

Course Structure and Standard Syllabus

Course Topic: General Macroeconomic Analysis

Course Title: Macroeconomic Diagnostics (MDS)

Objectives

This two-week course is designed to strengthen participants' ability to comprehensively assess a country's macroeconomic situation, including the current state of the economy; the stance of fiscal and monetary policy; financial stability; exchange rate misalignments; vulnerabilities in the different sectors; and the medium-term outlook, especially the sustainability of public and external debt. The course emphasizes practical tools for use in day-to-day macroeconomic analysis. It relies on case studies relevant to the region where the course is given to illustrate how these tools are applied and how they can contribute to the policymaking process.

Topics (*Core Units*)

0. Overview
- C1. Case Study and Group Project
 1. Macroeconomic Framework
 2. Analyzing Supply and Productivity – Tools
 3. Supply and Productivity – Growth Diagnostics and Structural Reform
 4. Analyzing Aggregate Demand
 5. Analyzing Inflation
 6. Assessing Monetary Policy
 7. Assessing Macro-Financial Linkages
 8. Assessing Fiscal Policy
 9. Assessing Fiscal Sustainability
 10. Assessing the External Position
 11. Assessing Competitiveness and the Exchange Rate
 12. Assessing External Debt Sustainability and Foreign Reserve Adequacy
 13. Assessing Risks
 14. Course Wrap-Up

Target Audience

Mid-to-senior level officials in central banks and ministries of finance or economy who are involved in diagnosing the state of the macro-economy and making projections.

Prerequisites

Participants should have an advanced degree in economics or equivalent experience, good quantitative skills, and proficiency in the use of Excel. It is highly recommended that applicants complete the online FPP.1x and FPP.2x courses and/or the face-to-face FPP course before enrolling in the face-to-face MDS or the online MDSx.

Performance Evaluation

A multiple-choice test will be administered at the beginning and the end of the course to assess participants' knowledge and the course's learning impact.

Learning objectives

Upon completion of the course, participants should be able to:

- Analyze potential output and calculate output gaps, and diagnose the outlook for the economy;
- Assess the stance of current fiscal, monetary & exchange rate, and financial policies;
- Assess macro-financial linkages, including through the analysis of financial sector soundness indicators;
- Assess the medium-term prospects of the economy, especially the sustainability of public and external debt, and identify impediments to long-term growth;
- Identify possible external and internal economic risks and vulnerabilities to economic growth and identify policies to address them.

MDS PROGRAM OUTLINE

UNIT 0: INTRODUCTORY LECTURE: COURSE OVERVIEW

Lecture 0 (0.5 hours)

- Set out objectives of course
 - Emphasize course focus is on diagnostic tools
- Provide an outline of the course
- Describe role of participant and counselor

C1. CASE STUDY INTRODUCTION

Lecture C1 (1.5 hours)

- Introduce case study exercise
- Highlight economic and political background
- Describe recent reforms and outline current government's objectives
- Describe final workshop project

UNIT 1: MACROECONOMIC FRAMEWORK

Lecture 1 (1.5 hours)

- Describes macroeconomic stability and financial stability
- Presents the macroeconomic framework
- Introduces selected indicators table and flow of funds tables

Workshop 1 (1.5 hours)

Objective: Examine the interrelationship among macroeconomic accounts and learn to interpret selected indicators table.

Activity: Case Study Workshop – based on country case study using actual AIV report from financial surveillance pilot group: (1) reviews a selected indicators table; (2) examines the interrelationship among the macroeconomic accounts; (3) assesses areas of possible vulnerabilities

References

1. IMF Institute, 2013, “The Baseline Scenario” Chapter 7 in *Financial Programming and Policies*, (unpublished; Washington: IMF).
2. Article IV Staff Report of Selected Country Case Study.

Online material

Link to online learning module: FPP1x (Module on interrelationships among macroeconomic accounts)

UNIT 2: SUPPLY AND PRODUCTIVITY

Lecture 2: Tools (1.5 hours)

- Review measurement of GDP
- Define potential output and output gaps
- Introduce time series methods to measure potential output

Workshop 2 (1.5 hours)

Objective: Implement methods to estimate potential output

Activity: The workshop estimates potential output and output gaps using a variety of methods for case study country.

Lecture 3: Growth Diagnostics and Structural Reform (1.5 hours)

- Introduce growth accounting
- Discuss production function approach to estimate potential output
- Describe growth diagnostics and discuss structural structural reforms
 - Labor markets and unemployment

Workshop 3 (1.5 hours)

Objective: Diagnose case study country's growth prospects

Activity: The workshop (1) assesses the supply conditions; (2) analyses the Solow growth model; (3) examines impediments to economic growth.

