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# Managing in the Face of Exchange-Rate Uncertainty:
## A Case for Operational Hedging

A Deloitte Research Study

# Introduction

In recent years, the value of the U.S. dollar has experienced historical highs followed by a dramatic decline against the currencies of America's major trading partners, a trend likely to continue.[1] Meanwhile, many U.S. companies have moved substantial portions of their operations overseas in order to lower costs and improve profitability. With revenues denominated in U.S. dollars and costs denominated in other currencies, any long-term decline of the U.S. dollar poses a significant risk to profits, competitive positions, cash flows, and ultimately share value. In particular, the significant role of China in many corporate supply chains and the potential appreciation of the Chinese currency together pose a high degree of risk to U.S. importers. Financial hedging tools are typically insufficient or too expensive to address large and long-term exchange rate shifts.[2] To effectively manage long-term exchange rate risks, companies should consider "operational hedging" strategies in addition to traditional and widely used financial hedging models.

Operational hedging—a strategy designed to manage risks through operational means—provides companies with flexibility in their supply chains, financial positions, distribution patterns and market-facing activities by allowing dynamic adjustments in the locations used to manufacture, source, and sell. When deployed carefully, such flexibility can help to reduce the impact of large and long-term shifts in currency values on costs and revenues.

Before a company can craft effective operational hedging strategies, it must complete a comprehensive assessment of currency exposure across its supply chain.

This study examines the risks and opportunities that large, long-term currency shifts pose to companies and identifies the need to establish an integrated view of their exposure to exchange rate risks. Within a holistic risk-management framework, we present a set of operational hedging strategies to mitigate risks and exploit opportunities through proactive risk management.

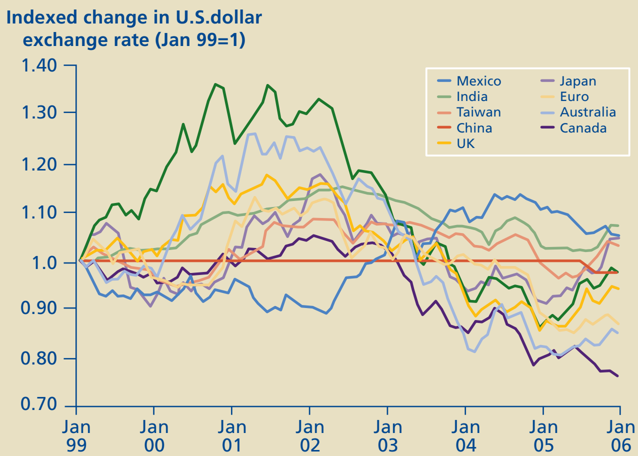
The momentum of global macroeconomic forces and the increasing U.S. trade imbalance suggest long-term devaluation of the U.S. dollar. This has significant implications for companies with international supply chains and markets. Recognizing and preparing for these implications now could mean the difference between success and failure in the future.

# The declining value of U.S. dollar – a long-term challenge

The U.S. dollar's historic highs of the past decade came to an end about three years ago, as the currency began what appears to be inexorable slide. The U.S. dollar has lost almost 50 percent of its value against the euro since 2000, and 25 percent against the yen and the Canadian dollar since 2002. Major U.S. trading partners with floating currencies, such as Europe, Canada and Japan, have seen their currencies soar toward multi-year or all-time highs against the dollar, adversely affecting the performance of companies that source or manufacture in these countries and sell into the United States. A large U.S. automotive manufacturer with several key models manufactured exclusively in Europe suffered a loss of more than half a billion dollars in 2004 at its European operations. Two-third of this loss was blamed on the U.S. dollar's fall, which hampered the company's non-U.S. cost and U.S. revenue dynamic.[3]

Fundamental macroeconomic forces and global political uncertainties have the potential to force a sustained decline in the dollar's value vis-â-vis other currencies. In 2004, the United States effectively managed to spend 5.7 percent more than what it produced.[4] The massive U.S. current account deficit of $660 billion is continuing to climb due to rising foreign debt, a record level budget deficit and declining household savings rate. Similarly, the record U.S. trade deficit of $617.7 billon is widening due to growing U.S. trade imbalances and increasing energy prices, pushing the dollar's value below its current levels. In addition, China's decision to liberate its currency, the renminbi, from its dollar peg has caused further uncertainty about the dollar's value. China is also considering diversification of its foreign currency portfolio, three quarters of which consists of U.S. dollar-denominated assets.[5] Despite its measures to revalue the renminbi against the U.S. dollar, international political pressure continues on China to allow the renminbi to further appreciate, as many experts estimate the renminbi to be undervalued by 20 to 40 percent.[678] Following China's lead, other Asian countries are expected to ease their exchange rates against the U.S. dollar, which will raise costs across the Asian supply chains. Moreover, U.S. manufacturers facing intense competition from low-cost Chinese manufactured goods are lobbying the U.S. government to impose tariffs, which will ultimately make imports more expensive still.

