Markets have changed significantly over the last decade, specially after the 2008 crisis. Regulators around the world have increased the scrutiny around the derivatives market looking to guarantee that every player acts under fair conditions.

Simultaneously, markets have moved away from products overly exotic in favor of simpler structures, that address directly the client’s needs, such as currency, rates and commodity hedges.

The above is encompassed in a series of measures aimed at increasing capital buffers for financial institutions and mitigate market, credit and operational risks.

The result is a gradual come back of public sector entities to the derivatives market, raising capital offshore and using hedges to efficiently manage currencies and rates exposure with the comfort of the increased transparency.
Markets Today: Main Themes

- Low rates environment has pushed investors to emerging economies. However the appetite for EM credit doesn’t always come along with appetite for EM currencies, since this appetite has been focused mainly in USD debt.

- Fiscal policy, via infrastructure spending, is acting as an engine for growth in EM which in turn generates need to hedge currency differences between funding and revenues. This time around governments are working closely with the private sector to promote Public-Private-Partnerships, as such, the risk management has become more relevant.

- Multilaterals are playing a key role, not only as lenders, but also as a bridge to close the gap between global investors and the local entities, for example, offering currency swaps to mitigate FX exposure generated when these entities borrow funds in hard currencies.
Risk Management: Why hedging?

- Eliminate Risk
  - Match the currency of funding with the currency of revenues
  - Align your exposures. Example: Oil price goes up, debt of oil consumer goes down

- Reduce Financing Costs
  - Financing might be cheaper if entity takes a loan in USD and swaps to local currency
  - Often costs versus local debt are lower because of currency basis dynamics

- Diversify Sources Of Funding
  - Relief pressure of the local market by borrowing in hard currency and swapping back
  - Offshore investors are keen of buying your credit, probably not your currency

- Benefit from Market Distortions
  - A sell off in EM credit spreads doesn’t necessarily mean defaults. Make good use of these events and swap existing debt to local currency using a credit contingent swap to generate additional savings

- It’s Easy
  - Multilaterals include conversion clauses in their loan contracts to be used at the borrowers decision
J.P. Morgan Local Currency Swaps Capabilities Across the World

<table>
<thead>
<tr>
<th>Americas</th>
<th>Europe</th>
<th>Africa</th>
<th>Asia Pacific/Middle East</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRL 25y / $200k 400,000,000</td>
<td>CHF 30y / $200k 500,000,000</td>
<td>ZAR 30y / $250k 300,000,000</td>
<td>ILS 20y / $100k 180,000,000</td>
</tr>
<tr>
<td>CAD 40y / $200k 600,000,000</td>
<td>CZK 20y / $100k 180,000,000</td>
<td>NGN 10y / $30k 25,000,000</td>
<td>KRW 15y / $50k 60,000,000</td>
</tr>
<tr>
<td>MXN 25y / $150k 300,000,000</td>
<td>DKK 30y / $100k 300,000,000</td>
<td>GHS 3y / $5k 10,000,000</td>
<td>THB 10y / $30k 25,000,000</td>
</tr>
<tr>
<td>COP 20y / $75k 150,000,000</td>
<td>HUF 15y / $75k 100,000,000</td>
<td>KES 2y Upon Request</td>
<td>TRY 20y / $75k 12,000,000</td>
</tr>
<tr>
<td>PEN 20y / $50k 120,000,000</td>
<td>NOK 30y / $100k 300,000,000</td>
<td>ZMW 2y Upon Request</td>
<td>AUD 30y / $100k 250,000,000</td>
</tr>
<tr>
<td>ARS 5y / $25k 75,000,000</td>
<td>SEK 30y / $100k 270,000,000</td>
<td>BWP 1y Upon Request</td>
<td>NZD 15y / $50k 70,000,000</td>
</tr>
<tr>
<td>UYU 10y / $30k 50,000,000</td>
<td>PLN 15y / $50k 60,000,000</td>
<td>SAR 10y / $30k 25,000,000</td>
<td>CNY 5y / $30k 50,000,000</td>
</tr>
<tr>
<td>CLP 20y / $100k 150,000,000</td>
<td>RON 10y / $30k 30,000,000</td>
<td>CNH 10y / $75k 70,000,000</td>
<td>IDR 10y / $20k 25,000,000</td>
</tr>
</tbody>
</table>
Case Study: Financing Education in Colombia

Overview:

Colombia needed a customized loan that the national student loan agency, ICETEX, could on-lend to low-income students. IBRD structured a loan with a longer grace period, longer than average maturity, disbursement-linked repayment schedule, and disbursement in Colombian peso. The total amount of the loan is the equivalent in COP of USD 300 million with a final maturity of 22.5 years.

COP Loan to ICETEX plus currency swap with JPMorgan

Commodity Hedges: Oil linked loan for a net consumer country

### Indicative Swap Details: Client Buys Oil hedging

- **Starting Loan Notional** $100mm
- **Tenor** 5 years
- **Amortizes** semi-annually, $10,000,000 per period at a fixed rate (regardless of whether payment to IBRD is made by JPM or End Client)
- **Additional spread** as function of strike
- **Amortization payments** by the client are a function of the average price of oil over the previous 6 month period
- **When oil is high** (i.e. above $80), client makes fraction of notional re-payment

<table>
<thead>
<tr>
<th>Average Oil Price over 6 months period</th>
<th>Client Pays</th>
<th>JPM Pays</th>
<th>IBRD Receives</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0-$80</td>
<td>$10</td>
<td>$0</td>
<td>$10</td>
</tr>
<tr>
<td>$80-$84.99</td>
<td>$8</td>
<td>$2</td>
<td>$10</td>
</tr>
<tr>
<td>$85-$89.99</td>
<td>$6</td>
<td>$4</td>
<td>$10</td>
</tr>
<tr>
<td>$90-$94.99</td>
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</tr>
<tr>
<td>$95-$99.99</td>
<td>$2</td>
<td>$8</td>
<td>$10</td>
</tr>
<tr>
<td>$100+</td>
<td>$0</td>
<td>$10</td>
<td>$10</td>
</tr>
</tbody>
</table>

### If Oil Averages $84 over a 6 month period

- JPMorgan pays $2,000,000
- IBRD pays $8,000,000
- Client receives $10

### If Oil Averages $102

- JPMorgan pays $10,000,000
- IBRD pays $8,000,000
- Client receives $10