

Coping with Capital Flow Volatility

Paolo Pesenti
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with assistance from Raymond Guiteras

Different from other lectures...

- Many questions
- very few answers
- and no conclusions

Outline

- Gains and losses from capital mobility
- Capital reversals and sudden stops: Stylized facts and interpretations of recent crisis episodes
- Preventing crises: A few key questions
- Managing crises: A few key questions

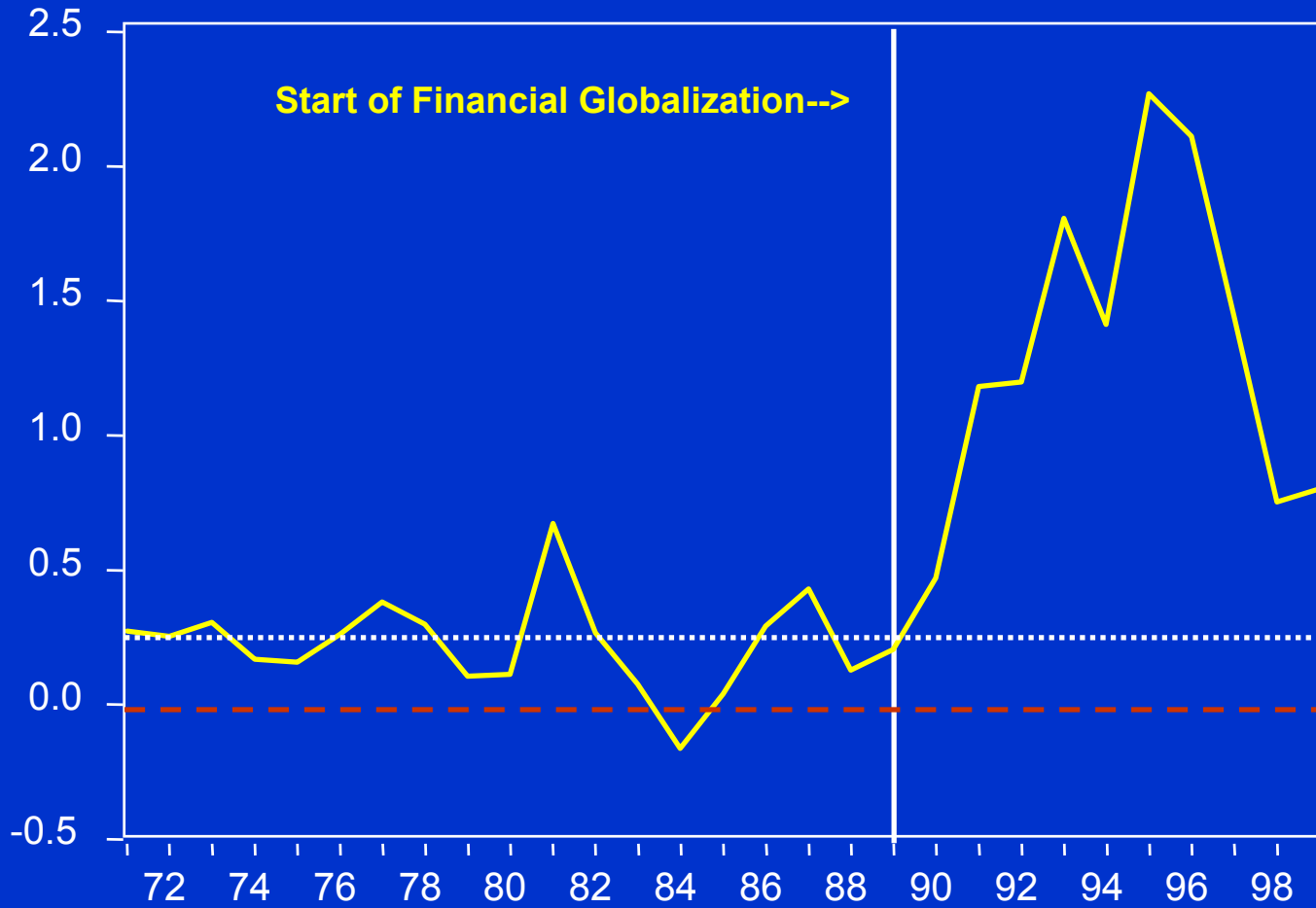
The case *for* capital mobility

- Capital flows provide superior insurance opportunities against country-specific shocks
 - Dampen business cycles
 - Allow households to smooth consumption
 - Allow firms to manage risk
- Capital flows promote efficient allocation of resources
 - Transfer savings from low- to high-return countries
 - Improve standard of living in low-income countries

The case *against* capital mobility

- Capital flows are volatile
- Countries suffer from sudden reversals in capital flows and large-scale currency and financial crises
 - emerging economies particularly vulnerable
- Many recent examples:
 - Latin America (early 1980s)
 - Scandinavia (early 1990s)
 - Mexico (1994)
 - Thailand, Indonesia, South Korea (1997)
 - Russia (1998)
 - Latin America (2001-...)

Real capital inflows to EMs



Source: WEO, April 2000; deflated by US WPI.

Some details

- Capital inflows / GDP:
 - 9.4% Brazil (1992-95),
 - 25.8% (Chile 1989-95),
 - 27.1% Mexico (1989-94),
 - 45.8% Malaysia (1989-95),
- Public flows in the 1990s were less than one-fifth of total private flows

What explains the sharp increase in capital flows to EMs?

- Trend toward openness and deregulation, relaxation of controls on foreign borrowing
 - Ideological shift to free markets and privatization
 - Infrastructure improvements (telecommunications, international standards on banking supervision and accounting)
