Exit Strategies for a Sick Floan

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Floan: Foreign Currency Loan

**EUR-CHF Floan**

- **T₀**: Treasurer borrows 20 M CHF
- **T₀**: Treasurer buys 12.5 M EUR at spot 1.6000
- **T**: 16 M EUR required to buy CHF at 1.2500
- **T**: Treasurer pays CHF interest
- **T**: Treasurer pays back 20 M CHF

**EUR interest saved**
Mrs. Watanabe and Mr. Penny

Mrs. Watanabe invests in a high yield currency (AUD-JPY)

Mr. Penny borrows in a low yield currency (EUR-CHF)
After the SNB removed the guarantee level of EUR-CHF 1.2000 on 15 January 2015, many floans in CHF that had already gone bad in last few years caused another substantial loss for municipalities and corporates in many countries in Europe.
Product and Market


Market: EUR-CHF spot 1.0400 on 23 May 2015. Other market data: swap points -0.00510, forward 1.0349, EUR deposit 0.055%, CHF deposit -0.906%, ATM 8.950%, 25-delta risk reversal -2.80% favoring EUR puts/CHF calls, butterfly 0.45%.
Exit Strategies for a Sick Floan

1. Strategy 0: do nothing – wait for better times
2. Strategy 1: outright forward
3. Strategy 2: call on the foreign currency
4. Strategy 3: vanilla zero cost structure
5. Strategy 4: exotics zero cost structure
6. Strategy 5: sue the bank
7. Strategy 6: reduce coupon further by trading a currency related swap and then sue the bank
Strategy 0 - Wait for Better Times

- EUR required in 6 M unknown
- Unlimited risk if EUR-CHF drops further
- Illegal: speculation – under new laws
Strategy 1 - Outright Forward

- Treasurer trades an outright forward contract at zero cost at 1.0340
- requires EUR 19,342,360
- no participation in rising EUR-CHF
Strategy 2 - EUR Put CHF Call

- EUR put CHF call
  - strike 1.0000 for EUR 319,400
  - worst case EUR 20 M
  - unlimited participation in rising EUR-CHF
Strategy 3 - Risk Reversal (zero cost)

- long CHF call EUR put at 1.0000 requires EUR 20 M
- short EUR call CHF put 1.0510 requires only EUR 19,029,495
- Not very attractive as EUR/CHF RR favors EUR calls
Strategy 4 - Shark Forward

**EUR-CHF exit strategies compared**

- **worst case 1.0000 EUR-CHF requires EUR 20 M**
- **bonus level 1.1280**
- **best case 1.1279 requires only EUR 17,732,068: save EUR 2,267,932 compared to the worst case**
Legal Limitations

- “risk minimization” required, but undefined
- “speculation prohibited” – *devilaties* concept
- floans only if FX risk is hedged
- supervising ministry silent

The only solution to the problem in a society with developed financial markets is

**Education Education Education**
Recap of the Outcome

Treasurer’s choice: strategy 1: outright forward

FAZ recommendation: strategy 0: wait: actually illegal / hindsight view

Best strategy: strategy 4: shark: saves about EUR 1M compared to strategy 1

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last quarter of 2015 the EUR-CHF recovered
spot ref 1.0900 in November 2015
shark is superior: least EUR amount required with worst case protection at zero cost
Outlook

- Public sector CHF floans in Germany mostly cleaned up
- Private sector CHF floans in Poland, Hungary sill alive
- Other sick floans are expected to arise in many of the EM currencies including INR, CNH, BRL, ZAR.
Resources

Publications:
FX Options and Structured Products, 2nd Edition [Wystup, 2017]
Risiken begrenzen, Chancen nutzen – Vier Strategien zum Umgang mit
Fremdwährungskrediten [Wystup, 2016b]
Brexit-Risiko erfordert Absicherung von Pfund-Einnahmen [Wystup, 2016a]

MathFinance Software (MFVal, MIRCL):
https://mathfinance.com/products/

18th Frankfurt MathFinance Conference:
16-17 April 2018
https://www.mathfinance.com
Solution to all Problems


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