this and other reasons it was not an option for Alliance to attempt to have the supplier accept payment in CAD.) At the time, there was not a comparable Canadian supplier that Alliance felt could provide the type of quality that it had built its business on.

PRICE QUOTATIONS AND EQUIPMENT PROCUREMENT

By the summer of 2014, Alliance Design Concepts had been in operation for only three years, and thus some of the administrative and supply chain processes, such as those for generating price quotations and for equipment procurement, required improvement and formalization. The management of administrative activities was described by one principal as “a couple of subcontractors trying to run a business”; it was hoped that the business management education that Wagstaff was bringing to the organization would add some value in this regard. Refer to Exhibit 1 for a diagram of the relevant steps of the combined price quotation and equipment procurement process, which is described below.

Price Quotations

As previously described, a representative from Alliance would visit a potential customer at the customer's request and would assess the customer needs (in terms of the audio system) and propose a comprehensive solution. At that point, Alliance would provide the potential customer with a price quotation (in CAD) that carried a 30-day clause that was standard in many industries (i.e., a clause that stated that “quoted prices are valid for 30 days from the date of quotation,” which required the customer to accept the quotation within 30 days, otherwise the price would no longer be valid; this did not necessarily require the work to be completed or for payment to be made within that timeframe). A customer that accepted a quotation with Alliance and wished to proceed was then required to submit a deposit of 50 per cent of the quoted price. Payment of the balance was required within 30 days of the installation being complete.

² D.F. Wood, A.P. Barone, P.R. Murphy and D.L. Wardlow, *International Logistics*, 2nd Ed., AMACOM, New York, United States, 2002, p. 291.

An initial price quotation was made by the Alliance representative based on the CAD–USD exchange rate *at that time*. That is, in order to provide the customer with a price quote in CAD, the Alliance representative converted from USD to CAD all equipment costs for equipment that was to be sourced from the U.S. supplier, using the spot exchange rate.³

Equipment Procurement

Exhibit 2 provides a general breakdown of cost types for a typical audio system solution. Due to the high dollar value of the equipment, and the necessity to manage cash flow carefully (more on this below), Alliance was generally careful to place the order with the supplier only when it knew that it was ready for the equipment. For example, “on larger jobs that also required construction renovations, installation may have taken phases because Alliance had to work around other contractors; so, they may order the electrical and wiring components, and perhaps a video screen and projectors, but if it would take five or six weeks to install all of the wiring due to being impeded by other contractors, it didn’t make sense to order expensive audio equipment only to have it sit in the shop.”⁴ (This held particularly true for larger sound equipment orders.) Once ordered from the supplier, small orders were shipped by package courier (e.g., UPS), while larger orders were palletized and shipped through a third-party transport provider. The order cycle time (from order placement until receipt of equipment) averaged three to four weeks, depending on the purchase order processing time and inventory availability at the supplier.

Cash Flow and Invoice Payment

It was particularly important for a small business, like Alliance, to manage cash carefully, by “stretching out payables and pulling in receivables.”⁵ Towards this end, Alliance did not place orders for equipment until it was ready for it (as described previously), and it also took advantage of the payment terms offered by its major U.S. supplier, which was that payment needed to be received within 60 days of the invoice date, which was effectively 60 days from the date that the product shipped from the U.S. factory, to avoid penalty. Typically, Alliance would wait until very near the end of the 60 days before paying the supplier. At that point, Alliance would convert CAD at the spot rate (on that day), subject to a conversion fee by the service provider (bank or credit card company) that was typically in the 1.5–3 per cent range. Management had come to prefer paying the supplier by personal credit card and expensing it back to the company, since the currency conversion fees charged by the credit card provider seemed less than those of a bank (in the absence of a specialized account with a banking institution, which will be described later).

EXCHANGE RATES

Consider the Bank of Canada’s published CAD–USD conversion rate at noon on June 11, 2014, of 1 CAD = 0.9202 USD.⁶ This meant that if Alliance were to purchase equipment from its U.S. supplier at a cost of 10,000 USD, it would need 10,867.20 CAD (plus applicable service charges from the enabling financial institution) to offset this cost.

³ A spot exchange rate is “the exchange rate at which a foreign exchange dealer will convert one currency into another on that particular day.” See C.W.L. Hill and T. McKaig, *Global Business Today, Canadian Ed.*, McGraw-Hill Ryerson, Toronto, Canada, 2006, p. 301.

⁴ Source: Personal communications with operations manager Andrew Wagstaff on June 6, 2014.

⁵ R. Lacerte, “Rule #1: Cash Is King,” *CPA Practice Advisor*, 21:4, 2011, p. 17.

⁶ Bank of Canada website, www.bankofcanada.ca, accessed June 11, 2014.

