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## DESIGNING AND IMPLEMENTING A FOREIGN EXCHANGE HEDGE POLICY BENEFITS AND COSTS IN THE POST FINANCIAL CRISIS ERA

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### ABSTRACT

The purpose of this article is to provide an overview of various currency risks that a company will face, tools to mitigate such risks and the related policies and procedures that should be documented accordingly. Financial executives continue to face scrutiny of their risk management policies and procedures as they relate to currency, particularly in the last six months with increased volatility of currencies and the overall strength of the US dollar. This article will serve as a guideline to those unfamiliar with currency risks, how to identify and mitigate them through an effective policy in accordance with accounting principles. It will also serve as a useful tool for those corporations that already have such a policy and wish to re-examine or update their guidelines and procedures. In either case an effective risk management policy is a document that should be evaluated regularly and on an ongoing basis as businesses and their related financial risks change. We will also discuss the benefits and costs of an effective hedge policy as compared to a “do-nothing” approach.

### INTRODUCTION

Multinational corporations are facing increased financial risks particularly currency risk as volatility has significantly increased in recent months across all major currencies after a prolonged period of relatively range bound activity. CFO's, Treasurers and corporate boards continue to face scrutiny from analysts and stakeholders regarding the effectiveness of risk management policies to mitigate currency risk and protect shareholder value. Whether you are a risk manager at a corporation with a hedge program and policy already in place or trying to implement one, this article is intended to serve as a practical guide to those facing currency risk and a primer on currency risk management in general. We will explain how to identify, analyze and calculate such risks as well as describe the basic tools to hedge these risks in accordance with hedge accounting rules. Next, we will explain how best to report and communicate risks and hedge strategy to management and board members in the most effective way. Finally, we will outline how to write a risk management policy that will serve to not only protect the Company from currency risk, but also provide structure and discipline to analyze these risks on an ongoing basis.

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**A. A Brief Description of Foreign Currency Risks**

Risk as it relates to a corporation can be defined as the *unexpected* increase in volatility that leads to unexpected losses or increased costs (Crouhy, Galai and Mark, 2014). The key word here is unexpected. Firms typically plan for a certain level of volatility or expected range of outcomes throughout the business organization. It is the unexpected outcomes that define real risk and are the cause of turbulence and stress among market participants. Risk factors can be broadly divided into the following major categories: financial risk, liquidity risk, operational risk, legal and regulatory risk, business risk, strategic risk and reputation risk. Financial risk can then be further subdivided into market risk and credit risk. One type of market risk is currency risk and is the subject of this article in the broad context of an overall risk management policy.

There are three primary types of currency risk: transaction risk, translation risk and economic risk. Some of these risks can be hedged while others are more difficult to eliminate. Transaction risk arises when a company has a commitment to pay or receive foreign currency at some point in the future. This exposure will occur for multinational corporations buying or selling products outside of their home country where they cannot fully offset such risks. An example would be a US based importer of Swiss watches who commits to buy the watches and pay for them 30 days after invoice. The US company is now exposed to exchange rate fluctuations between the Swiss Franc and US dollar during the 30-day period until payments is made. The second type of currency risk is translation risk. Translation risk arises when a company has operations outside its home country and must translate foreign subsidiaries financial statements into its reporting currency. For example, a US corporation reports its financial statements in US dollars, but has a subsidiary in Japan that reports its financial statements in local currency or Japanese Yen. The US parent company is now exposed to changes in the Japanese Yen when translating its foreign subsidiary financial statements on a monthly basis into US dollars using a month-end rate or average rate depending on which financial statement. Economic risk arises when unexpected currency swings adversely impact the business and are more difficult to mitigate with hedging. An example would be a clothing retailer that imports fabric from China to the US and has budgeted a 5% increase in the RMB for this year. The Chinese economy falters due to a housing bubble, which causes foreign investors to sell RMB and the currency depreciates. This unexpected change in the economic situation and related currency value of the RMB is an economic exposure that the retailer did not anticipate. This is called economic exposure.