**Figure 1. Falling value of U.S. dollar against major currencies**




# The exchange rate risk horizon

For manufacturers, the impact of a long-term fall in the dollar's value and the associated exchange rate risk is not limited to financial exposure. As identified in a Deloitte Research study, 'Managing the Value Killers', there are strong interdependencies across the various categories of risk – namely strategic risks, operational risks, financial risks and external risks[9].

- Strategic Risks, such as demand shortfalls, failures to address competitor moves etc…
- Operational Risks, such as cost overruns, supply chain failures etc…
- Financial Risks, such as poor financial management, asset losses, trading losses etc…
- External Risks, such as an exchange rate risks, country-specific political or economic issues, terrorist acts, and public health crises

Managing exchange rate risk (an external risk) merely by assessing the financial exposures resulting from payables and receivables – using sophisticated financial hedging models, typically out of the treasury department – is a very limited approach. Its primary benefit is to reduce the impact of short-term exchange rate fluctuation on near-term cash flows.

For a global company, however, the long-term downward shifts in the dollar's value against the other currencies can put future cash flows at risk. Companies that sell in the United States, but have substantial portions of their supply chains in China or other countries with currencies likely to appreciate against the dollar, face a significant risk of mismatch in their expected U.S. revenues and non-U.S. costs. This can put severe pressure on their sourcing strategies, pricing strategies and future demand, resulting in strategic and operational risks. For example, even with an aggressive financial hedging program in place, the North American subsidiary of a large European automobile manufacturer, that incurs most of its manufacturing costs in Europe, saw reduced margins and stagnant sales volumes in recent quarters because of the decline in the dollar's value[10]. Despite the introduction of new products, the company projected stagnant sales for the current year as local competition in the U.S. leverages the weak dollar. In seeking to manage exchange rate risk and to protect future cash flows, companies must also assess the operational and strategic risks.

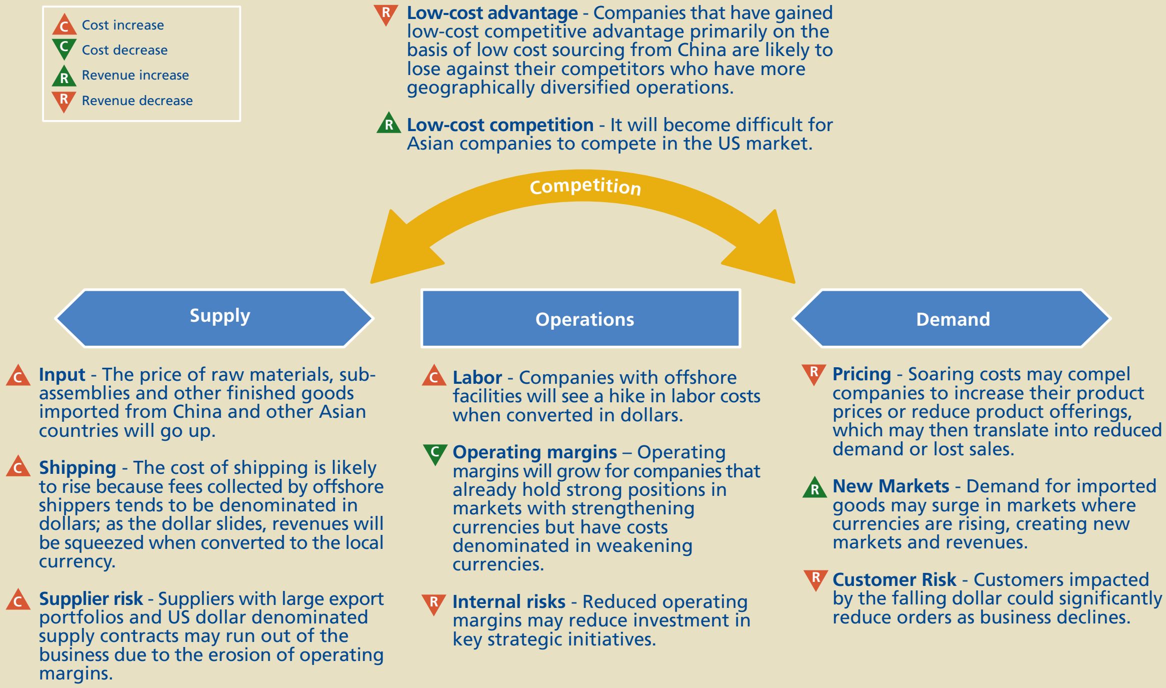
# Integrated assessment of the exchange rate risks

