The Global Dollar Cycle
by Obstfeld and Zhou

Discussion by Şebnem Kalemli-Özcan

Fall BPEA Conference, September 2022
Takeaways and Contribution: Bringing all under one Roof

1. The global dollar cycle (GDC) correlates with global financial conditions, global risk sentiments and US monetary policy.
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   - GFC-Risk Sentiment-US monetary policy correlation: Rey (2013, JH), Miranda-Agrippino and Rey (2022, RESTUD)

   - Financial channel > trade channel given USD’s global footprint in finance: Bruno and Shin (2015, RESTUD)
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   - Large literature on ‘contractionary depreciations’ in EMDE

   - EMDE affected worse than AE from GFC: Kalemli-Ozcan (2019, JH), di Giovanni, Kalemli-Ozcan, Ulu, Baskaya (2022, RESTUD)
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3. What are the necessary ingredients in the new generation open economy macro models to capture this ‘financial’ channel of international transmission?
   - USD exchange rate determination modeling needs financial factors: Gabaix and Maggiori (2015, QJE), Itskhoki and Mukhin (2021, JPE)
   - Risk averse investors, financial frictions/segmented markets or both?
An excellent paper that gives us a unifying framework over a large and complex literature.
**Comments**

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My comments will be on digging deeper on the following Qs:

1. Why EMDE affected worse than AE from GDC?

2. How to match models of UIP deviations with the UIP facts?

3. Why EBP?
1. WHY EMDE FARE WORSE?

Authors' Answer:

- Shallower financial markets (outcome)
- High FX debt/balance sheet weakness (outcome)
- Weak regulation and/or less credible macro/monetary policies (primitive)

I will argue:

- UIP not holding in EMDE and the reasons why it does not hold can separate outcomes from primitives
- Explain why EMDE affected more from GDC
- Provide lessons for EMDE policy makers on what to do

⇒ Recent optimal policy models' welfare maximization works via closing the UIP wedge
⇒ EM specific frictions/risks are going to be important
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**Floaters Rate Response to Depreciations: Exogenous US Tightening**

*Using surprise $\uparrow$ in U.S. policy rate—1996-2018:*

Government bond rate differentials (12month) increase in EMs and decrease in AEs

Emerging Economies

Advanced Economies

Investors pricing of EMDE risk plays an important role

Source: Kalemli-Ozcan (2019-JH); di Giovanni, Kalemli-Ozcan, Ulu, Baskaya (2021-RESTUD)
Exogenous US Tightening is contractionary for EMDE (and depreciates the exchange rate)

In spite of loose monetary policy!

Source: de Leo, Gopinath, Kalemli-Ozcan (2022)
2. UIP Modelling and UIP Facts
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The authors provide a very useful framework to connect several models and facts in the literature

\[ \lambda_{t+h}^e = (i_t - i_{US}^t) - (s_{t+h}^e - s_t) \neq 0 = \gamma_t^S + \rho_t \]

IR Differential \hspace{2cm} ER Adjustment

\[
\text{convenience/liquidity premium} \hspace{2cm} \text{excess returns}
\]

‘Dark Matter’ = \( \rho_t = \rho_{US}^t + \rho_{COUNTRY}^t = \text{Global} + \text{Local} \)

⇒ Global risk-aversion + Intermediary Friction + Country friction/risk sensitivity

\[ \lambda_{t+h}^e = \gamma_t^{US} + \gamma_t^{GOV} + \rho_t^{US} + \rho_t^{\text{credit/default risk}} + \rho_t^{\text{currency/policy risk}}. \]
UIP Macro Facts

Emerging Markets

\[ \lambda_{t+h}^e = (i_t - i_t^{US}) - (s_{t+h}^e - s_t) \]  

- UIP Premium
- IR Differential
- ER Adjustment

\( (s \text{ in LC/$}) \)

- UIP holds on average in AE, **but not** in EM.

Advanced Economies

Source: Kalemli-Ozcan and Varela (2019)
UIP MACRO FACTS

Emerging Markets

\[ \lambda_t^{e+h} = (i_t - i_t^{US}) - (s_t^{e+h} - s_t) \quad (s \text{ in LC/¥}) \]

- UIP holds on average in AE, **but not** in EM.
- VIX and UIP premium comove in both AE and EM.

