

Course Structure and Standard Syllabus

Course Topic: Monetary, Exchange Rate and Capital Account Policies

Course Title: Exchange Rate Policy (ERP)

Description: This course presents a comprehensive overview of exchange rate analysis and policy. The first part of the course introduces key definitions and concepts used in exchange rate analysis, including that of real exchange rate misalignment. It then discusses how changes in the real exchange rate may affect external adjustment and growth. The second part focuses on macroeconomic volatility and capital flows. It analyzes the role of foreign exchange intervention and international reserve adequacy. The third part covers the macroeconomic policy tradeoffs under different exchange rate regimes and the main exchange rate policy challenges in developing and emerging market economies, such as the use of hybrid regimes, forced and unforced exits from pegs, and the reasons behind the so-called Fear-of-Floating. The fourth part looks into real exchange rate equilibrium and misalignment. It elaborates on and uses the External Balance Assessment (EBA) methodology to that end. Finally, before participants' presentations, the course moves to currency crises. It presents the Early Warning System to monitor such events.

Topics:

1. **Basic Principles of Exchange Rate Analysis.** Key definitions and concepts used in exchange rate analysis (Law of One Price, Purchasing Power Parity, interest parities, nominal and real effective exchange rates); the role of productivity differentials between tradable and non-tradable sectors in explaining variations in the real effective exchange rate (REER).
2. **The Role of the Real Exchange Rate.** The REER as an indicator of external competitiveness; REER misalignment; the role played by the exchange rate in external adjustment; the relationship between real exchange rate undervaluation and economic growth.
3. **Equilibrium REER and REER misalignment.** Methodologies to estimate equilibrium real effective exchange rate; the IMF External Balance Assessment (EBA) methodology.
4. **Exchange Rate Regimes and Macroeconomic Policy.** Theories involving flexible and fixed exchange rate regimes; the roles of foreign exchange reserves and market interventions under flexible and fixed exchange rate regimes; de jure and de facto classifications of exchange rate regimes; policy issues involving flexible and fixed exchange rate regimes; the disconnect between theories of exchange rate determination and reality; policy trilemmas and tradeoffs.
5. **Practical Problems of Exchange Rate Policies in Developing and Emerging Market Economies.** Why policymakers dislike large changes in the nominal exchange rate (Fear of

Floating) following external shocks and in presence of structural weaknesses; the use of hybrid exchange rate regimes; policies to alleviate the Fear of Floating; the experiences in emerging market economies with forced and un-forced exits from pegs.

6. **Exchange Rates and the Foreign Exchange Market.** Overview of the structure of the FX market; objectives and modalities of FX interventions; costs and benefits of FX reserve accumulation and indicators of FX reserve adequacy; channels and effectiveness of FX interventions; management of FX reserves; currency trading strategies in the FX market.

7. **Currency Crises.** Models and cases of currency crises, the role of macroeconomic policies in currency crisis prevention; early warning systems for currency crises.

Prerequisites

The course is targeted to (junior to mid-career) officials involved in exchange rate policy and analysis. Participants should have an advanced degree in economics or equivalent professional experience.

Performance Evaluation

Two multiple-choice tests will be given, one at the beginning and one at the end of the course. Performance in these tests will be recorded in participants' evaluations.

Objectives

At the end of the course, participants will be able to i) compute and interpret indicators of FX reserve adequacy, ii) assess the effectiveness of interventions in the FX market, iii) measure the degree of real exchange rate misalignment, iv) construct early warning systems for currency crises and calculate the probability of experiencing a currency crisis episode. In addition, participants will have opportunities to a) discuss the exchange rate policy challenges in emerging and developing economies, b) identify the policy inconsistencies that may lead to currency crises and c) identify the policy measures to prevent them.

Introductory Lecture

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| 1.5 hours | L-1 | <ul style="list-style-type: none">• Introductory Lecture• <i>Structure of the course</i>• <i>Lectures</i>• <i>Workshop</i> |
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Key definitions and concepts

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| 1.5 hours | L-2 | Basic Principles of Exchange Rate Analysis <ul style="list-style-type: none">• <i>Key definitions and concepts</i>• <i>Arbitrage, exchange rates, and interest rates</i>• <i>Introduction to the real effective exchange rate (REER)</i> |
| 1.5 hours | L-3 | The Role of the Real Exchange Rate <p>Mr. Dyna Heng
Economist, Asian Division
IMF Institute for Capacity Development</p> <ul style="list-style-type: none">• <i>The exchange rate in internal and external balance</i>• <i>The REER as an indicator of external competitiveness</i>• <i>The relationship between REER and economic growth</i> |
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Macroeconomic volatility and capital flows