 - Regulatory changes (allowing institutional investors and banks to increase their exposure overseas)
 - Perception of new, high-yield opportunities
- Result: unprecedented flows starting around 1989

Money in, money out: characteristics of recent crises

- Before: Capital liberalization and lending booms
- Crisis: Sudden capital reversals
- After: Credit crunch and output contraction
- Contagion

Sudden stops

Country	Episode	Change in capital flow (% of GDP)
Argentina	1982-83	-20
Ecuador	1995-96	-19
Mexico	1981-83	-12
Korea	1996-97	-11
Thailand	1996-97	-26
Turkey	1993-94	-10

The consequences of capital reversals

- Large-scale depreciation or devaluations, reducing incomes and spending
- High fiscal costs of bank restructuring (borne by taxpayers)
- Credit crunch (banks stop issuing new loans, cut back on trade credit and working capital)
- Equity market crash
- Severe recession, unemployment, possibly high inflation

Contagion

- Observed in all 1990s crises
 - occurrence across several countries
 - rapid regional spread
- Example: devaluation of the Thai baht in July 1997 followed by currency crises in Malaysia and Indonesia within a month, and in Korea a few months later.

Several possible explanations of contagion

- Common shocks or sources of vulnerability
- Trade linkages
 - a currency depreciation in one country reduces the competitiveness of other countries' exports
- Financial interdependence
 - a crisis in one country leads outside creditors to recall loans elsewhere, and a credit crunch spreads
- Confidence links
 - a currency crisis in one country worsens market participants' confidence in similar countries

Interpreting recent crises

- Fundamentals view: implicit guarantees, contingent liabilities, moral hazard...
- Panic view: self-fulfilling expectations, multiple equilibria...