Source: Kalemli-Ozcan and Varela (2019)
## UIP Granular Facts: EM

<table>
<thead>
<tr>
<th>UIP Premium</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflows/GDP*_{it−1}</td>
<td>-0.005***</td>
<td>-0.003***</td>
<td>-0.001</td>
<td>0.003</td>
<td>-0.010</td>
<td>0.031</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.001)</td>
<td>(0.001)</td>
<td>(0.050)</td>
<td>(0.040)</td>
<td>(0.031)</td>
</tr>
<tr>
<td>$EPU*_{it−1}$</td>
<td>0.015***</td>
<td>0.011**</td>
<td>0.010**</td>
<td>0.012***</td>
<td>0.009***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.005)</td>
<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.003)</td>
<td></td>
</tr>
<tr>
<td>log(VIX*_{t−1})</td>
<td>0.054***</td>
<td>0.054***</td>
<td>0.046***</td>
<td>0.039***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.008)</td>
<td>(0.009)</td>
<td>(0.009)</td>
<td>(0.010)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Convenience Yield/Liquidity Premium*_{it−1}</td>
<td>0.050</td>
<td>0.040</td>
<td>0.017</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.037)</td>
<td>(0.030)</td>
<td>(0.020)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected Inflation Differential*_{it−1}</td>
<td>0.393***</td>
<td></td>
<td></td>
<td>0.074</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.054)</td>
<td></td>
<td></td>
<td>(0.390)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sovereign Default Risk*_{it−1}</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.584***</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.110)</td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>3288</td>
<td>3288</td>
<td>3288</td>
<td>2782</td>
<td>2245</td>
<td>1711</td>
</tr>
<tr>
<td>Number of Countries</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>19</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>Currency FE</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Notes: * p < 0.10 ** p < 0.05 *** p < 0.01. Currency-time two-way clustered standard errors in parentheses. 21 emerging markets currencies. Period 1996m11:2018m12. Capital inflows are measured as changes in gross debt liabilities. The UIP premium and the exchange rate adjustment term are measured using expected exchange rate changes from Consensus Forecast.

Source: Kalemli-Ozcan and Varela (2019)
### UIP Granular Facts: EM and AE Does not depend on measurement of exchange rate changes—survey based expectations or realized

<table>
<thead>
<tr>
<th>Panel A: Emerging Markets</th>
<th>Panel B: Advanced Economies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Realized UIP Premium</td>
</tr>
<tr>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td>Inflows/GDP(_{it-1})</td>
<td>-0.023***</td>
</tr>
<tr>
<td></td>
<td>(0.004)</td>
</tr>
<tr>
<td>(EPU_{it-1})</td>
<td>0.019**</td>
</tr>
<tr>
<td></td>
<td>(0.008)</td>
</tr>
<tr>
<td>(\log(VIX_{t-1}))</td>
<td>0.052**</td>
</tr>
<tr>
<td></td>
<td>(0.021)</td>
</tr>
</tbody>
</table>

| Observations | 3288 | 3288 | 3288 | 2209 | 2209 | 2209 | 2209 | 2209 | 2209 |
| Number of Countries | 21 | 21 | 21 | 12 | 12 | 12 | 12 | 12 | 12 |
| Currency FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: * p < 0.10  ** p < 0.05  *** p < 0.01. Currency-time two-way clustered standard errors in parentheses. 12 advanced economies currencies and 21 emerging economies currencies. Period 1996m1:2018m12. Capital inflows are measured as changes in gross debt liabilities. The UIP premium and the adjustment term are measured using expected exchange rate changes from Consensus Forecast and realized exchange rates.

Source: Kalemli-Ozcan and Varela (2019)
3. Why EBP? Exogenous changes in risk sentiments?
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How to measure exogenous changes in risk sentiments leading to $ appreciations and ↑ spreads?

Dollar 'shocks' not same as VIX or US monetary policy shocks, EBP captures former better. Why?

Sectoral Shares in External Debt—EM sovereigns borrow in bonds (mostly local currency), EM corporates and banks in loans (mostly FX)

Source: Avdjiev, Hardy, Kalemli-Ozcan, Serven (2022, JEEA
**Alternative: Earnings Volatility**

Financial frictions amplify uncertainty shocks (for earnings) through pricing of risk, and not due to binding balance sheet constraints.

Source: Akinci, Kalemli-Ozcan, Queralto (2022)
Conclusion

- Valuable paper providing a unifying framework on how to think GDC and its detrimental effects especially on EMDE

- **Important policy implication:**
  - The case for flexible exchange rate stronger
    - If most detrimental effects go from higher risk premia, flexible rates absorb some of this premia
    - Authors show: ONLY pegs and crawls hike policy rates as a response to GDC. Not hiking policy rate helps with the contractionary effects.