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| 1.5 hours | L-4 | Macroeconomic Volatility and Capital Flows <ul style="list-style-type: none">• <i>Capital flows and macroeconomic activities</i>• <i>Push and pull factors of capital flows</i>• <i>Capital flows, asset prices, and exchange rates</i> |
| 1.5 hours | L-5 | FX Interventions <p>Mr. Michael Leahy</p> <ul style="list-style-type: none">• <i>Sterilized and non-sterilized interventions</i>• <i>Channels and effectiveness of FX interventions</i>• <i>Objectives and modalities of FX interventions</i> |
| 1.5 hours | L-6 | FX Reserve Adequacy <ul style="list-style-type: none">• <i>Trends in FX reserve accumulation</i>• <i>Indicators of FX reserve adequacy</i> |
| 1.5 hours | W-1 | Workshop: FX Reserve Adequacy |
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Tradeoffs under different exchange rate regimes and the main policy challenges

1.5 hours	L-7	Exchange Rate Regimes: An Overview <ul style="list-style-type: none">• <i>Taxonomy of exchange rate regimes</i>• <i>The trilemma between exchange rate regime, policy independence and capital mobility</i>• <i>History of exchange rate arrangements</i>
1.5 hours	L-8	Exchange Rate Regimes and Macroeconomic Policy <ul style="list-style-type: none">• <i>The exchange rate as nominal anchor</i>• <i>External adjustment and crises</i>• <i>Exchange rates and economic integration</i>
1.5 hours	W-2	Workshop: Choice of the Exchange Rate Regime
3 hours	L-9	Practical Problems of Exchange Rate Policies in Developing and Emerging Market Economies <ul style="list-style-type: none">• <i>Fear-of-floating</i>• <i>The use of hybrid exchange rate regimes</i>• <i>Policies to alleviate the fear-of-floating</i>
3 hours	W-3	Workshop: Managed Floats
3 hours	W-4a	Workshop: Policy Responses to External Shocks—case study
1.5 hours	W-4b	Workshop: Policy Responses in Selected Developing and Emerging Economies to External Shocks
1.5 hours	L-10	Transitions from Fixed to Flexible Exchange Rate Regimes <ul style="list-style-type: none">• <i>Elements for smooth transitions from fixed to flexible regimes</i>• <i>Selected country experiences</i>
1.5 hours	W-5	Workshop: Transitions from Fixed to Flexible Exchange Rate Regimes

Real exchange rate equilibrium and misalignment

3 hours	L-11	Equilibrium REER and REER Misalignment <ul style="list-style-type: none">• <i>The exchange rate assessment framework</i>• <i>The EBA (External Balance Assessment) and EBA-lite methodologies</i>• <i>Limitations, extensions, and the role of judgement</i>
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1.5 hours	W-6a	[P] Workshop on External Balance Assessment (EBA)
1.5 hours.	W-6b	[P] Workshop on EBA-Lite

Currency crises

1.5 hours.	L-12	Currency Crises <ul style="list-style-type: none"> • <i>Models of currency crises</i> • <i>Links between currency crises and other types of financial crises</i> • <i>The role of macroeconomic policies in currency crisis prevention</i>
1.5 hours.	L-13	Early Warning Systems for Currency Crises <ul style="list-style-type: none"> • <i>Building an Early Warning System (EWS)</i> • <i>Performance of the EWS</i> • <i>Examples in the literature</i>
3 hours	W-7	Workshop: Early Warning Systems for Currency Crises

Participants' presentations

Preparations for Participant Presentations

Course Evaluation

Post-Course Quiz

Participant Presentations and Policy Discussion

Closing Session and Presentation of Certificates

Session	Topic
L-1	Introductory Lecture
L-2	<p>Basic Principles of Exchange Rate Analysis</p> <p>Sarno, L., 2008, “Purchasing Power Parity,” in <i>The New Palgrave Dictionary of Economics</i>, 2nd ed.</p>
L-3	<p>The Role of the Real Exchange Rate</p> <p>Dornbusch, Rudiger, 1980, <i>Open Economy Macroeconomics</i>, Chapter 6 (New Rodrik, Dani, 2008, “The Real Exchange Rate and Economic Growth,” <i>Brookings Papers on Economic Activity</i>, Vol. 39 (Fall), pp. 365-439.</p> <p>Williamson, John, 2002, “What Washington Means by Policy Reform,” Chapter 2 from <i>Latin American Adjustment: How Much Has Happened?</i> Edited by John Williamson.</p>
L-4	<p>Macroeconomic Volatility and Capital Flows</p> <p>Dell'Ariccia, Giovanni, Paolo Mauro, Andre Faria, Jonathan David Ostry, Julian Di Giovanni, Martin Schindler, Ayhan Kose, and Marco Terrones, 2008, “Reaping the Benefits of Financial Globalization,” IMF Occasional Papers 264 (Washington: International Monetary Fund). (Working Paper Version: link)</p> <p>IMF, 2018, “A Decade After the Global Financial Crisis: Are We Safer?” <i>Global Financial Stability Report</i>, October, pp. 1-53 (Washington: International Monetary Fund). (link)</p>
L-5	<p>FX Interventions</p> <p>Blanchard, Olivier, Gustavo Adler and Irineu de Carvalho Filho, 2015, “Can Foreign Exchange Interventions Stem Exchange Rate Pressures from Global Capital Flow Shocks?” NBER Working Paper No. 21427 (Cambridge: National Bureau of Economic Research).</p> <p>Ghosh, Atish R., Jonathan D. Ostry, and Marcos Chamon, 2012, “Two Targets, Two Instruments: Monetary and Exchange Rate Policies in Emerging Market Economies,” Staff Discussion Notes No. 12/01 (Washington: International Monetary Fund). (link)</p>
L-6	<p>FX Reserve Adequacy</p> <p>International Monetary Fund, 2015, “Assessing Reserve Adequacy – Specific Proposals,” IMF Policy Paper, (Washington: International Monetary Fund). (link)</p> <p>Jeanne, Olivier, and Romain Ranciere, 2011, “The Optimal Level of International Reserves for Emerging Market Countries: A New Formula and Some Applications,” <i>Economic Journal</i>, Vol. 121, Issue 555, pp. 905-930.</p>