**A.2 BASIC TOOLS TO HEDGE AGAINST RISKS**

There are various solutions to mitigating transaction exposure, one of which is hedging the related risk by entering into a derivatives contract with the same maturity and amount as the firm commitment. We will not list all of the available hedging instruments but instead list a few basic ones and definitions that will be useful as you analyze each strategy. First, a forward contract is a contract between two parties to buy or sell an asset at a specific price at some future date. Note that a forward contract can be customized to any amount, date and asset unlike a futures contract where the terms are inflexible. Forward contracts can either be deliverable or non-deliverable. A forward contract that is deliverable simply means that amounts are exchanged as agreed in the terms of the contract. The party selling the asset

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delivers funds in accordance with the terms and the party buying the asset receives funds. An example is a UK based multinational selling product to a customer in Italy. The company may choose to enter into a forward contract to sell EUR and buy GBP in accordance with the expected payment date by the customer. The company has effectively converted its EUR receivable to GBP and eliminated any currency risk between the invoice date and the date funds are received. There are some countries that have currency controls in place by the government that wish to limit the amount of currency coming into or leaving the country. This practice is most common in emerging market countries like Brazil, Korea and China where the use of Non-Deliverable Forwards is the more common instrument used. A non-deliverable forward is structured in the same way as a traditional forward except that at the settlement date the contract rate is compared to the market rate and the gain or loss is net settled in US dollars. You are effectively marking to market the contract upon contract expiry and receiving or paying US dollars instead of delivering or receiving the currency as outlined in the contract terms. The benefit of forward contracts is that the contract rate is known, the underlying risk is eliminated and there is no upfront cost. The drawback is the inflexibility of a forward contract and the inability to participate in favorable market movements during the life of the contract.

We will next discuss option contracts which provide for flexibility and participation in favorable market movements with downside protection, but at a cost referred to as an upfront premium. A call (put) gives the holder the right, but not the obligation to buy (sell) an asset at some point in the future. The flexibility inherent with an option contract has value and is paid for with a premium. Out-of-the-money options can be purchased to reduce the cost with a less favorable rate as compared to the current market rate. Zero cost collars are effectively "range forwards" which widen the band around the forward rate allowing for participation in favorable market movements and still providing for downside protection, albeit at a rate that is out of the money compared to the market rate. For example, instead of locking in a forward contract to sell EUR at 1.08 and buy USD, you may wish to purchase a zero cost collar, which involves purchasing a put and selling a call where the premiums exactly offset. The rates, for example, may be 1.05 and 1.11. The put at 1.05 gives you downside protection while participating in favorable EUR movements up to 1.11. Other examples of zero cost options include participating forwards, forward extra's and barrier options which all allow for some participation in market movements while protecting downside risk.

Another solution to reduce risk and avoid currency hedging altogether is to offset the transaction exposure by finding a related offset in the same currency to reduce or eliminate the currency risk. An example would be a French company that imports goods from China payable in US dollars. The same French company also has sales to US customers receivable in US dollars. The receivable can be used to offset the payable and provide a natural hedge thereby reducing the Company's overall currency risk to changes in the USD/EUR exchange rate. Another example that has been implemented by several auto manufacturers such as BMW involves setting up operations in the same country where the sales and customers are located. Consider the BMW plant in South Carolina, for example. By setting up a manufacturing plant in the US where a significant portion of its sales occur, BMW has created a natural hedge by offsetting the payable and receivable to reduce or eliminate any currency risk due to changes in the USD/EUR (Bin and Ying, 2012).

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Translation risk cannot be hedged as it is purely an accounting entry made to convert financials from one entity's currency into the parent's currency. Note that many US based multinationals in the first quarter of 2015 reported weaker than expected sales and profits due to the strong dollar and the related translation losses that occurred when converting their foreign subsidiaries financial statements into US dollars (Hintze, 2015).

