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Understanding & Managing Foreign Exchange Risks

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Overview

- ✓Identifying and quantifying risk – different points of view
- ✓Understanding “hedging” of risk and risk management strategies
- ✓Some common myths on “good” deals…
- ✓… and seemingly genuine opportunities that are not tapped
- ✓Common asks for the community

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Identifying and Quantifying Risk

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Case Study : Indian Oil Corporation Ltd

- ✓ Indian Oil Corporation (IOC) is India's flagship national oil company
- ✓ IOC and its subsidiary, CPCL account for
  - over 49% petroleum products market share
  - 31% national refining capacity
  - 71% downstream sector pipelines capacity in India
- ✓ Imported crude oil forms a major raw material for its refineries
- ✓ Oil imports for IOC and CPCL ~ $ 41 Bln worth of crude oil in FY13 i.e 66.3 MMT of crude
- ✓ <u>Question : Are these foreign exchange and commodity exposures risks to IOC, that need active risk management and “hedging”?</u>

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Case Study : Indian Oil Corporation Ltd

Possible answers

- ✓ Yes, of course
- ✓ No, there is no risk to IOC – it merely passes through its costs. It's revenues would move in tandem with moves in FX and oil prices.
- ✓ Maybe there is a pass through element, but IOC has a responsibility to "hedge" or risk manage on behalf of the public at large.
- ✓ Full pass through is an unrealistic construct in the current context
  - ✓INR depreciation will raise under recoveries
  - ✓Government will not cover all under recoveries
  - ✓Perhaps some proportion of imports need to be "hedged"…
  - ✓…but what happens if price of oil or USD cheapens later?
- ✓ What are BPCL/ HPCL doing?

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Case Study : Indian Oil Corporation Ltd

Lens	View
Regulatory Lens	Has appropriate underlying
Accounting Lens	Has appropriate underlying
Economic Lens	Maybe, maybe not
Competitive Lens	What are BPCL/ HPCL/ RIL doing?

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Case Study : Domestic Bearings Company

- ✓ Sources raw materials domestically, pays in INR, no imports
- ✓ Supplies to railways and automobile manufacturers
- ✓ Domestic sales, all receipts in INR
- ✓ No exports
- ✓ Question: does this company run any risk on USDINR? Should it be doing any foreign exchange risk management?

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Case Study : Domestic Bearings Company

- ✓ As INR appreciated against USD to Rs 40 levels in Q4CY2007
- ✓ It was cheaper to import bearings from France
- ✓ Domestic purchase of bearings shifted to imports
- ✓ Impacted the sales and profits of the domestic bearings company
- ✓ Since import substitution is a risk, is the company effectively “long” USD? Does it stand to lose, if USD was to weaken against INR?

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Case Study : Domestic Bearings Company

Lens	View
Regulatory Lens	No underlying
Accounting Lens	No underlying
Economic Lens	Yes – impact on the bottomline
Competitive Lens	Yes – threat of import substitution

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Case Study : Diamond Processing Company

- ✓ Diamonds are internationally priced and dealt in USD
- ✓ Import rough diamonds and export cut & polished diamonds
- ✓ Limited domestic sales
- ✓ Question: should the company hedge it's import exposures, by buying USD against INR?

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Case Study : Diamond Processing Company

Possible answers

- ✓ Yes, of course
- ✓ No, the company is a net exporter, and already long USD against INR. It should only worry about the net position. At best, it can do swaps to cover the mismatch of cashflow dates

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Case Study : Diamond Processing Company

Lens	View
Regulatory Lens	Valid underlying
Accounting Lens	Valid underlying
Economic Lens	Only to the extent of net exports – not for covering imports
Competitive Lens	May not be relevant, given small size of the company

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Risk – The Eye of the Beholder

Lens	View
Regulatory Lens	Allowed by regulation?
Accounting Lens	Does it qualify as an accounting hedge?
Economic Lens	Sensitivity of market move on the bottom-line
Competitive Lens	Who is the competition? What are they doing?