Balance of payments crises

- Consider a country whose authorities pursue an expansionary monetary policy while attempting to maintain a fixed exchange rate
- Defending the exchange rate depletes the central bank's stock of foreign currency reserves
- A currency attack ensues: agents with excess liquidity exchange domestic currency for foreign currency-denominated securities or domestic interest-bearing assets

The exchange rate regime is part of a broader policy package, and can be sustained only if it does not conflict with other objectives

The role of fiscal imbalances

- Fiscal imbalances make a country more vulnerable to currency crises and speculative attacks.
 - the credit expansion previously described can be thought of as the result of the central banks' monetization of a fiscal deficit
- A speculative attack is triggered by the market's *foresight* of an unavoidable depreciation. What matters are *future* policy stances as anticipated by investors, not the policy stances observed in the *past*
- The absence of a sizable fiscal deficit does not rule out a currency crisis
- *The observed fiscal balance may be a poor indicator of the effective government net liabilities*

Contingent liabilities

- Consider a country with no public deficit or debt and a fixed exchange rate
- The private sector suffers a series of shocks to corporate and bank profits
- Financial difficulties require the government to bail out troubled institutions
- The government ultimately will be forced to finance the bailout via a monetary expansion or a reduction in reserves
- Such an intervention is inconsistent with the the peg
- Agents observe the private sector's weakness and trigger a speculative attack

Current account deficits and currency crises

- A current account (CA) deficit represents net borrowing from the rest of the world, so dependency on foreign capital can make a country vulnerable to a crisis
- A terms of trade deterioration can significantly reduce a country's ability to repay its debts. Foreign investors may then decide not to extend lending
- If the private sector become insolvent *vis-à-vis* its external creditors, the build-up of private sector liabilities ultimately represents a burden for the public sector.
 - The public sector will be called on to rescue private institutions as soon as foreign creditors stop rolling over existing debt
- The dynamics of a currency crisis then follow the same logic as in the contingent liabilities case

Under what conditions can a current account deficit become unsustainable?

- A debtor country must be able to run trade surpluses in the future. A permanent deterioration of the export outlook adversely affects the sustainability of its external position.
- Domestic inflation increases the price of traded goods under a fixed exchange rate, leading to an export slowdown
- Competitiveness falls when the exchange rate appreciates against important trading partners
 - Example: Asian crisis countries pegged to the US dollar. The competitiveness of their exports to Japan fell as the dollar appreciated against the yen
- *A CA deficit that finances investment in tradable sectors provides a new source of export revenue, which can finance the debt*
- *A CA deficit that finances investment in non-traded sectors or low-profitability projects may not be sustainable.*

The overborrowing syndrome

- Private agents assume their investments are guaranteed by the government
- If foreign creditors are willing to lend against future bailout revenue, unprofitable projects and cash shortfalls will be financed via external borrowing
- An unsustainable path of current account deficits will follow

Twin crises

Financial and currency crises are linked

- A government involved in a bailout of financial institutions burdened by non-performing loans must undertake appropriate domestic fiscal reforms, possibly resorting to seigniorage revenues through money creation, or lose foreign reserves.
- Speculation in the foreign exchange market, driven by expectations of inflationary financing/reserves depletion, causes a collapse of the currency and anticipates the event of a financial crisis

Panic-driven crises

- Debt servicing difficulties may also arise from creditor coordination problems when the ratio of short-term debt to liquid assets is high
- Panic-driven creditor liquidity run or rollover crises
 - Self-fulfilling multiple equilibria
 - Sunspot “bad” equilibria
 - Bank runs or panics

The logic of a panic-driven crisis

- Panic: Short-term creditors refuse to roll over their loans and demand immediate payments.
- Self-fulfilling runs: If all creditors refuse, short-term debts exceed foreign exchange reserves. It is rational for me to join the panic (collective action problem)
- Multiple equilibria: If other creditors do not panic, I have no reason to panic
- A panic-driven crisis: a sudden shift of expectations, *with no change in fundamentals*, can take a country from the good equilibrium (no panic) to the bad equilibrium (panic)

Problems with the panic view

- Silence on the cause of the shift in expectations
- Multiple equilibria are possible only if fundamentals are sufficiently bad
 - in practice, this is virtually indistinguishable from the “fundamental” view

Synthesis view: panic magnifies fundamental vulnerabilities

Crisis prevention: key questions

- Do banking supervision and corporate governance make a difference?
- Should the process of financial liberalization and globalization slow down?
- Do balance sheet mismatches matter?
- What is the best exchange rate regime?