Economic risk can be hedged, but is more difficult to do so as it requires anticipating moves in exchange rates in advance and that are outside of what was planned for or budgeted. One solution might be to provide a range of expected changes or volatility in currency rates as opposed to a hard and fast number to allow for some variability or swings that were not anticipated. As studies have shown over time, exchange rates is one of the most difficult markets to predict and as a result currency experts are often times changing their forecasts one or two months after having set them. An example would be a firm that had set budget rates for 2015 based on year-end rates or forecasts at that time. Not many would have predicted the huge strengthening of the US dollar over the last 3 months, which has forced corporations to re-examine or re-forecast their financial statements much earlier than anticipated.

### **A.3 Quantifying the Currency Risk in an Organization**

Now that we have defined the types of currency risks and which ones can be mitigated through hedging, it is important to identify and quantify the currency risks in an organization. Often times financial risks and, in particular, currency risk can be identified by having a deep understanding of the business and markets the company is operating in. Management must also rely on its country and regional managers to assist in identifying currency risks and reporting them back to head office. One of the most effective ways to identify currency risk is through the use of an Enterprise Resource Planning (ERP) system, which is a corporate wide system that can identify currency exposures across the organization on a global basis. An ERP system is also able to identify natural hedges or offsets to reduce overall currency exposure. For example, a manager in the US who buys product from a vendor in Italy payable in Euros is able to determine through the ERP system that one division in the US sells product to customers in Italy. These two exposures offset each other as one position is long the Euro and the other is short the Euro, thereby reducing the overall currency risk.

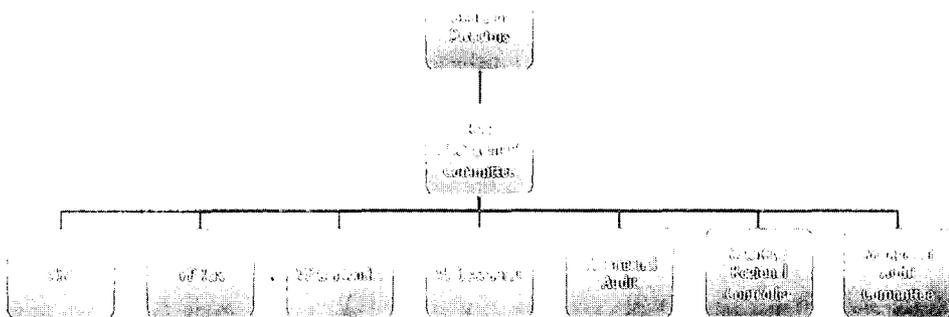
Currency risks must also be continually updated and monitored and should be reviewed on a monthly basis as forecasts change. Again, an ERP system is best way to update and monitor currency exposures as the business changes. For example, a US parent has a subsidiary in Brazil that has projected sales of 500M R\$ this year, but due to the recent poor economic fundamentals of the country and currency devaluation, sales are now only projected to be \$450M R\$. This change should be incorporated into the overall exposures of the Company and the related currency risk of the BRL/USD.

### **B. Risk Management Committee and Corporate Philosophy on Hedging**

Now that we have identified and explained some of the alternatives to reduce risk in an organization, it is necessary to discuss the benefits of a risk management committee and the link to an overall corporate philosophy on hedging. When assessing currency risk and

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implementing a hedge program, it is important to consider those in the organization that have the currency exposure as well as those responsible for the overall risk management of the company. In this context we would recommend that senior financial executives form a risk management committee with the following members: Chief Financial Officer, Corporate Controller, Treasurer, one audit committee member and country or regional controllers or group heads with significant currency exposures. Having a broad and diverse set of individuals throughout the organization helps ensure that different opinions and views are discussed on currency risk management and not just dominated, for example, by the CFO and Treasurer (Silicon Valley Bank, 2014). The risk management committee should meet regularly to assess and quantify risks, discuss current state of currency markets and its impact on the business, various tools to hedge and how much to hedge. Below is a schematic diagram showing the members of the risk management committee and how they relate to the overall organization of the Company.