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Credit risk evaluation : FCY debt and INR receivables
Case Study : Domestic Power Company

FY13

Revenue from Operations	**INR 6,000 crores**
Fuel Cost	**INR 5,000 crores**
Long term INR debt	**INR 9,000 crores**
Long term Foreign Currency dent	**INR 9,000 crores**

- ✓ Significant portion of fuel is now imported coal, which is impacted by international commodity prices and USDINR exchange rate.
- ✓ Most of the revenues are in INR with no pass-through of above costs

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Credit risk evaluation : FCY debt and INR receivables
Case Study : Domestic Power Company

- ✓ Revenues are in INR with no pass-through of fuel costs
- ✓ 50% of long term borrowings are in FCY with limited forward cover. INR has depreciated significantly, since the loans were taken
- ✓ Thus, rupee depreciation has an adverse impact on:
  - ✓ EBITDA through higher expenditure on imported coal
  - ✓ Net Cash flow through lower EBITDA, higher principal and interest payments on FCY loans
- ✓ These could have an impact on financial covenants such as coverage ratios, Debt/ EBITDA, Debt/ Equity etc
- ✓ <u>Question : What if the FCY loans were taken today?</u>

What is the right hedge ratio and tenor ?

Spot 62.50	Forward	Outright
1Y Forward	Rs 5.10	67.60
2Y Forward	Rs 9.30	71.80
3Y Forward	Rs 13.75	76.25
4Y Forward	Rs 17.70	80.20
5Y Forward	Rs 21.40	83.90

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“Hedging” of Risks

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Hedging Commodity Price Risk
Case Study: Large US Budget Airline

- ✓ Jet fuel price is the largest cost in airlines (30-40)% of the cost
- ✓ Jet Fuel prices started rising from 2003 onwards
- ✓ Between 1999 and 2nd Quarter 2008, Southwest saved approximately $3.5 billion through fuel hedging. Fuel hedging contributed almost 83% of the company's total profits between 1998-2008

Year	% hedge	Hedged Price / Barrel in $	Average Nymex in $
2005	85	26	54.60
2006	65	32	65.36
2007	68	70	72.68

- ✓ After 17 years of profits, they took a charge of USD 250 million in Q32008 on the hedges as they wrote down the value of their hedge contracts due to the fall in crude prices

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Hedging Foreign Exchange Risk
Case Study: IT Companies

	IT Company XYZ	IT Company ABC
Hedging Tool	Foreign currency forwards and options	Foreign currency forwards and options
Tenor of hedges	Long tenor up to 7 years	Short tenor
Accounting	Cash flow hedges + other hedges stated at fair value	Fair Value
31 March 2009	Hedge book of $ 2.1B Exchange loss of Rs 600 crores on forward/option hedges	Hedge book of $ 0.5B Exchange loss of Rs 650 crores on forward/option hedges
31 March 2010	Hedge book of $ 1.5B Exchange loss of Rs 200 crores on forward/option hedges	Hedge book of $ 0.5B Exchange profit of Rs 280 crores on forward/option hedges
	Bore the brunt of long tenor trades booked at lower levels	Light Hedge Book

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Hedging Interest Rate Risk : Type II error
Case Study: High Cost Liabilities

- ✓ Banks raised fixed rate INR liabilities as part of the IMD SBI scheme in 2000
- ✓ The rates were then considered attractive, however, fixed rate tenor asset growth remained muted
- ✓ Rates came off sharply from 2001 onwards
- ✓ The cost of funds was far higher than deployment returns
- ✓ “If cash flows are known and fixed, there is no risk to hedge” – a fundamental myth

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Discussion Topics on Hedging

- ✓ Should one be 100% “hedged”, 0% “hedged”, or choose a magic percentage in between?
- ✓ Efficient frontier analysis – a brief introduction – advantages & lacunae
- ✓ Is the “right hedge ratio” only possible to know post facto?
- ✓ Should CFOs decide on “hedge” strategies based on their view of the market? Is there a choice at all?
- ✓ What is “hedging” – is it reduction of risk?
- ✓ The preferred phrase – risk management

