



Modern Corporate FX Risk Management

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Topics Covered

- Modern corporate risk management
- Common MNC FX hedging mistakes
- Corporate FX hedging models
- About Greenwich Treasury Advisors



Modern Corporate Management Philosophy

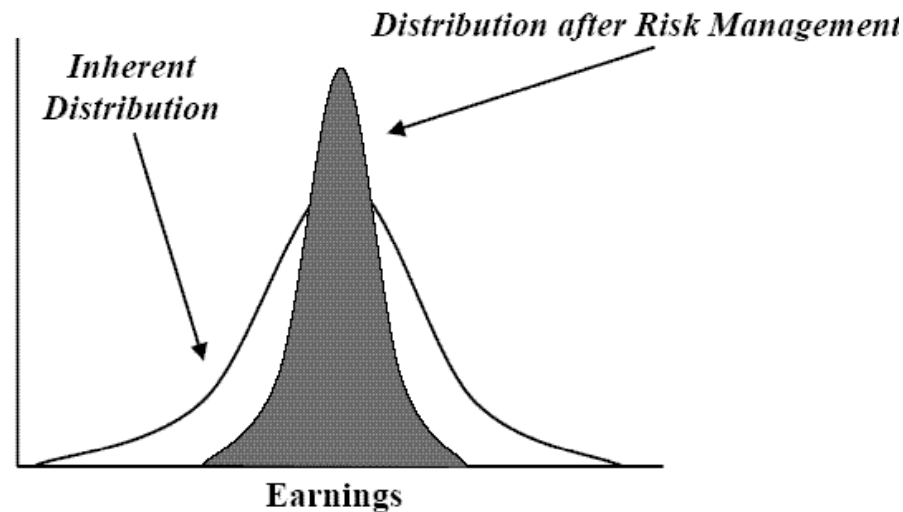
- A firm maximizes profit by taking risks only in areas in which it has unique expertise and experience; e.g.:
 - IBM: computer technology and related services
 - Microsoft: software technology
 - Wal-Mart: retail distribution
- A non-financial firm minimizes risks in areas in which it has no unique competitive advantage, e.g.,
 - Foreign exchange risk
 - Interest rate risk