The committee should also discuss any related accounting rules as they relate to hedging. For example, ensure that that tools being used to hedge comply with hedge accounting rules under ASC815. Hedge effectiveness testing should also be conducted regularly to ensure contracts are matched properly to the underlying exposure and no over-hedging has occurred. Accurate forecasting of exposures both initially and on an ongoing basis is one of the most fundamental, yet most challenging and error prone, aspects of risk management. Poor forecasts lead to significant over or under-hedging and make the program far less effective than desired. Over-hedging means the hedges are not effective and cannot receive favorable accounting treatment. This means marked-to-market gains and losses on hedge contracts must flow through the income statement causing unwanted quarterly “noise” in the financial statements. Hedges that are deemed effective receive favorable hedge accounting treatment with gains and losses being deferred in Other Comprehensive Income, a component of Shareholders’ Equity until the hedge is settled. We will not explain hedge accounting in detail, but suffice to say this is a very complicated and involved process that is required in order to receive favorable accounting treatment for hedge contracts. The basic rules for US corporations are listed as part of the FASB (Financial Accounting Standards Board) rules under ASC (Accounting Standards Codification) 815. Similar rules apply for firms domiciled outside the US as part of IFRS (International Financial Reporting Standards).

Another important point that is often overlooked when developing a risk management policy is to align the policy with the overall corporate philosophy and attitude

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towards hedging risk. For example, in general a very conservative company should have a very conservative risk management policy and philosophy. A company that is willing to take more risk with the business may have a different attitude towards risk and feel comfortable using Treasury as not only a way to reduce risk but also as a profit center – trading platform. Just as individuals have a risk tolerance level, a corporation has a certain risk tolerance level as well. It is important to determine what this risk tolerance level is and incorporate it in the overall risk management program. There may also be different types of philosophies on hedging depending on the type of corporate structure. For example, private or closely held companies may not mind volatility in the income statement due to currency hedging and therefore may not require hedge accounting treatment. A publicly held corporation may require hedge accounting treatment to avoid unnecessary volatility in the income statement on a quarterly basis due to scrutiny by analysts, shareholders and the general public.

The risk management committee should also be aware of and educate themselves on the various hedging tools at their disposal to mitigate risk. We have already discussed several tools at your disposal to hedge risk, but it is not the intent of this article to list and define all of the hedging tools available (that is well beyond the scope of this paper). Suffice it to say that there are many tools and permutations of basic and complex hedging instruments available. It is the committee's job to understand the basics and have at least a general understanding of some of the complex instruments available if necessary should they become useful in certain situations. For most hedge programs, forwards and zero-cost options and perhaps a small allocation to purchased options would be adequate depending on the nature of the underlying hedge exposure and philosophy of the company with regards to risk. It is also important to formalize the risk management process into a policy with relevant guidelines.

### **C. Measurement, Evaluation and Communication of a Hedge Policy**

In order to properly evaluate the effectiveness of your hedge program it is important to first determine the goal(s) of the program itself. What is the proper benchmark rate? Are you trying to protect a budget rate? Are you trying to minimize the variance as compared to market rates to remain neutral as compared to a company that does not hedge? You may wish to try and accomplish both objectives, protecting a budget rate as well as stay within a minimum variance compared to market rates. The highest priority is to protect the company and minimize or eliminate risk. In the simplest terms, think of hedging as buying insurance which hopefully will never be used. Your primary goal may be to protect the budget rates, but budget rates may change as evidenced by the huge swing in the Euro this year. While hedging at a budget rate of 1.30 may have looked good at the end of 2014, that rate is very far away from the current market rate of 1.09. The point is that there should be enough of a mixture of hedging tools as well as discipline in your hedging program to allow for flexibility and participation in current market movements.