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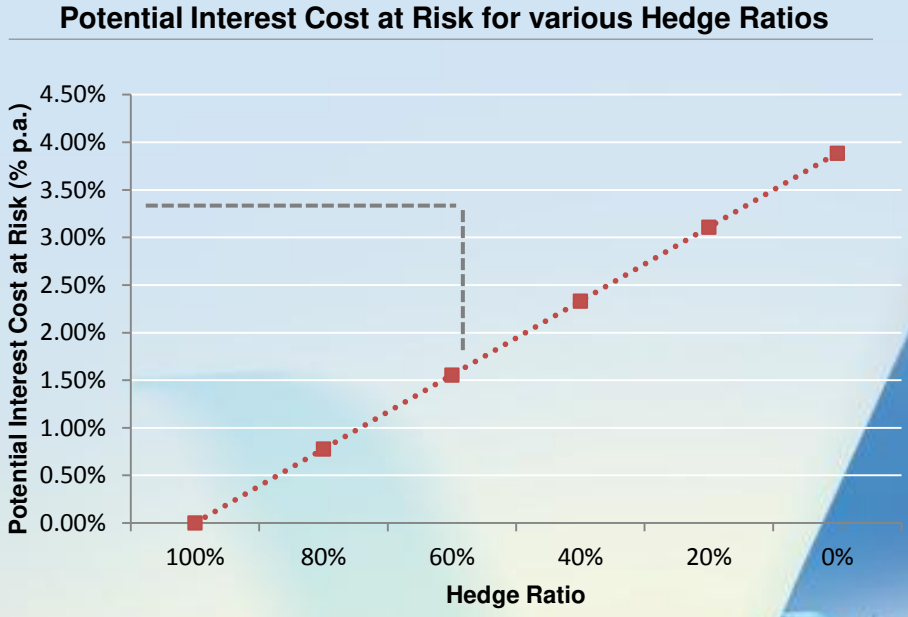
Hedge ratio for Rates Risk : Case study

Case study: Corporate with a 10 year floating rate liability of USD 100 million linked to USD 3m LIBOR with bullet repayment.

Based on current market levels, potential Average Interest Cost (AIC) of the liability on account of 3m LIBOR on a expected case basis and worst case basis based on a 2.5 standard deviation move is calculated

- ✓ Expected Average Interest Cost = USD 28.8 mio (2.88 % p.a.)
- ✓ Worst case Average Interest Cost = USD 67.7 mio (6.77 % p.a.)

Potential Interest Cost at Risk = USD 38.9 mio (3.89% p.a.)



The corporate could determine the optimal hedge ratio based on their internal risk tolerance metrics, for example Potential Interest Cost at Risk

The chart along side plots the potential Interest cost at risk for various Hedge Ratios assuming hedge through an IRS

As can be seen, as the hedge ratio decreases, the potential interest cost at risk increases.

Assuming a risk tolerance of potential interest cost at risk at 1.50% p.a., the hedge ratio should be 61.5%

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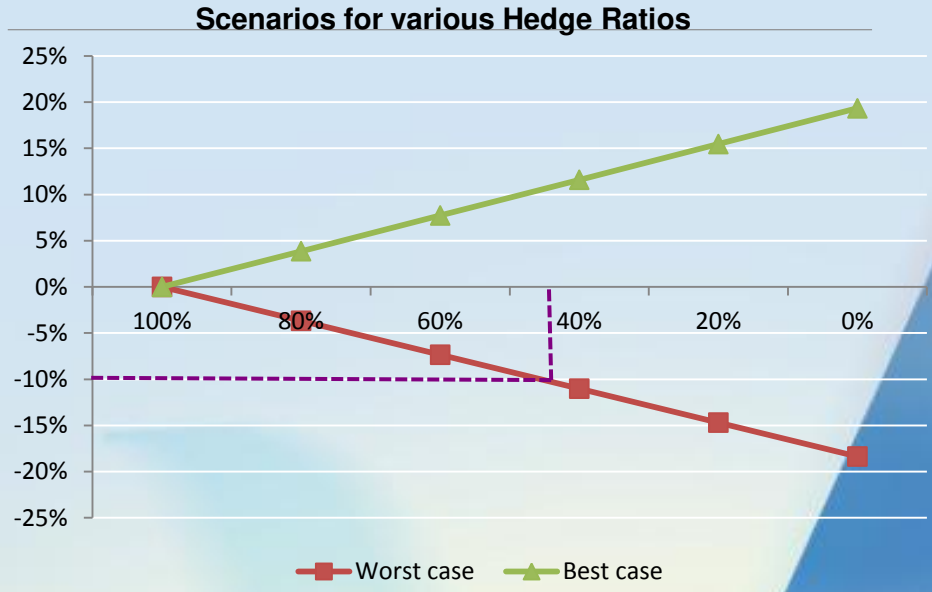
Hedge ratio for FX Risk : Case study

Case study: Corporate with a 1y USD payable

Based on current market levels, potential best case and worst case USDINR values are calculated based on a 2.5 standard deviation move

1. Best Case: 55.798 (-11%)
2. Worst Case: 84.117 (26%)
3. Forward rate: 67.951 (8.04%)

The chart along side plots the potential best case and worst case for various Hedge Ratios assuming hedge through a forward



The corporate could determine the optimal hedge ratio based on either a maximum worst case cost or a minimum best case cost.