References

1. Abiad, Abdul, John Bluedorn, Jaime Guajardo, and Petia Topalova (2014), "Resilience in Emerging Market and Developing Economies: Will It Last?" *World Economic Outlook* – Chapter 4, pp 129-71 (Washington: October).
2. Dabla-Norris, Era, Giang Ho, and Annette Kyobo (2016), "Structural Reforms and Productivity Growth in Emerging Market and Developing Economies" IMF Working Paper 16/15.
3. IMF (2016), IMF Staff Note for the G20-A Guiding Framework for Structural Reforms
4. Sutherland, Douglas and Peter Hoeller (2014): "Growth Policies and Macroeconomic Stability", OECD Economic Policy Paper, February 2014, N.08.

5. Svirydzenka Katsiaryna and Martin Petri (2014): “Mauritius: The Drivers of Growth—Can the Past be Extended?” IMF Working Paper 14/134.

Online material

Link to online learning module: Estimation of Output Gaps

UNIT 3: ANALYZING AGGREGATE DEMAND

Lecture 4 (1.5 hours)

- Review expenditure decomposition of growth
- Analyze major components of aggregate demand
- Describe the use of business cycles and short-term indicators to understand short-term fluctuations

Workshop 4 (1.5 hours)

Objective: Calculate the contributions and use of high frequency indicators to help assess short run fluctuations.

Activity: The workshop (1) identifies the relative contributions to GDP growth of external and domestic demand; (2) analyses trends in private consumption and investment, including high frequency indicators.

References

1. Ghazanchyan, Manuk and Janet Stotsky (2013): “Drivers of Growth: Evidence from Sub-Saharan African Countries”, IMF Working Paper 13/236.
2. Lebrun, Igor and Esther Pérez Ruiz (2014): “Demand Patterns in France, Germany, and Belgium: Can We Explain the Differences?” IMF Working Paper 14/165.

UNIT 4: ANALYZING INFLATION

Lecture 5 (1.5 hours)

- Review of inflation around world and region
- Discuss cost of excessively high/low inflation
- Describe the measurement of inflation, including headline and core inflation
- Introduce the Phillips curve and determinants of inflation

Workshop 5 (1.5 hours)

Objective: Measure inflation, calculate the Phillips curve, and assess inflation determinants

Activity: The workshop (1) calculates headline, core, and trend inflation; (2) analyzes components of inflation and their contributions; (3) reviews recent developments in inflation in region; (4) examines inflation determinants on both supply/demand side.

References

1. Gordon, Robert, 2011, "The History of the Phillips Curve: Consensus and Bifurcation" *Economica*, Volume 78, Issue 309, pp 10-50.
2. [Hoover, Kevin, 2008 "Phillips Curve," in *The Concise Encyclopedia of Economics, an easy-to-read introduction to the Phillips Curve*](#)
3. International Monetary Fund, 2013, The Dog that Did not Bark: Has Inflation Been Muzzled or Was it just Sleeping," *World Economic Outlook*, Chapter 3, pp. 79-96 (Washington: April).
4. Lansing, Kevin, 2015, "Assessing the Recent Behavior of Inflation," Federal Reserve Bank of San Francisco *Economic Letter*, No 2014-24.
5. Wu, Tao, 2003, "Improving the Way We Measure Consumer Prices," Federal Reserve Bank of San Francisco *Economic Letter*, No. 2003-24.

UNIT 5: ASSESSING MONETARY POLICY

Lecture 6 (1.5 hours)

- Describe monetary policy frameworks
 - Objectives and the fundamental trilemma
 - Monetary policy regimes
 - The role of macroprudential regulation
- Introduce diagnostic tools for monetary policy
 - Taylor and inflation targeting rules
- Assess monetary policy stance

Workshop 6 (1.5 hours)

Objective: Acquire set of tools to assess the stance of monetary policy

Activity: The workshop develops tools to assess stance of monetary policy using (1) inflation expectations; (2) real interest rates; (3) yield curves; (4) Taylor rules; and (5) inflation targeting rules.

References

1. Orphanides, Athanasios, 2007, "Taylor Rules," Federal Reserve Board Finance and Discussion Paper Series, No. 18.
2. Bernanke, Ben S., 2010, "Monetary Policy and the Housing Bubble," Address at the Annual Meeting of the American Economic Association, Atlanta, Georgia, January 3, 2010.

3. Fawley, Brett W. and Christopher J. Neely, 2013, “*Four Stories of Quantitative Easing*,” Federal Reserve Bank of St. Louis Review, January/February, 95(1).
4. IMF, 2015, “*Monetary Policy and Financial Stability*,” IMF Policy Paper, August.