Determining the appropriate hedge ratio is also very important as it provides a target percentage of the overall exposure to hedge. A prudent approach may be to hedge only 50% of total exposure to allow for changes in forecasts as well as allow for participation in favorable currency movements. The risk management committee should also determine whether a passive or active approach to hedging, or some combination, is best. A passive strategy is a systematic approach that will avoid any market timing and instill discipline in the hedging program. For example, on the 15<sup>th</sup> of each month hedge a certain percentage of your

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exposure until you have hedged up to your hedge ratio of 50%. A full-blown active approach would involve taking views on the market and even trading currencies to make a profit and not just mitigate risk. Most corporations do not speculate on currency in part as a result of the lessons learned during the financial crisis and regulations implemented afterwards such as the Volcker Rule. A mixture of passive and active to incorporate some market views in the context of the overall philosophy to minimize risk is another approach. Again, whatever strategy is chosen should be thought of in context of the firm's overall view towards risk and corporate culture.

Next, determine the maximum tenor of the hedge contracts. The tenor of the hedge contracts may be different depending on the underlying exposure. For example, long-term intercompany loans may be hedged up to five years forward while inventory purchases may only be hedged one year forward due to increased uncertainty and confidence in forecasts beyond one year.

Another consideration or goal might be to have a minimum hedge variance ratio as compared to market rates. For example your USD/EUR hedges should be -5% as compared to market rates at the time of settlement. This means the company is not only protecting its budget rates, but also not too far away from the current market in the case of adverse moves. For example a company that is long GBP and short USD may contract to sell GBP at 1.50 USD/GBP protecting its budget rate. However, it is possible that the currency (GBP) starts to appreciate relative to the USD by the time of settlement trades at 1.65. What looked like a good hedge at the time ended up being 10% out-of-the-money at the time of settlement. This is only one contract and the hedge program should be evaluated on a comprehensive basis, but the point is that the company may wish to incorporate enough flexibility to allow for participation in variable market moves. Forwards do not allow for participation in market movements while options do, but at a cost. Overall cost/benefit analysis should, of course, be taken into account when evaluating each of the hedge tools including forward points (interest rate differentials), option premiums and overall credit risk of the counterparty.

Communicating and properly explaining the hedge program and results to a wide range of audience members is vitally important. Most corporations require regular reporting of risk exposures including currency hedging both to the board of directors and audit committee members. For those corporations that do not have in-house expertise in this field, it may be useful to bring in outside consultants or financial institutions with deep knowledge that can assist in either developing a risk management policy or in advising the client on the types of hedges available and executing them on behalf of the client at the lowest cost.

Since most board of directors and audit committee members are not experts in the field of risk management and specifically currency hedging, it is best to provide information at a very high level and then provide details if necessary as questions come up. Committee members in most cases simply want to know what the risks are and whether the company is being protected. Make sure you communicate the goals of the policy and to what extent the company is accomplishing those goals, showing a brief analysis of hedges vs. budget rates, market rates, etc. A detailed explanation of the various hedging tools, for example, is not necessary in most cases. It is best to keep it simple, short and to the point. Make sure you discuss that the company is compliant with all related documentation if gaining hedge accounting is your goal and that the outside auditors are comfortable with the policy and procedures as laid out. Often times outside auditors are also very useful in advising clients regarding the technical aspects of a hedge policy to ensure and compliance with accounting

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rules and regulations. Employees should not be afraid to use outside resources such as accounting and financial firms to educate you and your team. Often times these institutions have in-house experts that can assist you during the risk management process. It is not uncommon to have experts to speak during audit committee or board meetings to educate and explain currency hedging and related accounting issues to give a sense of comfort and confirm that the company is on the right track in terms of risk management and currency hedging.