Assuming a risk tolerance of worst case cost of 10%, the hedge ratio should be 43%

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Suggested Approach to Risk Management

- ✓ Know and quantify the risks, across both sides of the balance sheet & P&L statement
- ✓ Understand what the current market implies
- ✓ Build a view on the market (?)
- ✓ Understand competitive context, accounting and regulatory constraints
- ✓ Study the markets, look for low risk opportunities
- ✓ Implement the view using market tools – forwards, swaps, options etc
- ✓ Simulate and understand the downsides, buy insurance where practicable
- ✓ Make sure your boss knows and acknowledges what you are doing!
- ✓ Disclose, review, be transparent

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Some common misconceptions about "good" deals…

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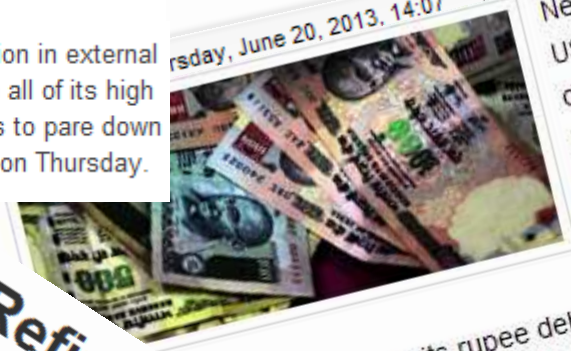
Jet Airways plans to raise $300 million to replace its high cost rupee debt

Anirban Chowdhury, ET Bureau Oct 25, 2013, 03.00AM IST

MUMBAI: Jet Airways plans to raise $300 million in external commercial borrowings this quarter, to replace all of its high cost rupee debt as the lossmaking airline aims to pare down its high finance costs, a senior executive said on Thursday.

eel raises $1 bn overseas to low

rsday, June 20, 2013, 14:07



New Delhi: Essar Steel on Thursday said it has raised USD one billion through ECB to part-retire its rupee-denominated debt, a move that will help the Ruias-owned firm to de-risk balance sheet from fluctuating currency rates and save about Rs 450 crore per annum on interest outgo.

the dollarising its rupee debt, Essar Steel will also save approximately Rs 450 crore
rest. The company will also gain significantly in terms of additional liquidity and
interest cost," the steel maker said in a statement.

competitive LIBOR-linked rate, has an average maturity of seven years
el's debt is rupee denominated as against the average 30-40 per

of the company has also nearly doubled. The earning
hedge to reduce the risks associated with curren
ICICI Bank and IDBI subscribed the External

teel to Refinance Rupee Debt With Cheaper Dollar Loans

By Abhishek Shanker - Apr 12, 2013 12:41 PM GMT+0530

The steelmaker, owned by the billionaire Jindal family, plans
$600 million of debt raised by unit JSW Ispat Ltd. (JS
year, Group Chief Financial Officer Seshagi
help the company cut interest costs
percent at present, Rao said

Asian Companies Turn to Offshore Loans for Cheap Cash

The Value of Foreign-Currency Loans in Indonesia, the Philippines and Vietnam Has More Than Doubled

Asian companies are rushing to raise cash by turning to foreign-currency loans while interest rates abroad are low. But these funds come with risks and faint echoes of the buildup to the region's financial crisis fifteen years ago.

The value of offshore loans in Indonesia, the Philippines, Vietnam, India and Malaysia totaled $36 billion at the end of October, up 52% from the same period a year earlier, according to data from Thomson Reuters LPC.

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You can raise cheap USD funding !!

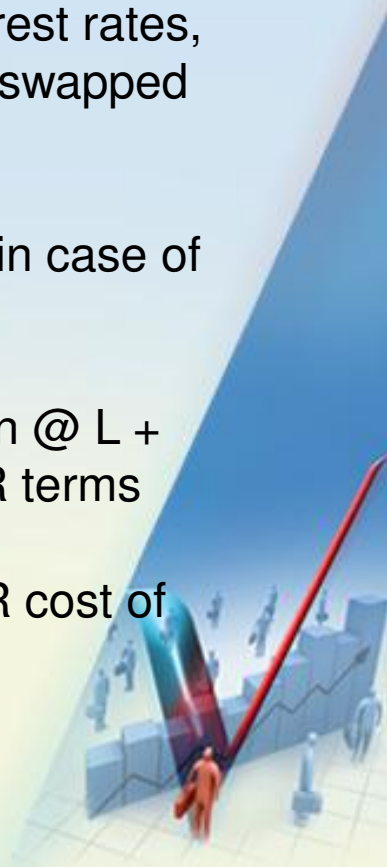
The Myth of Cheap FCY Borrowing

✓Though FCY loans appear cheaper at inception due to low interest rates, the right benchmark for comparison with Rupee loans is the fully swapped INR cost