<p>L-7</p>	<p>Exchange Rate Regimes: An Overview</p> <p>Ghosh, Atish R., Jonathan D. Ostry and C. Tsangarides, 2010, “Exchange Rate Regimes and the Stability of the International Monetary System,” <i>IMF Occasional Paper</i> No. 270 (Washington: International Monetary Fund).</p> <p>Levy-Yeyati, Eduardo, and Federico Sturzenegger, 2010, “Monetary and Exchange Rate Policies,” in Dani Rodrik and Mark Rosenzweig eds, <i>Handbook of Development Economics</i>, Vol. 5 (North Holland).</p>
<p>L-8</p>	<p>Exchange Rate Regimes and Macroeconomic Policy</p> <p>Blanchard, Olivier, Gustavo Adler, and Irineu de Carvalho Filho, 2015, “Can Foreign Exchange Intervention Stem Exchange Rate Pressures from Global Capital Flow Shocks?” IMF Working Paper 15/159 (Washington: International Monetary Fund). (link)</p> <p>Obstfeld, Maurice, Jay Shambaugh, and Alan Taylor, 2005, “The Trilemma in History: Tradeoffs Among Exchange Rates, Monetary Policies, and Capital Mobility,” <i>Review of Economics and Statistics</i>, Vol. 87(3), pp. 423-438.</p>
<p>L-9</p>	<p>Practical Problems of Exchange Rate Policies in Developing and Emerging Market Economies</p> <p>Epstein, Natan, and Rafael Portillo, 2014, “Monetary Policy in Hybrid Regimes: The Case of Kazakhstan,” IMF Working Paper 14/108. (link)</p> <p>Levy-Yeyati, Eduardo, and Federico Sturzenegger, 2010, “Monetary and Exchange Rate Policies,” in Dani Rodrik and Mark Rosenzweig eds, <i>Handbook of Development Economics</i>, Vol. 5 (North Holland).</p>
<p>L-10</p>	<p>Transitions from Fixed to Flexible Exchange Rate Regimes</p> <p>Duttgupta, Rupa, Gilda Fernandez, and Cem Karacadag, 2004, “From Fixed to Floats: Operational Aspects of Moving Toward Exchange Rate Flexibility,” IMF Working Paper WP/04/126 (Washington: International Monetary Fund). (link)</p> <p>Ötoker-Robe, Inci and David Vavra and others, 2007, “Moving to greater Exchange rate Flexibility: Operational Aspects based on Lessons from Detailed Country Experiences,” Occasional Paper 256 (Washington: International Monetary Fund).</p>
<p>L-11</p>	<p>Equilibrium REER and REER Misalignment</p> <p>Phillips, Steven et al., 2013, “The External Balance Assessment (EBA) Methodology,” IMF Working Paper 13/272. (link)</p> <p>IMF, 2017, “External Sector Report,” IMF Policy Paper (Washington: International Monetary Fund). (link)</p>

L-12	Currency Crises Krugman, Paul R, 1979, "A Model of Balance-of-Payments Crises," <i>Journal of Money, Credit, and Banking</i> , Vol. 11, pp. 311-325. Obstfeld, Maurice, 1996, "Models of Currency Crises with Self-Fulfilling Features," <i>European Economic Review</i> , Vol. 40, pp. 1037-1047.
L-13	Early Warning Systems for Currency Crises Obstfeld M., J. C. Shambaugh, and A. M. Taylor, 2008, "Financial Stability, The Trilemma and International Reserves," NBER Working Paper No. 14217. (link) Rose A. K., and M.M. Spiegel, 2009, "Cross-country Causes and Consequences of the 2008 Crisis: Early Warning," NBER Working Paper No. 15357. (link)