Foreign exchange rates fluctuate on a daily basis (see Exhibit 3, for example), due to the complex interaction of a variety of factors that are beyond the scope of this case study but were also beyond the control or predictive abilities of Alliance. Exchange rate fluctuations, combined with time lags in ordering and payment processes, can provide risk for an organization that deals in more than one currency, as was the case for Alliance. Although it could be argued that the exchange rate could fluctuate in either direction and thus present the possibility of either an upside or a downside, the company justifiably had no intentions of playing the currency speculation game for profit, and therefore exchange rate fluctuation represented a risk that needed to be managed. (One might consider it human nature to be more impacted by the negative outcomes than the positive ones; in the words of Wagstaff, “[the exchange rate fluctuations] always seemed to work against us, for some reason.”⁷)

Exhibit 4 shows some analysis of the amount of change in the CAD–USD exchange rates for different time lags, using data over an approximately ten-year span. It shows that the longer the time period between the quotation of a price to a customer (in CAD) and payment to the supplier (in USD) for equipment, the larger the risk that the change in the exchange rate will have a negative impact on profit.

RISK MITIGATION

There were a number of different currency risk mitigation strategies that Wagstaff could consider for future projects at Alliance.

Involve the Customer

One option was to modify the price quotation process in order to involve the customer in the mitigation of foreign exchange risk. There were a number of forms that this strategy could take; a few examples were to: (i) include in the original contract a stipulation that the final charges would be based on the exchange rate *at the time of project completion*; (ii) “pad” the margin in the quotation by a few per cent in order to reduce the risk to Alliance; or (3) change the acceptance period (30 days) of the quotation itself and/or the amount of deposit required in some way.

Internal Process Changes

Further to the above strategy, there was the opportunity to revise internal processes related to price quotations, equipment procurement and cash management (including collecting from customers and paying suppliers). Although completion times for projects were often subject to the schedules and operations of others (i.e., the customer as well as other contractors), there were still aspects of the overall process at Alliance that perhaps could be more mindful of exchange rate risk management.

Foreign Exchange Services

A number of different services were available through financial institutions. One such service was a foreign exchange account with a local (Canadian) bank or a foreign exchange specialist such as Canadian Forex. This service would allow Alliance to reduce service charges on frequent conversions from CAD to USD, and would also allow it to convert (from CAD into USD) and deposit cash as it received it such that it would

⁷ Source: Personal communications with operations manager Andrew Wagstaff, June 6, 2014.

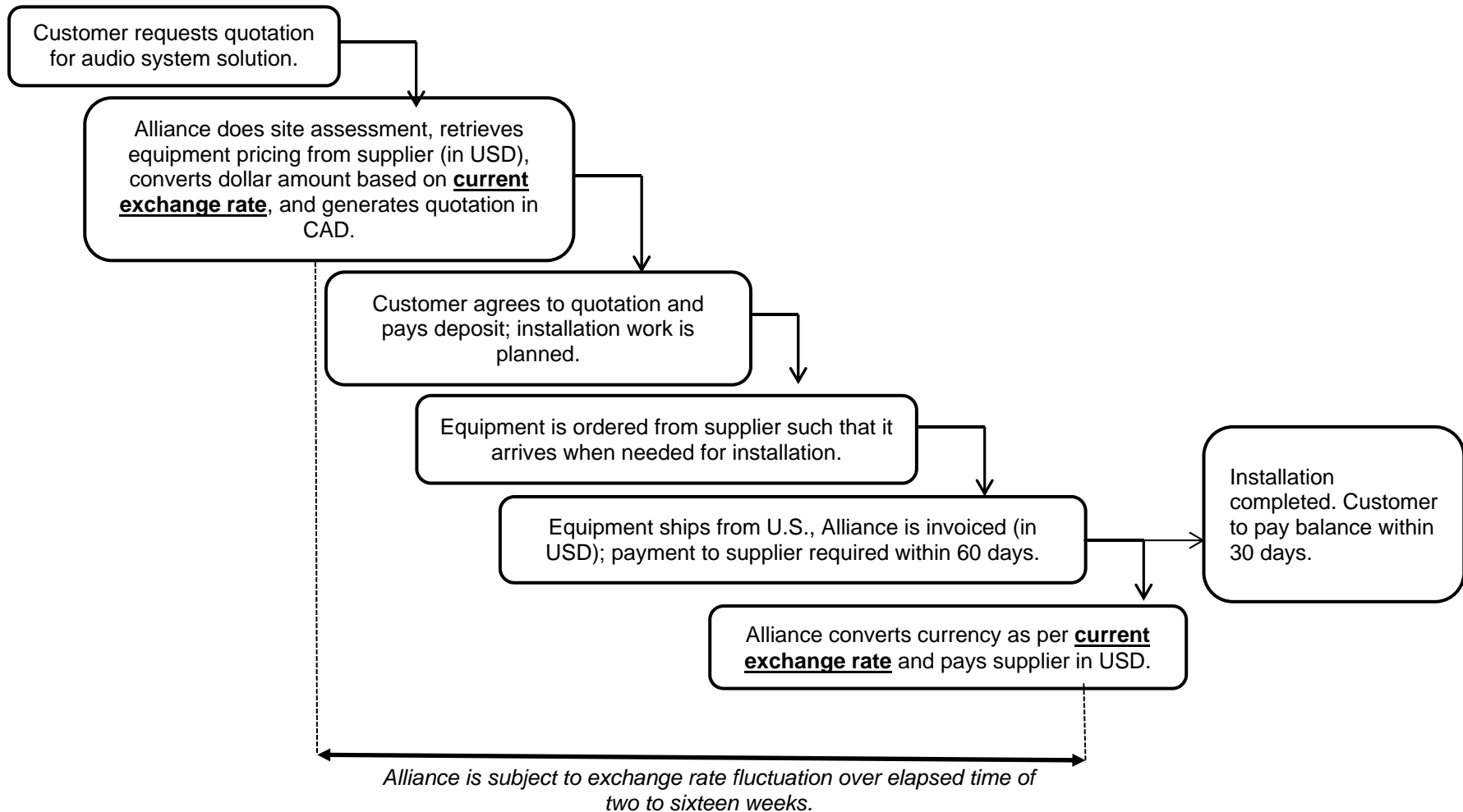
be converted at a time well before it was to be paid to the supplier and thus not subject to potential currency fluctuations during the meantime.