In the post-financial crisis era the regulatory environment has changed dramatically and one of the byproducts of increased regulation and government oversight is an increase in both implicit and explicit costs that an organization must face. We will discuss some of these costs next.

#### **D. Trading and Administrative Costs**

As mentioned previously the costs of hedging have continued to increase due to regulatory reform and closer scrutiny by government agencies as it relates to trading activity. In addition, regulators have mandated that financial institutions increase reserves and capital to ensure that if and when another financial crisis happens, banks are better equipped to deal with such a crisis and avoid bailouts or bankruptcy (Crouhy, Galai and Mark, 2014). These requirements as well as a low interest rate environment since the crisis have dramatically reduced the earnings of banks on a relative basis. As a result, corporate treasurers and CFO's must view the banking relationship in a new light and make changes accordingly. Traditionally banks have provided capital and funding for corporations in exchange for utilization of such capital and other ancillary business like depository accounts, trading, investment banking services and cash management products. Today, banks today are earning far less on capital employed than in the pre-crisis era and as a result have come under more pressure to sell more services or exit relationships with corporations accordingly. There are "hurdle rates" which banks need to meet in order to maintain a certain return on capital and as a result corporate treasurers must view hedging not only as one of the services provided by banks, but also in the context of the entire relationship. This is important to balance the mandate of minimizing trading costs relative to ensuring an adequate profit for the banks and avoid damaging the overall relationships between the two parties.

Trading costs can be defined as the bid-ask spread that is earned by the counterparty or financial institution on the other side of the trade. When entering into a forward contract you need to make sure both the spot rate and the forward points or interest rate differential between the two currencies is priced appropriately. The use of online trading platforms through Bloomberg, Reval, Reuters and other systems has made it easier to monitor executed trades and evaluate the competitive bid process to ensure the most favorable rates. Corporations should evaluate the cost of such systems both initially and on an ongoing basis, but in general the larger the volume of trades the easier the justification and rational for such a system. Many of these systems are also trying to integrate the trading aspect with the accounting and mark to market aspect to encompass a holistic approach in one system. Furthermore, data from these systems is easily integrated into SAP or other ERP platforms. Corporations should also evaluate the labor cost needed to execute hedge contracts and settlement including related reporting requirements to accounting and other departments of the organization. Typically there is a segregation of duties as required by Sarbanes-Oxley Act

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of 2002, which lists a series of internal controls and procedures that must be followed. For example, the person executing the trade should obtain proper sign off and approval at the executive level of the organization. There may also be trading limits imposed both for a single trade and on a daily basis in aggregate by the organization. The person confirming the trade should be different than the one that executed the trade and also ensure settlement of the trade at maturity date.

Other trading costs include those that relate to regulatory framework in response to the financial crisis of 2007-2009. These include Dodd-Frank, European Market Infrastructure Regulation (EMIR) and International Securities and Dealers Association (ISDA). The Dodd-Frank Act of 2010 and all its updates or protocols focus on systematic risk and was enacted by the US government and applies only to US firms. The act focuses on financial regulation and attempts to address a variety of issues: regulatory powers, too big to fail, derivatives clearing and transparency, consumer protection, proprietary trading, rating agencies, executive pay and corporate governance. It is an attempt to convince the public that such actions have now been taken through this act to ensure a financial crisis will not happen again. The act is 848 pages and requires an additional 400 pages of detailed rule making by a variety of US regulatory agencies. Needless to say implementing Dodd-Frank by US firms is a very time consuming and costly exercise. For example, for each trading entity, the firm must register the entity and pay related fees that range from \$500-\$700 per entity. This must be done for each of the Dodd-Frank protocols of which there are three currently. To calculate this cost for a large firm executing trades for 20 different entities, the cost is roughly  $20 \times \$700 \times 3 = \$42,000$ . Due to a similar financial crisis that occurred in Europe during 2010, EMIR was instituted by the European Union and provides for similar rules as Dodd-Frank with some differences. This adds another layer of regulation and related cost for multinational firms.