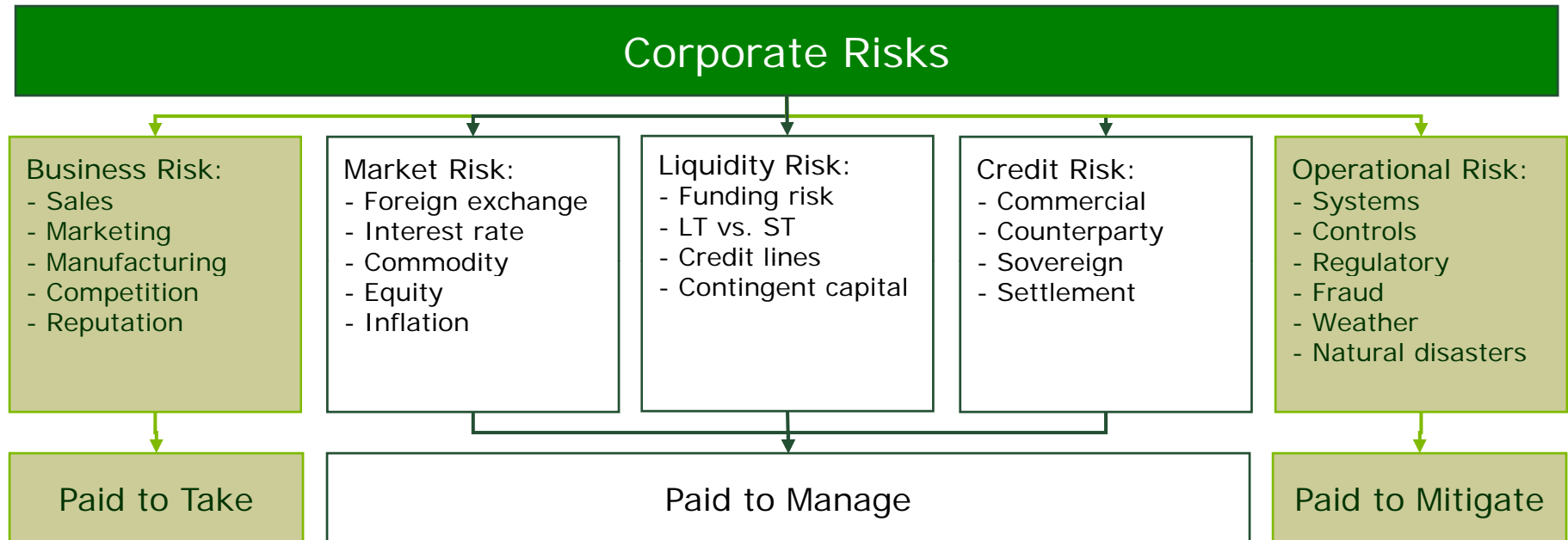
Modern Corporate Risk Management — 1

Active risk management creates shareholder value through better stock price performance by:

- Stabilizing earnings and dividends
- Communicating clear expectations and risk profile to the stock market
- Lower discount rate and related WACC



Modern Corporate Risk Management — 2



Modern Corporate Risk Management — 3

Modern corporate risk management is:

- The effective hedging of *business-generated* financial exposures and (ancillary) commodity exposures
 - Measures of effectiveness include those outlined in FAS 133
 - Pragmatic, performance-based standards
 - Not hedging significant risks is speculative
- By definition, hedges must mitigate risk
 - “Hedges” that increase risk are speculative



Modern Corporate Risk Management — 4

A modern risk management program is sustained over a period of time with these objectives:

- Raising the awareness level of key risks in the business (risk exposure reporting)
- Proactively mitigating significant risks so as not to exceed senior management's defined worst case (risk tolerance level)
- Incorporating risk management into capital allocation decisions (risk-adjusted returns)
- Strong controls and meaningful reporting to senior management (governance)



Session Topics

- Modern corporate risk management
- **Common MNC FX hedging mistakes**
- Corporate FX hedging models
- About Greenwich Treasury Advisors



Common Mistake #1

Substantial and pervasive FX risk denial

- The main focus of corporate energy is meeting operating income which are either in
 - Local currency or
 - Dollars at budget rates
- Often in these cases,
 - The unit GM's are not measured on FX results
 - Parent accountants don't understand FX or FAS 133
 - Parent treasury is the only group that cares



Common Mistake #2

The belief that FX rate changes even out over time, causing companies to underestimate FX risk

- A misreading of purchasing power parity (PPP)
- Absolute PPP states that the FX rate will be the ratio of local goods prices in two countries
- That is, FX rate stability occurs as two economies come into “equilibrium” with each other
 - Ignores differences in inflation, shifts in competitive advantage, imperfections in capital markets, etc.



Common Mistake #2 — Continued

- What does “evening out over time” mean?
 - What time horizon: 5 or 10 or 20 years?
 - What evens out: A sum or NPV or inflation-adjusted?
 - How is the sum, NPV etc. calculated over what period: A quarterly or yearly basis?
- And how can this be true for all companies for the same time horizon and measured in the same way?
- However, economic evidence does show that FX rates are mean reverting over 4-7 years



Common Mistake #3

Thinking that derivatives are the best way to manage FX exposures:

- Derivatives only buy time to fix the underlying business problem, they cannot solve it
- The best way to manage FX exposures is to re-engineer the business processes that create them so that:
 - The exposures are more easily hedgeable or
 - By creating offsetting flows to reduce the next exposure by currency



Common Mistake #4

Limited FX exposure reporting:

- No reporting of balance sheet FX risk
- Budgets are prepared in dollars with no foreign currency flows
 - Thus, forecasting FX flows becomes a separate exercise almost independent of the budgeting process



Common Mistake #5

No FX performance analysis of the hedging — or of the no hedging — leading to zero feedback and thus ignorance of:

- The actual FX risks being incurred
- How the FX risks are changing over time
- The costs of not hedging
- The advantages of using options



Common Mistake #6

Refusing to use options as hedges because they are “too expensive”:

