Financial Crises – Banking and Currency Crises

I. Currency Crises

A. Exogenous Policy Models (1st Generation Models)

1. Currency crisis is an unavoidable outcome of unsustainable policy stances or structural imbalances.
2. The ER regime can only be maintained if it is compatible with monetary and fiscal policy objectives and current account deficit.
3. Example:

a. Monetary Policy: Country who prints money excessively – the fixed ER will lead to an exhaustion of foreign currency reserves. In particular, if money is printed excessively, credit will grow faster than the demand for the domestic currency. That is, people will demand foreign-denominated assets, if they can, or domestic assets. The first results in depletion of foreign reserves and the Second results in fall in domestic asset yields and movement into foreign assets. The exhaustion of reserves is sudden. When it is anticipated (realized) that the peg is not sustainable (reserves are still high), a speculative attack takes place as currency holders try not to be the last to collect before the reserves run out.

b. Fiscal Policy: Fiscal deficit monetization. The deficit is so high that it is thought that the central bank must eventually monetize it.
Takeoff on the above: Assume there is no public debt, but the private sector is subject to shocks that threaten corporate and banking profitability. If it is anticipated that the government will bail out the private sector in a large way (and put pressure on the central bank to monetize it), then the ER peg cannot be maintained.

c. Chronic Current Account Deficits: Current account deficit is net borrowing from the rest of the world. Large deficits often result from large capital inflows. This can reduce a country's ability to repay its debt (external debt). Foreigners will rollover debt only at a high cost or not at all. This debt can be to the public or private sectors. If to the private sector, the fiscal authority may try to bail out corporations. If to the government, the country must resort to printing money to finance its debt. The devaluation can actually help to boost exports and regain a balance in the current account.

B. Self-Fulfilling Expectations and Multiple Equilibria Models (2nd Generation Models)
    1. In the 1st generation models, a sustainable ER peg is determined by exogenous fundamentals – unrelated to any expectations that people might have (except the expectation of unsustainability). For example, expectations of unsustainability are not dependent on how their actions will affect fiscal or monetary policy, or current account imbalances.
    2. In 2nd generation models, market decisions influence macroeconomic policy decisions. There is an interaction between investors' expectations and actual policy outcomes – this can lead to self-fulfilling crises.
    3. Example:
        a. Country that maintains an ER peg, but is willing to float under extreme circumstances (like a recession). If foreign investment in the domestic country's assets and the return on those assets is in the domestic currency (which it almost always is), a devaluation would hurt the value of the asset and decrease the return. If foreign investors **think** there will be a devaluation, they will demand a premium on investments. The domestic country's costs of borrowing would rise and slow credit growth and the economy. If the authorities deem this cost to be too high, they will devalue their currency to boost AD. The devaluation would validate the initial investors' expectations. I.e. ultimately, the investors' expectations are self-fulfilling – expectations of a devaluation, leads to policy of a devaluation. Devaluation prevents economy from suffering.
        b. Multiple Equilibria: Consider the same case and investors have not expectations of a devaluation and demand no risk premium. Borrow costs remain low and authorities can maintain the ER peg, thereby validating the expectations.

C. 3rd Generation Models
    1. The East Asian crisis was not a result of any of the above. Also, the currency crisis appeared to be proceeded by banking crises. Also, the economy has suffered as a result of this crisis. This crisis did not fit the above models.
    2. The above two models interact bank and currency problems

3. Weak Bank Fundamentals Model
    a. Full Implicit Deposit Insurance Guarantee by government
    b. Poor regulation and supervision of banks

        ⇨ Moral Hazard behavior by banks
        ⇨ NPL and Insolvency of banks
        ⇨ Government at some point does not have a credible guarantee or to make it credible the central bank has to come in and bail out the banking system
            - Without a credible guarantee foreign depositors will run on banks and run on the central bank => devalution
            - With the central bank coming to the rescue, devaluation must occur.

    c. Solution: Revamp the banking system to have better regulation/supervision and better monitoring. E.g. have a small deposit insurance system.

4. Liquidity Crisis – Expectations Model
    a. Mismatch between short-term/dollar liabilities and long-term domestic currency assets. Foreigners appeared to be lending to banks only short-term (possibly due to risk).
    b. This mismatch leads to financial fragility. There is a classic coordination failure model of Diamond and Dybvig, where any event (information) can precipitate a run. Instead of a bank run there is a bank run and a run on the currency. This creates a liquidity crisis and could result in insolvency.
    c. Initially this results in the exhaustion of central bank reserve and a devaluation.
    d. This all has nothing to do with fundamentals. The banks could be in okay shape, but if there is an expectation that others will run, depositors and currency holders will try to run first.
    e. The fragility sets up the possibility of a run. So you could say that the way the financial system is set up causes the problem.
    f. Solution: Credible Deposit Insurance to encourage long-term borrowing.

Additional Information on Currency and Banking Crises

A. History of Banking and Currency Crises
    1. Evidence
        a. Kaminsky and Reinhart, *AER*, 1999

B. Macroeconomic and Microeconomic causes of financial crises
    1. Budget deficits
    2. Exchange rate pegs
    3. Capital inflows
    4. Financial institution problems

C. Effects of Banking and Currency Crises (in general)
    1. Latin America
    2. Britain
    3. Others
    4. East Asia

D. Theory of Banking and Currency Crises in EFMs
    1. Overview
        a. Glick, Moreno and Spiegel, *FRBSF Economic Letter*, March 23, 2001.
    2. Moral Hazard vs. Panic in Banking and, Banking and Currency Crises
        a. Bank Guarantees and Moral Hazard – Banking Crises lead to Currency Crises
            (1) Krugman, website, 1998.
        b. Panic Equilibria and Currency Crises
            (1) Radelet and Sachs, *NBER*, August 1998.
            (2) Chang and Velasco, *Quarterly Journal of Economics*, 2001
        c. Distinguishing Between the Two Theories. What is the Evidence
            (1) Deposit Guarantees
                (a) Opiela (2002)

    3. Restructuring after Crises
        a. Demirguc-Kunt, Detragiache, and Gupta, IMF Working Paper WP/00/156, October 2000.
        b. Boorman, et al. June 2000.
        c. Disyatat, May 2001.

References

Boorman, et al., "Managing Financial Crises: The Experience in East Asia," IMF Working paper WP/00/107, June 2000.

Demirguc-Kunt, Detragiache, and Gupta, "Inside the Crisis: An Empirical Analysis of a Banking System in Distress," IMF Working Paper WP/00/156, October 2000.

Disyatat, Piti, "Currency Crises and the Real Economy: The Role of Banks," IMF working paper WP/01/49, May 2001.

Kaminsky and Reinhart, *American Economic Review*, 1999

Glick, Moreno and Spiegel, "Financial Crises in Emerging Markets," *FRBSF Economic Letter*, March 23, 2001.

Krugman, website, "What Happened to East Asia?," February 1998.

Radelet and Sachs, "The Onset of the East Asian Financial Crisis," *NBER*, working paper 6680, August 1998.

Chang and Velasco, *Quarterly Journal of Economics*, 2001

Opiela, Timothy P., "Depositor Monitoring of Financial Institutions in Pre-Crisis Thailand," Revision and Resubmission to *Journal of Money, Credit and Banking*, 2002.