Steep and long-term shifts in exchange rates create discrepancies in cost and revenue models resulting in operational and strategic risks. To formulate effective risk management strategies, companies need to assess the risk exposures arising from sensitivities in costs and revenues dynamic under various exchange rate scenarios.

Exchange rate shifts can create risk exposures across the supply chains. If the dollar slides, U.S. companies with offshore sourcing and operations may face soaring input material and shipping costs and supplier risks. Similarly, companies with offshore facilities will see a hike in labor costs in dollar terms. On the demand side, if the company decides to pass on the increased cost to its customers it may result in reduced demand or lost sales. Moreover, the exchange rate risk faced by customers and suppliers can impact companies indirectly, significantly raising their strategic and operational risks.

Beyond their impact on supply chains, sustained downward exchange rate shifts can change the competitive landscape. For example, companies that have gained low-cost competitive advantage primarily on the basis of low-cost sourcing from China are likely to lose ground to competitors who have more geographically diversified operations. It is advisable, therefore, that companies consider the exchange rate exposures of their competitors when deciding risk mitigation strategies. The exchange rate risk assessment should also include implications of risk management strategies over the long term. For example, in the 1990's a large pharmaceutical company discovered that financial reallocations adopted to absorb currency fluctuations were affecting its margins. As a result it reduced its long-term R&D expenditure, which compromised its competitive position[11].

**Figure 2. Impact on cost and revenue due to exchange rate risk from the decline in the U.S. dollar against the renminibi**




## Traditional responses are not enough

Traditionally, to eliminate exchange rate risk from the cost-revenue equation, many companies have implemented financial hedging strategies through financial instruments, carrying large cash balances or borrowing in the currency of the countries in which they operate.  For example, a large aircraft manufacturer hedges aircraft sales from the time of sale through delivery by purchasing a contract to exchange dollars for euros at today's exchange rate two years in the future.  Financial hedging techniques can offset the impact of short-term currency fluctuations or, in other words, lessen near-term financial risk. However, the ability to limit the risks posed by large, long-term exchange rate shifts is either unavailable or very expensive.  In part, this is because long-term exchange rate risk leads to uncertainty in future cash flows, as opposed to uncertainty of the exchange rate at which those cash flows will be converted.  Specifically, financial hedging cannot prevent a company's competitive position from being eroded by dramatic increases in operating costs. Moreover, long-term hedging quickly becomes expensive because the derivative premiums are proportional to the degree of perceived risk and the duration for which they are issued.

Some companies respond to pressure on their margins by increasing the price at which they sell.  However, it is not always feasible to increase prices given competitive pressures and the current low rates of inflation.  Price increases are constrained by the fear of corresponding decreases in sales volume.  In most industries and markets, the price elasticity of demand is high, meaning that a price rise will adversely affect sales. Competition also offers an effective check on individual price increases.  In industries where producers are, at least to some degree, price takers, it is very difficult to initiate price rises if competitors can continue to provide similar products without raising their prices.  Moreover, the current low rate of inflation establishes an expectation of limited price increases in most sectors.  Thus increasing prices is not a suitable strategy for dealing with long-term exchange rate uncertainty.

## Stable by design

To address the operational and strategic risk exposures arising from the exchange rate risk, companies should adopt operational hedging as part of their integrated risk management strategy. Operational hedging is designed to mitigate long-term currency risk by providing companies flexibility in their supply chains, financial position, distribution patterns and market-facing activities so they can make swift adjustments to where they manufacture, source, and sell.  It involves decisions regarding the location of production facilities and capacity, sourcing of inputs, choice of logistics network, product design and offerings, choice of markets and how opportunities in those markets are pursued.  The objective is to manage the sensitivities in cost and revenue, so as to offset the exchange rate risks while managing the competitive positions.  Operational hedging strategies can be crafted by assessing the likelihood of various risks and the magnitude of their impact on cost and revenue elements across the supply chain, for various exchange rates and pertaining to different periods.  Operational hedges can be unique to a given situation or company and can be established in a variety of creative ways.