- Typically, these are same people that think everything evens out over time
- In other words, the FX spot and forward markets are efficient, but the option markets are inherently inefficient and always overpriced
- Behavioral economics show that it is a hard-wired human instinct to avoid paying now to avoid a possible future loss



Common Mistake #7

An obsession on whether the derivatives made money, a meaningless metric

- A metric only appropriate to speculators, which corporates swear that they never are
- A metric that ignores the gains and losses on the real economic underlying risks, whether hedged or unhedged
- Focusing on only half of the FX risk and ignoring the real business FX risks can not be a good way to manage FX risk



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Economic Factors and Corporate FX Hedging Models

A company's FX hedging model is determined by:

- The company's own economic model:
 - Local manufacturer, global centralized manufacturer, exporter, and global operator
- The actual strength of specific economic factors affecting their FX risks
 - Closely related to the economic model, but there can be wide variation within a model
- The sophistication of senior management in understanding their economic risks and their willingness to invest in a global finance (not just treasury) infrastructure to be able to adequately manage them
 - There are companies whose senior management live in “FX Denial”, which is not always justified



Economic Factors Driving FX Practices

Economic Factor	FX Hedging Practices
Revenue and costs in local currency	Limited FX exposure, limited FX hedging
Revenue/cost currency mismatch	Usually extensive hedging and treasury sophistication to manage operating margins, whether in USD/parent currency or in local currency
Ability to change pricing due to FX rates	If the end buyer is taking the FX risk, then the seller rarely hedges. The greater the competitive pressure forcing FX risk on the seller, the more sophisticated the successful sellers become.
Substantial Intercompany Trading	Usually extensive hedging and treasury sophistication to keep individual units “whole”
Unit GM Compensation	The currency of the performance evaluation drives whether hedging protects local currency profits or USD profits.
Global scale	Larger the global footprint, the more sophisticated the FX hedging becomes.
Decentralized or centralized operating management structure	Decentralized management structures are usually both local currency revenue and expenses companies, leading to minimal FX hedging. As companies organize on a more centralized basis, hedging usually increases
Foreign currency capex	Extensive hedging
Relative importance given to finance infrastructure	The larger the importance that senior management gives to finance, the more sophisticated treasury hedging becomes. Smaller companies that are driven by senior management with little respect for the finance function are always poor FX hedgers and often live in FX denials.



Company Models & Hedging Practices

Hedging Practice	Companies in FX Denial	Local Services & Manufacturing	Global Centralized Manufacturers	Exporters
% who do FX hedging of forecast operating flows	5%	10-15%	85-95%	90-95%
Hedging time horizon for forecast operating flows	1-3-6 Months or Fiscal Year	Fiscal year	12-24+ months	12-36 months
% use of FX options	Never	Never	40%	40-50%
Hedging cash flows vs. P&L and B/S separately	Cash flows	Cash flows	Usually separate P&L & B/S focus	60% cash flows, 40% P&L & B/S
FX hedging decision-making	Local unit	Local unit	HQ Treasury	HQ Treasury
FX trade execution	Local unit	Local unit	HQ Treasury	HQ Treasury
Overlay hedging	N/A	N/A	Rare	N/A
FX exposure reporting	Minimal	Small	Extensive	Extensive
HQ Treasury FX sophistication	Very little	Little	Extensive	Extensive



Supplemental Case Studies

- US high tech company (H-P)
- US software company (Microsoft)
- East Coast manufacturer (DuPont)
- Auto company (GM)
- Pharmaceutical (Merck)
- Diversified global conglomerate (GE)



US High Tech Model (H-P)

- Companies are generally dollar functional world-wide so hedging objective is hedging to **protect dollar**, not local currency, **profits**
- Due to the rapid changes in technology, product life cycle is short and prices naturally tend to decline
 - Reliable forecasting of new product streams is an issue
- Active hedging program
 - Hedge forecasted sales and AR
 - Hedging time horizon is often short, about six months
 - Short horizon reflects uncertainty surrounding future flows
 - Short horizon also makes sure that any significant FX-related cost or sales problems are not hidden for long
 - More forwards than options
 - Excellent technology infrastructure