What causes a crisis? Shifts in the conventional wisdom

From low saving rates (Tequila)...
to soft pegs, overborrowing (Asia) ...
to financial sector problems (Russia)

At present there is much greater consensus that financial vulnerabilities, especially a **weak banking sector**, play a key role.

Banking sector vulnerabilities: a partial list

- excessive foreign borrowing by domestic banks
- lax supervision and weak regulation
- low capital adequacy ratios
- distorted incentives for project selection and monitoring
- outright corruption in lending practices
- non-market criteria of credit allocation
 - *relationship banking model* emphasizes semi-monopolistic relations between banks and firms, downplaying price signals

The role of foreign banks

- In normal times: greater domestic competition, more efficiency, introduction of new managerial skills, transfer of innovative know-how
- During a crisis, a foreign bank that operates locally has much more at stake in the stability of the domestic banking system and it is much less likely to call in loans.
- Foreign banks may adopt more rational lending practices than domestic banks, relying less on relationship banking.
- They may also be subject to less pressure and arm-twisting from local political and economic élites seeking support of particular projects

The role of rapid liberalization

In the presence of internal distortions, a rapid process of capital account liberalization can make things worse

- larger mismatches
- excessive borrowing
- vulnerability to global shocks or to sudden changes in investor sentiment.

Debt composition: avoid mismatches

- Asset-liability mismatches carry risk
 - local-currency assets and foreign-currency liabilities
 - long-term assets and short-term liabilities
- Asian crisis: large share of foreign debt short-term, denominated in foreign currencies
 - by the end of 1996, many banks' short-term liabilities comprised more than 50% of total liabilities
- Short-term external liabilities exceeded foreign reserves in Korea, Indonesia and Thailand

Exchange rate regimes

- Institutional choices signaling policies, priorities, and commitments
- Vary in rigidity. The choices go beyond fixed versus floating rates
- Range from institutional arrangements (monetary unions, dollarized regimes, and currency boards) to conventional fixed exchange rates, crawling pegs, basket pegs, managed floats, and free floats

Exchange rate regimes and capital mobility

- **The impossible trinity:** three goals of financial market openness, monetary policy independence, and exchange rate stability are inconsistent
- A country can attain at most two out of the three
- Most countries have moved in the direction of increasingly open capital markets
- *Maintaining free capital mobility requires a choice between exchange rate stability and monetary policy autonomy*

The fixed exchange rate as a nominal anchor

- By choosing a fixed exchange rate and free capital mobility, a country loses monetary autonomy
 - Monetary authority cannot inflate
- A fixed exchange rate can signal a commitment to low inflation
 - especially useful for countries with low credibility and/or a history of hyperinflation

Benefits of exchange rate flexibility

- Flexible exchange rate regimes allow monetary policy to respond to the business cycle.
- A flexible regime can also help a country adjust to external shocks, such as the swings in capital flows and the terms-of-trade shocks that have been factors in recent crises.
- Example: European Monetary System crisis
 - Unification and the resulting increase in western German spending in the eastern länder drove up interest rates
 - Other European countries, facing different economic conditions, were unwilling to follow Germany by raising rates
 - The strains broke apart Europe's Exchange Rate Mechanism in 1992-93, although it was later restored.

Flexible rates may discourage excessive borrowing

- Flexible exchange rates make the risk of foreign currency-denominated borrowing by banks and firms explicit.
 - may discourage the accumulation of unhedged foreign currency liabilities
- Pegged exchange rates, on the other hand, can provide an implicit guarantee
 - promote unhedged foreign-currency borrowing and, since they are least credible at long horizons, skew financial flows toward the short end
 - such unhedged, short-term, foreign currency denominated liabilities are a time bomb waiting to explode

What is the best exchange rate regime?