The following operational hedging strategies have been deployed by leading companies to successfully manage currency risk.

- **Relocating manufacturing and strategic supply bases to final markets**
  Since the Yen's sharp appreciation in the mid-1980s, many Japanese manufacturers have built international production systems that are less vulnerable to exchange rate risks by investing in local production and local procurement. A large Japanese auto manufacturer recently finished building its fourth production facility in the United States to fulfill the growing demand there while stabilizing its currency flows. The auto manufacturer also requires its strategic suppliers to establish supply bases in the local markets. Their local procurement ranges between 60 and 90 percent. Relocating the suppliers to the local market provides them with input cost security. The auto manufacturer also reduces suppliers' vulnerability by ensuring stable revenues for them during currency fluctuations. Moreover, suppliers can also attain cost efficiency through their global network as it continues to develop.

- **Optimizing sourcing and supply chain networks to limit weak dollar risk**
  With the increase in globalization, some companies have created flexibility in their sourcing, production and logistics networks that enables optimal decision-making in the face of exchange rate fluctuations. Such flexibility allows them to delay decisions until demand dynamics are better known and to concentrate production and sourcing in a location that limits exchange rate risk at any given time. A large U.S. retail chain and some of the large U.S. apparel businesses, who rely on low-cost production, develop various supply chain networks and scenarios to allow optimal sourcing decisions on a timely basis[12]. The supply chain network optimization addresses exchange rate risks along with other factors such as cycle time, transportation cost, duties, taxes, insurance and financing cost.

- **Redirecting sales and marketing investments towards stronger currency markets**
  Companies build a capacity into their financial systems to identify and leverage currency dynamics that yield region-based margin variations. They further build flexibility into their sales and marketing channels to divert resources into stronger currency markets and thereby achieve better sales. In 2004 a large U.S. computer manufacturer increased investment in its European sales force and marketing teams, achieving nine percent revenue growth over the previous year. Four percent, or just under $700 million, of this was attributed to favorable exchange rates.

- **Pursuing exports through product development to enhance global appeal**
  Companies develop universal product platforms which give them the flexibility to customize products on short notice and tailor them to regional taste in markets with high demand. They can then concentrate their product supply and marketing initiatives towards stronger currency markets as exchange rates fluctuate.

- **Increasing productivity in off-shored and outsourced operations**
  Companies invest in improving productivity through operational improvement programs in their offshore operations to offset the rising cost from exchange rate appreciation. Operational improvement practices such as lean manufacturing are uncommon in Chinese factories. Labor costs are so low that reducing labor usually has no significant impact on total cost. However, 'lean' can extend far beyond the reduction of labor cost: it can reduce total cycle time, delivery lead-time, inventory cost, scrap cost, and capital equipment investment cost, as well as improve quality.

None of this is as expedient as currency hedging. A proper operational hedging strategy may require significant time and investment to implement, while the steep decline of the dollar's value could erode operating margins and competitive positions rapidly. By necessity, then, companies that face long-term exchange risks should prepare themselves well ahead of time. They can do this by:

1) Identifying and assessing all types of risk exposures, including operational and strategic, that a company faces as a result of long-term exchange rate shifts;

2) Implementing operational hedging strategically to mitigate risks and leverage opportunities.

## To sum up

While exchange rates are unpredictable, the U.S. dollar has declined more than 30 percent against major trade currencies in the last three years. This trend is expected to continue against a broad spectrum of currencies, including those of Asian countries, and particularly as China embarks on the journey of revaluing the renminbi. Companies with international supply chains and international markets will face not only exchange rate risk from the financial accounting perspective, but risks to their competitive positions and cost-revenue dynamics as a result of steep and large declines in the dollar's value. Financial hedging strategies are suitable for mitigating small and short-term currency fluctuations. But to circumvent the effects of large, long-term shifts in the dollar's value, companies are well-advised to adopt operational hedging strategies. These provide the flexibility to dynamically manage supply chains and markets, thereby allowing a more nuanced and efficient management of the cost-revenue equation as international macro-economic forces influence the global marketplace.


## End notes

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