East Coast Manufacturer (DuPont)

- Significant direct overseas investor for many years in many countries where units are local currency functional
- Full-fledged country operations with significant inventory levels
 - Often manufacturing or finishing operations
- Very large interco trade flows representing product sales to the subs who then sell to the trade
- Active hedging program
 - Focus is on hedging to preserve **LC profits**
 - Exposures are netted whenever possible
 - Hedging time horizon is often fiscal year if company is very budget driven
 - Hedging is generally centralized



Auto Company (GM)

- Long-term product life cycles with hedging time horizons > two years
- Active hedging programs
 - Hedging is usually transactional cash flows rather than P&L focused
 - Hedging is protecting **local currency results** and balance sheet, not consolidated dollar P&L
 - Sophisticated and extensive use of options
 - Options help manage the large forecast error risk
 - Small margins cause autos to use options to avoid losses that can result from using forwards
 - Hedging decision-making and execution is centralized



Pharmaceutical (Merck)

- Key focus is maintaining the R&D investment, the company's life blood
- Greater than average focus on managing earnings
 - Reduce risk of having to cut R&D spending
- Exporter model, with easily modeled future foreign currency revenues
- Active hedging program
 - Long-term (> 2 years) hedging to protect **consolidated dollar profits**
 - Exposures are netted whenever possible
 - Aggressive use of options
 - Centralized hedging and execution
 - Like high tech companies, can generally attract treasury staff who are comfortable with sophisticated risk analysis and using options



Diversified Global Conglomerate (GE)

- 14 very large divisions that are global MNC's by themselves (>\$10 bn in sales each)
- Performance measure is quarterly **dollar net income numbers**
 - no whining about FX rates is allowed
- Active hedging program
 - FX hedging decision-making made on the **divisional level** with FX advice from HQ Treasury
 - No netting of exposures across divisions
 - Hedging time horizon varies by division
 - Hedging decisions are made on the divisional level with FX advice from centralized treasury
 - Centralized FX execution at HQ Treasury
 - HQ Treasury does overlay hedging



Conclusions for Fortune 50 MNC's

- Have a large and sophisticated hedging programs
- Hedging time horizons are generally 2+ years
- Will use options are used to express views, manage forecast error and to avoid forward contract losses, but will use forwards to cover 50-75% of hedged exposures
- Hedging decision-making and execution is centralized at HQ Treasury



About Greenwich Treasury — 1

Since 1992, Greenwich Treasury Advisors has been delivering integrated treasury solutions for over 300 global businesses:

- Risk
 - FX/IR/commodity risk assessment and policies
 - FAS 133/Section 3865/IAS 39 hedging and documentation
 - Performance measurement
 - Best practices
- Cash
 - Global liquidity management
 - Cross-border cash consolidation
 - Bank reviews and RFP development



About Greenwich Treasury — 2

- Structures
 - Diagnostic treasury reviews
 - Implementing spin-offs and merger treasuries
 - In-house banking and outsourcing
- Technology
 - Treasury system RFP's, review and selection
 - Treasury intranet and web application design
- For more info, visit www.greenwichtreasury.com
 - Free articles on risk management, FAS 133, treasury systems and treasury maxims at </articles.cfm>



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Novartis

NZ Dairy Board

Procter & Gamble

Saint-Gobain

Siemens

TRW Automotive



Jeff Wallace

- Founded GTA in 1992, and author of:
 - *The Group of 31 Report: Core Principles for Managing MNC FX Risk* (Association for Finance Professionals, 1999)
 - FAS 133 chapter of *The Handbook of International Finance & Accounting* (2004, John Wiley)
- Advised over 50 companies and six system vendors, Financial Sciences, FXpress, Principia Partners, Simcorp, SunGard and Wall Street Systems, on FAS 133 compliance
- Formerly VP-International Treasury at American Express, AT at Seagram and at D&B; CPA at PW
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Why Clients Choose Greenwich Treasury

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 - Each consultant brings over 25 years of **corporate** treasury experience
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 - We work as part of your team
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 - Or we will return your fee