- No single exchange rate regime is best for all countries at all times: the choice depends on a country's circumstances.
- Stability depends on good policies, no matter what exchange rate regime a country chooses
 - especially: strong financial regulation and appropriate monetary and fiscal positions

Extreme choices vs. middle choices

Friedman: “the system of occasional changes in temporarily rigid exchange rates seems to me the worst of two worlds: it provides neither the stability of expectations that a genuinely rigid and stable exchange rate could provide in a world of unrestricted trade and willingness and the ability to adjust the internal price structure to external conditions nor the continuous sensitivity of a flexible exchange rate.”

Crisis management: key questions

- Do capital controls work?
- How should fiscal and monetary policy respond?
- Do large-scale packages work?
- What is the optimal degree of private sector involvement (PSI)?

Capital controls controversies

- *Capital controls can successfully curb capital flows, but there is no agreement on whether they are needed to restore growth.*
- The Malaysian economy recovered soon after controls were imposed, but it is not obvious that the controls promoted a fast recovery
 - strong demand for the region's exports brought about comparable recoveries in other East Asian economies that did not impose controls.
- Some argue that Malaysia was more vulnerable than the other Asian economies in 1998, so that its performance would have been poorer without capital controls, but there is disagreement on this point.

The policy mix dilemma

- In a crisis situation an active monetary policy is essential to contain the extent of the depreciation
- In the presence of balance sheet mismatches, a depreciation damages the solvency of corporations with external debt: scope for interest rate hike
- But excessive and prolonged monetary tightening is unwarranted if a simultaneous policy of fiscal consolidation damages prospects of recovery

Need to balance cyclical and structural aspects of fiscal adjustment

What to do when a crisis generates an external financing gap?

- In principle there are three options:
 - A large-scale bail-out: an official support package fills the entire financing gap
 - A full bail-in of private investors (debt rescheduling, restructuring, reduction)
 - A combination of official financing, policy adjustment and appropriate private-sector bail-in
- Bail-in vs. bail-out: the most controversial issue in the international financial architecture reform debate

The case for official lending

- The IMF as the international lender of last resort (ILOLR)
 - Avoid runs, panic-driven bad equilibria
- The official creditor/IMF can monitor/control policy effort
 - this *conditionality lending* reduces the avoidable costs of a crisis (liquidation costs, excessive policy/domestic adjustment)
- IMF liquidity support can prevent international contagion

Arguments against an ILOLR

- ILOLR solutions are not optimal when crises may be partly caused by weak fundamentals.
- An ILOLR can lead to *moral hazard*.
- A tradeoff: the ILOLR's ability to head off a run vs. the potential for its existence to exacerbate moral hazard

Moral hazard: debtors...

- Moral hazard (MH) is a term widely used (and mis-used) in the literature on capital reversals.
- One dimension of moral hazard is *debtor* MH:
 - an adverse shock to profitability does not induce financial intermediaries to be more cautious in lending or to reduce the riskiness of their portfolios
 - in fact, the opposite occurs: in the face of negative circumstances the anticipation of a future bailout provides a strong incentive to take on even more risk
 - Debtors, as Krugman writes, “play a game of heads I win, tails the taxpayer loses.”
- Many observers agree that debtor MH played an important role in many crisis episodes

... and creditors

- Another dimension is *creditor* MH: Expectations of large-scale packages (IMF) induce foreign investors to lend to weak banks and firms.
- Controversial issue:
 - Potentially very relevant
 - Not much evidence: actually, capital flows tended to *contract* after Tequila and ensuing crises; FDI took a bigger role

Different aspects of PSI

- Coercive (defaults)
- Semi-coercive (debt suspensions and standstills)
- Intermediate (exchange offers)
- Soft (rollover agreements)

Complementarities and trade-offs between bail-ins and bail-outs

- Official support can help fill the financing gap
- Under normal circumstances, official funds insufficient to fill the gap fully
- Appropriate policy: keep official support low enough to avoid moral hazard but high enough to avoid more coercive forms of PSI (which may discourage private capital flows)
- 1990s: combination of partial bail-outs and bail-ins

Complex issues to figure out:

- When to do PSI and when not?
- Which type of PSI (coercive, voluntary)?
- Which claims to include?
- Which creditors?
- What do to in liquidity cases?
- What to do in systemically important cases where contagion is possible?
- How to distinguish insolvency from illiquidity?
- How much adjustment versus financing?

