To Define Best Practice First Define the Exposure

- **Long-Term**: M&A; Plant Expansion; Net-Equity
- **Medium-Term**: Multi-Year Supply Contracts
- **Short-Term**: Three-Month Receivable
To Define Fair Value Define the Horizon
Three Months
5 YEARS
30- YEARS

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Further Defining the Exposure

• Cash Flow VS Balance Sheet VS Economic
• Receivables, Dividends, Inter-Company
• Incidental VS Potential EPS Impact
BUILDING A FRAMEWORK FOR ANALYSIS

- **Long-Term**: PPP; Real Effective Exchange Rates
- **Medium-Term**: Trade Flows; Rate Differentials
- **Short-Term**: Market Positioning; Risk Appetite
THE LONG-RUN

- PPP

- Productivity
PPP: Real Long-Run Valuation

• Determined by Relative Inflation Rates

• Focus on Mean Reversion

• Defining Over/Under Valuation Based on PPP: Magnitude + Duration
Defining Over/Under Valuation

- **Magnitude:** 15-20%

- **Duration:** Five to Seven Years
PPP Case Study: The AUD

AUD Over or Under Valued Relative to USD (%)
- Range: 10 Years
- Over(+)/under(-) valued: 26.43%

Chart Selection:
- % Over/Under
- Spot vs. PPP

AUDUSD Spot: 0.93
PPP Estimate: 0.69
Spread: 0.24

Back to Rankings 204
Additional Long-Run FX Valuation Techniques

• REERS: Real Effective Exchange Rates: BIS/IMF

• The BIG-MAC Index: Bugernomics
REER: Real Effective Exchange Rate

• A Trade Weighted Average of Individual Exchange Rates

• More Reliable than Relying on Individual Bilateral Exchange Rates
AUD:
Other Long Term Valuation Techniques

BISBAUR Index: Mid Price
- BISBAUR Index: 97.6200
- 193.028 Index: 115.4700

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AUSSIE BIG-MAC INDEX: A Leading Indicator?
PPP and Other LT Approaches: How Useful?

• Clearly a Long-Term Technique

• Caveats: Choice of Base Year
  Choice of Price Deflator

• In the Long-Run Markets are a Weighing Machine....in the Short Run Markets are a Voting Machine
The Medium-Run

- Cyclical Trade Patterns-Price Trends
- Monetary Policy/Interest Rate Differentials
Trade Flows—Volumes and Prices: Affected by The Business Cycle
Looking Behind AUD Trade Flows: Chinese Growth

China GDP Constant Price YoY

National Bureau of Statistics...

Last Price
- CNGDPYOY Index (R1) 7.5
- AUD Currency (R2) 0.9138

Line Chart

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RATE DIFFERENTIALS

AUUS10 Index

10/02/2012 - 10/02/2013

Last Price
- AUUS10 Index (R1) -1.3210
- AUD BGN Currency (L1) 0.9353

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MONETARY POLICY OUTLOOK: FORECASTS

Median Forecast

Q3 2014

04/17 05/07 05/27 06/16 07/06 07/26 08/15 09/04
MONETARY POLICY OUTLOOK: MARKETS
MONETARY POLICY OUTLOOK: MODELS

- The Taylor Rule: Inflation VS Unemployment
THE SHORT-RUN: RISK, SENTIMENT, POSITIONING

- Risk Appetite
- Investor Sentiment
- Market Positioning
Assessing Risk Appetite

![Chart showing changes in WMCCCONS Index and AUD currency from 02/29/2012 to 09/30/2013]
INVESTOR POSITIONING

[Diagram showing currency amounts issued by country for the years 2013 and 2012, with a focus on the Australian Dollar and Japanese Yen.]
MARKET POSITIONING: OPTIONS

AUD CALLS - AUD PUTS
## Scenario Analysis Using Options

<table>
<thead>
<tr>
<th>Currency</th>
<th>Source</th>
<th>Spot</th>
<th>Scenario</th>
<th>%</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Start</th>
<th>End</th>
<th>Prob</th>
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<tr>
<td>AUDUSD</td>
<td>BGN</td>
<td>0.9392</td>
<td>Gain</td>
<td>2</td>
<td>0.9580</td>
<td></td>
<td>Today</td>
<td>by</td>
<td>6M</td>
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<td>BGN</td>
<td>0.9392</td>
<td>Between</td>
<td>.9100</td>
<td>.9850</td>
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<td>Above</td>
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<td></td>
<td></td>
<td></td>
<td>on</td>
<td>Q4 11</td>
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</tbody>
</table>

**Scenarios**

**Horizon**

---

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Looking Forward: Devising an Early Warning System

• Real Exchange Rate

• Medium-Term: Sovereign and Corporate Debt Profile

• Short-Term: Foreign Portfolio Flows
CREATING A COUNTRY-RISK MODEL

- Financial Market Risk: Cross Asset Volatility, Rollover Risk
- Economic Risk: Reserves VS Imports, Inflation, Unemployment
- Political Risk: Regulation and Corruption Indices
- For All of the Above: Current VS Trend
Linking Valuation Techniques to FX Risk Management Policy

• **Better Use** of FX Valuation Techniques = More Effective Hedge Implementation

• **Different Tenor** → Different Technique
## INVESTOR POSITIONING: FUTURES

### CME Australian Dollar

<table>
<thead>
<tr>
<th>Non-Commercial</th>
<th>Futures Commit</th>
<th>Chg</th>
<th>F &amp; O Commit</th>
<th>Chg</th>
<th>Futures Traders</th>
<th>Chg</th>
<th>F &amp; O Traders</th>
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<tr>
<td><strong>Long</strong></td>
<td>20049</td>
<td>-9756</td>
<td>19423</td>
<td>-10077</td>
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<td></td>
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<tr>
<td><strong>Short</strong></td>
<td>54868</td>
<td>-2297</td>
<td>52780</td>
<td>-2814</td>
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<tr>
<td><strong>Spreading</strong></td>
<td>1339</td>
<td>-164</td>
<td>11977</td>
<td>2305</td>
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<tr>
<td><strong>Net Position</strong></td>
<td>-34819</td>
<td>-7459</td>
<td>-33357</td>
<td>-7263</td>
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<td></td>
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</table>

**Bullish (%)**

-63.5  

**NET POSITIONS**

**CURRENT DATA**

*Report Date: 09/24/13*
COMMON THEME: MARKET BASED APPROACHES

- Fed Fund Futures: Policy Outcomes
- NDFs, Options, Futures: FX Market Valuation, Direction and Scenario Analysis
WHY?

• Corporate Business Strategies Change Frequently

• Risk Appetite Cycles have Shortened Dramatically
KEY TAKEAWAY: EXPOSURES EVOLVE OVER TIME

- M&A Transactions:
  - Begin as Long-Term Valuation Exercises
  - But Often End as Spot Transactions

- Short Term Cash Flow Hedges Morph into LT Hedging Programs
KEYS TO MORE EFFECTIVE FX RISK MANAGEMENT

• Choose the Appropriate Market Analysis Techniques
• Understand Internal Company Dynamics and Requirements
• Educate Internally and Externally