Another option was to buy forward foreign currency exchange contracts.⁸ These would allow Alliance, at the time of proposal acceptance, to lock in a known exchange rate for a future date, and protect itself from the risk that the spot rate would change against its favour between then and when the supplier was to be paid for equipment. (Note that the forward currency exchange rate would be a little above the prevailing spot rate at the time of purchase in order to compensate the seller.) See Exhibit 5 for an example of a forward exchange product.

As Wagstaff contemplated new customer opportunities and quotation requests, he knew that before long Alliance Design Concepts was going to need a more formal way to deal with the currency exchange risk that was inherent in its quotation and ordering processes — he just didn't feel that it was immediately obvious as to which way of doing this would fit Alliance the best.

⁸ Forward exchange is "when two parties agree to exchange currency and execute a deal at some specific date in the future." See C.W.L. Hill and T. McKaig, *Global Business Today, Canadian Ed.*, McGraw-Hill Ryerson, Toronto, Canada, 2006, p. 301.

EXHIBIT 1: OVERVIEW OF QUOTATION AND EQUIPMENT PROCUREMENT PROCESS (ASSUMES SUCCESSFUL QUOTATION)



Source: Based on personal interviews with Alliance management on June 2, 2014, and follow-up email correspondence.

EXHIBIT 2: BREAKDOWN BY COST TYPE FOR A TYPICAL AUDIO SYSTEM SOLUTION

Cost Type	Proportion	Example*
<i>Equipment</i>	60-80%	\$150,000 - \$200,000
<i>Labour</i>	20-30%	\$50,000 - \$75,000
<i>Other Costs**</i>	10-20%	\$25,000 - \$50,000