Toward a consensus on PSI: “Constrained discretion”

- Rigid rules are not realistic because of the complexity and novelty of situations
- Case-by-case approach preferable
- However, discretion should be constrained by principles, tools, criteria and guidelines

Debt standstill as alternative to ILOLR in liquidity cases

- Full bail-in or a debt standstill
 - provides an alternative to a full ILOLR (full bail-out) in the case of a pure liquidity crisis where new private liquidity cannot be obtained
- Benefits of coercive bail-ins:
 - solve the collective action problem
 - may prevent a sudden panic and capital flight
- However, such standstills can be destabilizing

Problems with standstills

- May lower long-run lending and capital flows to emerging markets
- If anticipated, may lead to a “rush to the exits”
 - as in the case of anticipated capital controls
- May lead to international financial contagion
- Partial standstills on sovereign claims may not be enough: private claims must also be locked in if a run starts or is imminent

Three debt workout regimes

- Status Quo regime: use of unilateral exchange offers (as in Pakistan, Ukraine, Russia, Ecuador)
- Contractual approach: introduction of collective action clauses (CACs) in all bond contracts
- Statutory approach: creation of a Sovereign Debt Restructuring Mechanism (an international bankruptcy regime).
- Each approach has pros and cons.

Which market failures or externalities prevent orderly debt restructurings?

Mostly collective action problems among creditors, especially

- Rush to the exit
- Rush to the courthouse
- Holdout, free rider, or rogue creditor problem

SDRM/Statutory solution

Solves all three collective action problems via:

- Debt standstill/suspension/default
- Stay of litigation after default
- Majority “cramdown” provision: a deal agreed to by a majority of creditors and the debtor can be imposed on minority holdouts.

Contractual solution

Solves collective action problems via:

- A debt suspension
- A bond clause allowing a majority of creditors in each bond issue to stay litigation
- A majority cramdown clause allowing the imposition of a deal on minority holdouts

Contractual vs. statutory

Statutory may be preferable to contractual:

- Stock problems of existing bonds without CACs
- CACs clauses are bond-by-bond while SDRM affects a majority of all bondholders
- SDRM can deal with all current and future instruments; CACs are generally only for bonds

Status quo solution

Collective action problems can also be solved using existing tools:

- “Rush to exits” can be avoided through debt standstill
- “Rush to the courthouse” is not a major problem in the sovereign setting: there are not many assets to seize
 - no one has litigated in Argentina
- More of a problem: how to deal with free riders/holdouts

Costs/benefits of holding out

- A free rider will not automatically receive its full claim if by holding out.
- A creditor will hold out if the *risk-adjusted expected discounted net value* of the original claim exceeds that of the new claim.
- Litigation is costly and uncertain; small retail investors will settle rather than fight; some investors are risk-averse or impatient.

Could the “status quo” work?

- While the “status quo” cannot solve all free rider problems, creative exchange offers can provide market-based, orderly restructurings reducing the risks of litigation and/or free riding.
- Historically, holdout problems have not prevented orderly bonded debt restructurings.
- Argentina will be the most important test case of the status quo. The case for an SDRM depends on how costly, disorderly, lengthy this restructuring case turns out to be.

The solution...

...is neither a single piece of financial engineering nor a compact between the official lenders and private creditors. Rather, it is a process incorporating a number of elements. Essentially, I would suggest that our current case-by-case approach to crisis management needs to evolve in ways that are **market-based and adaptive, yet strategic, creative, and principled.** (William J. McDonough, Promoting Financial Resilience, October 17, 2002)

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