Finally, ISDA agreements are legal documents must be set up between counterparties (financial institutions and firms) to set clear rules between trading partners in the event of default (or more generally an event), clearing of trades and persons authorized to execute such trades among many other requirements. Note that all of the regulatory and administrative work must be completed before a single trade can be executed. It is therefore imperative that firms understand these requirements and can communicate them to management. In summary, both explicit and implicit costs as they related to hedging activities have increased significantly in the recent years and are only expected to continue to increase. Note that there are discussions amongst US regulatory authorities and the EU with regard to the comprehensive set of rules going forward. However, a firm time-table for convergence has not been set (Ackerman, 2015). Next, we will delve into the topic of counterparty risk as it relates to the overall hedge program and ways in which to monitor and mitigate this type of risk.

### **E. Counterparty Risk**

Another risk that was brought into further focus as a result of the financial crisis is counter-party risk or the credit risk that a firm will not be able to fulfill its obligations as stated in the hedge contract. Typically counterparties to hedge contracts are financial institutions and the entity in the corporation that has the exposure or risk that requires the hedge contract. Note that one of the requirements in obtaining preferential accounting

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treatment for hedge contracts is that the entity with the exposure must be a party to the contract. For example, a French subsidiary of a US parent has a need to sell EUR and buy CHF to pay for goods imported from a Swiss vendor. The US parent can execute a trade on behalf of its French subsidiary as long as the French subsidiary is listed on the document since it has the exposure.

One way to minimize counter-party risk is to set trading limits or credit imposed limits with each financial institution. Setting a minimum credit rating for counter-parties is useful and such counter-parties credit worthiness should be evaluated regularly by the Risk Management Committee. Setting maximum tenor limits on trades is also useful. For example, the committee may choose to set a maximum tenor of 12 months on all trades, meaning that no trade's maturity date can exceed one year forward. This has two effects. First, it minimizes unexpected volatility as it shortens the time horizon between date of execution and settlement date. Second, it reduces the cost of hedges, i.e. less forward premium for far dated hedges and lower cost of options due to lower time value of the option. Setting a minimum credit rating is also a useful way to control and monitor your counterparty and reduce risk. Again, the credit rating should be reviewed regularly and reviewed during the risk management committee meetings.

The committee should also take into account the stability of the financial institution or counterparty in context of the overall banking relationship. As previously mentioned, a bank that is not earning an adequate return on the relationship may be quicker to exit the bank syndicate during times of economic or company specific stress. Of course increasing trades executed with such firms will help to solve this issue, but there are other ways to incentivize banks as well. The general idea is to look at the counterparty at an overall relationship level.

Lastly, a firm should consider dealer liquidity in connection with exotic currencies and hedge instruments and that the counter-parties are market makers and can liquidate such positions if needed. For example, the sudden and quick devaluation of the Russian Ruble over the past year has caused certain liquidity issues for market participants and the settlement or trading of the currency has not always been available. When trading certain emerging market currencies or entering into exotic options, consider the counterparty, currency and instrument in total, as it may not be wise to hedge given the liquidity risk or settlement risk. At a minimum you may wish to consider shortening the tenor of the hedge to an acceptable duration. Again, think of counterparty risk as not only the risk that the financial institution may not be able to deliver under the terms of the contract, but also the risk that the institution may exit the overall trading relationship prior to settlement of the contract and assign its obligation to another firm. The longer the duration of the hedge contract the more uncertainty involved and the greater the counterparty risk. As a general statement regarding risk management it is necessary, but often times difficult to choose a maximum tenor of hedge contracts that protects the firm, but minimizes cost and uncertainty as it relates to cash flows and counterparty risk. Trying to strike the right balance between all of these factors is critical and again should mirror the organization's philosophy with regard to risk. Formalizing all of the components discussed thus far into a risk management policy is discussed next.