✓The landed cost on unhedged loans could be significantly high in case of sharp INR depreciation

✓For example, a company having drawn down a 5 year USD loan @ L + 5% in Aug 2008 at 43.75 would have a landed cost of 16% in INR terms

✓A 5-year USD loan at LIBOR + 5% today, would swap to an INR cost of 13.75%



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Market Opportunities

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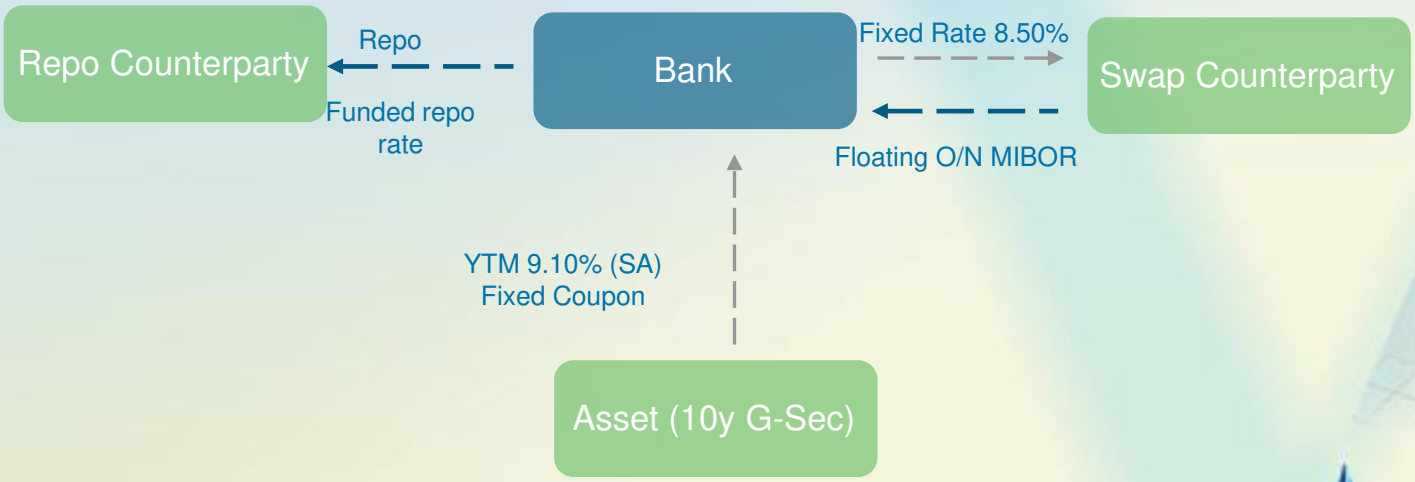
Raising USD via Synthetic Route

- ✓ It is cheaper to raise USD liability by swapping INR liability into USD, rather than straight USD liability – an advantage of well over 100 bps
- ✓ USDINR cross currency swaps have spiked up sharply due to FX volatility
- ✓ INR asset yields have also moved up, but not to that extent
- ✓ Raising USD funding offshore has become expensive due to widening of credit spreads
- ✓ For example, a manufacturing company recently raised a USD 500 mio syndicated ECB at L + 330 bps for 6y
- ✓ It could raise an INR bond in the range of 10.50%, which swaps to L + 230 bps for the same tenor, implying a cost saving of 100 bps pa approx. In addition, it would save on withholding tax that would be applicable on FCY borrowings

Balance sheet basis – long bond versus paid swaps

- ✓ Banks can buy 10 year off the run GOI bond at 9.10%, fund if necessary through repo, and hedge the interest rate risk through an OIS @ 8.50%
- ✓ There are accounting issues, including RBI norms on income recognition
- ✓ Net carry of held to maturity = 0.60% p.a., plus favorable MIBOR versus Repo
- ✓ Even better with INBMK swaps



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Common asks for the community

- ✓ Regulatory asymmetry between futures and OTC, and its consequences.
- ✓ Dilemma of discouraging open exposures (by proposing to increase RWA on unhedged exposures) versus increasing costs of hedging with Basel 3 CVA.
- ✓ Close out netting not recognized, increasing capital requirements at a time when capital is scarce, despite clear legal view on netting under Companies Act.
- ✓ Dilemma of wanting to encourage clients to buy insurance but disallowing selling of insurance by end users

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Thank You

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