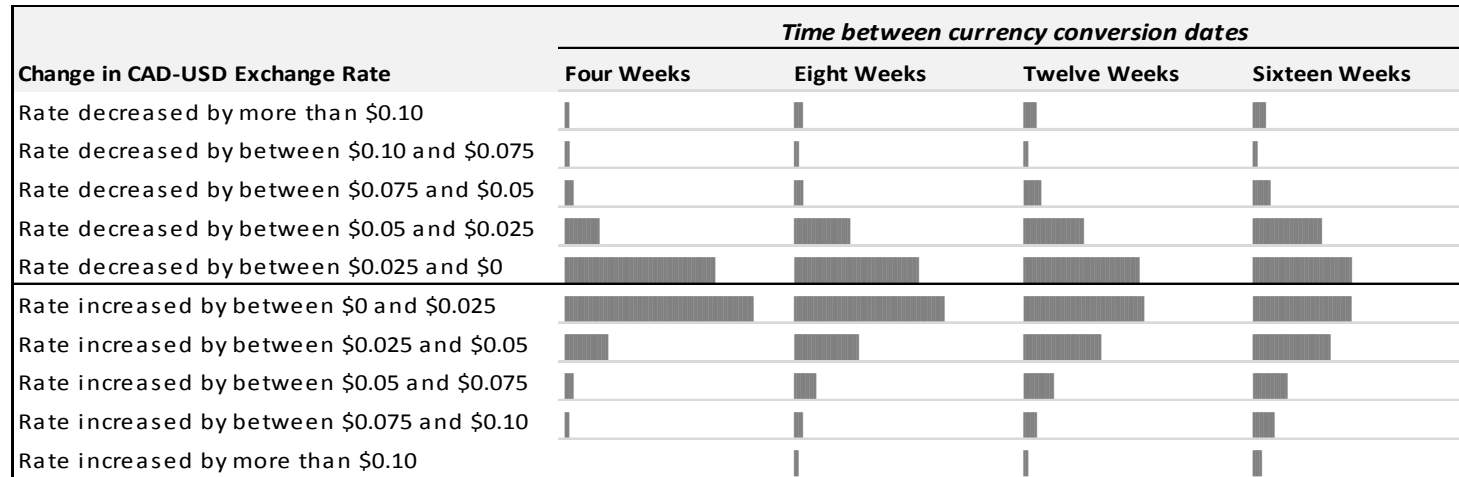
*based on a \$250,000 total price quote

**include general hardware, cabling, and other miscellaneous costs

Source: Operations manager Andrew Wagstaff's personal communication with author on June 6, 2014.

EXHIBIT 3: HISTORICAL CAD–USD EXCHANGE RATE

Source: "10-Year Currency Converter," Bank of Canada, www.bankofcanada.ca/rates/exchange/10-year-converter, accessed May 26, 2014. Used with permission.

EXHIBIT 4: FREQUENCY HISTOGRAM OF AMOUNT OF CHANGE IN CAD–USD EXCHANGE RATE, OVER DIFFERENT TIME RANGES


Source: Data retrieved from “10-Year Currency Converter,” Bank of Canada, www.bankofcanada.ca/rates/exchange/10-year-converter, accessed May 26, 2014, and summarized using Microsoft Excel; data is over the period of September 15, 2004, to May 26, 2014. Used with permission.

EXHIBIT 5: FORWARD FOREIGN EXCHANGE CONTRACTS

Forward Exchange Contracts for Money Transfers

Almost anyone can hedge their forex rate risk by using a forward currency contract. A forward currency contract is an agreement by two separate parties (e.g., a foreign exchange service provider and its clients) to buy or sell a currency at a predetermined exchange rate in the future. Essentially, forward contracts allow anyone to freeze an exchange rate for future use.

Example of How a Forward Contract Works

Let's say Joe, who lives in Toronto, wants to retire in a year. He desires to buy some real estate in Oregon. Joe finds the perfect location in Oregon and meets with the U.S. seller Sarah. They negotiate the price of the real estate and both agree that Joe will pay \$500,000 U.S. dollars a year from now. The current exchange rate at the time of the deal is C\$1.00 = US\$1.00. Joe expects to pay \$500,000 Canadian dollars for the property.

First Possibility — Joe Doesn't Use a Forward

A year's time passes and Joe is ready to pay for his property in Oregon. Only now the exchange rate has moved unfavorably for Joe, C\$1.00 = US\$0.95. Joe's new property will cost him \$526,315. That is \$26,315 more than he originally planned on paying.

Second Possibility — Joe Uses a Forward

A year's time passes and Joe is ready to pay for his property in Oregon. The exchange has changed to C\$1.00 = US\$0.95. Joe isn't worried though as he bought a forward contract right after he negotiated the price with Sarah. Joe's forward contract cost him 1 per cent off the total amount to be exchanged, C\$500,000.

Result

$C\$526,315$ (the future price) – $C\$500,000$ (expected price) – $C\$5,000$ (Forward Contract cost) = $\$21,315$. Joe saves himself more than \$21K by thinking ahead and protecting himself with a forward currency contract. If the exchange had gone the other way in Joe's favor, he would only be out \$5,000, the cost of the forward. Accordingly, forwards should be used by people who want to minimize potential losses and are willing to pay a small fee for that peace of mind.

How Is a Forward Rate Calculated?

The forward price is calculated by adjusting the current market rate (the spot rate) for "forward points," which take into account the difference in interest rates between the two currencies and the time to maturity. The forward points are based on a formula which is standard industry practice.

Minimum Forward Contract Amount

Most customers won't see the full benefit of a forward if they send less than \$30,000.

Maturity Dates of Forward Contracts

Because forward contracts are set for the future, you'll need to pick a specific date for settlement. Settlement maturity dates of 2 days to 12 months from the present are offered.

When Does Money Change Hands?

You do not have to pay the full amount on the forward until the future maturity date. There may, however, be a small deposit required at the commencement of the forward transaction and/or at a later stage prior to the maturity date. This holding deposit can run between 5 per cent–15 per cent depending on the volatility of the market.

Source: "Forward Exchange Contracts for Money Transfers," Canadian Forex, www.canadianforex.ca/our-services/forward-contracts, accessed June 4, 2014. Used with permission.