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**F. Establishing a Foreign Exchange Risk Management Policy**

A foreign exchange risk management policy is important for several reasons. First, it provides a framework and guideline for management to analyze, measure and account for currency risks. A policy also provides guidance to new managers in an organization and educates them on risk management and the corporation's philosophy on hedging. In addition, the policy is a document that supports the internal controls and compliance with hedge accounting rules and Sarbanes-Oxley requirements for public companies. Establishing a foreign exchange risk management policy will also help management examine accounting and cash flow flows as well as overall risk tolerance and firm objectives with regards to currency risk. The document should be easy to read and provide guidance to those not only involved in the hedging process, but those responsible for risk management oversight including board or audit committee members. It should be viewed as a working document and evaluated at least annually for changes or updates due to regulatory requirements or business objectives. The policy should be reviewed and approved by the board of directors and audit committee as well as outside auditors. There are typically four main components of a policy (Acer Incorporated, 2013):

1) Objectives: The objectives should be clear and relevant to the business. They should include financial goals, overall exposures and which ones to be hedged, management's risk tolerance and notional amounts or percentage of exposure to be hedged. Objectives should also state the maximum tenor of hedges and types of hedges allowed. Whether favorable hedge accounting treatment is important or not should also be discussed including cash flow hedges vs. fair value hedges and where in the financial statements the hedge and underlying exposures are recorded.

2) Responsibilities: This section should clearly state which persons in the organization have authority to execute hedge contracts as well as the approval process. It should also segregate areas of responsibility in the process to comply with proper internal control procedures. Also state whether the corporation is controlling the hedging function centrally for the whole company or whether local subsidiaries have authority to enter into hedge contracts and if so to what extent. List the members of the risk management committee and how often the committee meets. Finally, list the levels of management approval for different types of exposure – long-term vs. short-term.

3) Control: This area of the policy should state the reporting and documentation requirements of hedge transactions under FAS133 (ASC815) as well as the process for marking-to-market the hedges. Also it is important to state whether the hedges are deemed to be effective or not and if so how you test for effectiveness both at inception and on an ongoing basis until the hedge matures. There should also be a section on credit limits and counterparty risk. How do you evaluate counterparties and control this risk? Also, the document should describe who should

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inform management of hedging activity and results and how trades are confirmed and by whom.

4) Strategies: List the types of derivative products that can be used, for example forwards, options and whether or not the company has approved the use of purchased options which involved paying premiums up front. Should a passive approach to hedging or a more active approach, which involves taking a view on currency markets, be used? . Does the individual have any discretion in the hedge process or does the authorized individual have to strictly adhere to the approvals by management?

The policy should be signed by the various levels of management including a member of the board of directors or audit committee. The CFO, Treasurer, Controller and one individual from the board is considered best practice. A foreign exchange risk management policy helps to formalize the process and provides a road map for those involved in the process thereby strengthening controls and providing management with the framework to identify, analyze, hedge and account for currency risks in accordance with the organization's risk tolerance level. An effective hedge program is not static, just as a Company's financial and business risks change as it grows and becomes more dynamic, it is necessary for a hedge program to change and adapt as well.

### G. Summary

The objective of this article is to provide an overview of currency risk in the context of the larger risk management process and serve as a guide to those firms unfamiliar with such risks and how best to mitigate and manage them. The article should also be used as the basis for discussion amongst firms with a policy already in place and assist them in reviewing and updating the process as needed. The financial crisis highlighted the importance of risk management and the need for greater focus and participation by key individuals across the organization including board members. Risk management should be viewed, not in isolation, but in conjunction with the firm's overall business objectives and risk tolerance levels. Lastly, risk management and its components can be quite complex and it is therefore essential that those that are experts in the firm on this subject educate and train other individuals with direct exposure to risk or have risk oversight responsibility. An understanding of risk management throughout the firm can help reduce unwanted volatility and, more importantly, avoid extreme losses during times of crisis.

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