Online material

Link to online learning module: Monetary Policy Transmission Mechanisms

UNIT 6: ASSESSING MACRO-FINANCIAL LINKAGES

Lecture 7 (1.5 hours)

- Motivate the importance of assessing financial sector risks
- Highlight the impact of financial conditions on macroeconomic conditions and the outlook, and vice versa:
 - Assessment of the depth of financial market
 - Feedback of financial conditions on the real economy
- Review Financial Soundness Indicators (FSIs) and the Balance Sheet Approach (BSA)

Workshop 7 (1.5 hours)

Objective: Calculate and interpret diagnostic tools (financial sector soundness and risk indicators) and explore the links between the macroeconomy and the financial sector

Activity: The workshop (1) examines financial sector indicators, assessing the possible risks to the system; (2) investigates the main risks exposures and financial linkages among sector balance sheets.

References

1. IMF Institute, 2013, “The Monetary and Financial Sector” Chapter 6 in Vol. I, *Financial Programming and Policies*, pp 175-181.
2. IMF, 2015, “Balance Sheet Analysis in Fund Surveillance,” IMF Policy Paper.
3. Matias Costa Navajas and Aaron Thegeya, “Financial Soundness Indicators and Banking Crises,” IMF Working Paper, December 2013

UNIT 7: ASSESSING FISCAL POLICY

Lecture 8 (1.5 hours)

- Review fiscal accounts, including fiscal indicators and analysis of the composition of expenditures and revenues
- Calculate the cyclically adjusted and structural balances using aggregated and disaggregated approaches
- Review fiscal multipliers
- Assessment of the stance of fiscal policy

- [Assessment of fiscal balances in resource-rich countries]

Workshop 8 (1.5 hours)

Objective: Measure fiscal balances and assess stance of fiscal policy

Activity: The workshop (1) identifies sources of changes in the current fiscal position; (2) computes primary balances; (3) calculates cyclically-adjusted and structural balances; (4) assesses the fiscal policy stance.

References

1. Batini, N., and others, 2014, 2014, “Fiscal Multipliers: Size, Determinants, and Use in Macroeconomic Projections”. IMF Technical Notes and Manuals TNM 14/04.
2. Bornhorst, Fabian, and others, 2011, “When and How to Adjust Beyond the Business Cycle? A Guide to Structural Fiscal Balances,” *IMF Technical Notes and Manuals* (Washington: International Monetary Fund).
3. Daniel, James, and others, 2006, “Fiscal Adjustment for Stability and Growth,” IMF Pamphlet Series, No. 55 <http://www.imf.org/external/pubs/ft/pam/pam55/pam55.pdf>

Online material

Link to online learning module: JVI Structural Balance Module.

UNIT 8: ASSESSING FISCAL SUSTAINABILITY

Lecture 9 (1.5 hours)

- Define fiscal solvency and fiscal sustainability
- Linking debt dynamics to government budget constraint
 - Role of contingent liabilities – from financial sector or entitlements
- Analysis of public debt dynamics
- Show IMF debt sustainability framework: debt baseline and risk scenarios

Workshop 9 (1.5 hours)

Objective: Implement the public debt dynamic equation using an abbreviated version of IMF’s debt sustainability framework

Activity: The workshop (1) introduces debt sustainability assessments; (2) develops a baseline scenario; (3) conducts analysis of sensitivity to key assumptions; (4) explores alternative debt sustainability scenarios.

References

1. IMF Institute, 2013, “What is Debt Sustainability Analysis?” Chapter 8 and “Fiscal Sustainability” Chapter 9 in *Financial Programming and Policies*, (unpublished; Washington: IMF).
2. International Monetary Fund, 2013, “*Staff Guidance Note for Public Debt Sustainability Analysis in Market-Access Countries*”, May 9, 2013,
3. Tanner, Evan, 2013, “Fiscal Sustainability: A 21st Century Guide for the Perplexed,” IMF Working Paper 13/89 <http://www.imf.org/external/pubs/cat/longres.aspx?sk=40482>

Online material

Link to online learning module: DSAX (identified modules from Debt Sustainability course).

UNIT 9: ASSESSING THE EXTERNAL POSITION AND THE EXCHANGE RATE

Lecture 10: Assessing the External Position (1.5 hours)

- Review the Balance of Payment accounts:
- Analyze the Current Account and links to domestic demand:
 - Drivers, Intertemporal Choice, Trade and Savings-Investment perspective
 - Terms of trade and commodity prices
- Analyze the Capital and Financial Account
 - Review accounts
 - External vulnerability indicators and crises

Workshop 10 (1.5 hours)

Objective: Analyze trends driving the external accounts

Activity: The workshop (1) analyzes trends in the current and capital and financial accounts; (2) assesses whether these trends create external risks.

References

1. IMF Institute, 2013, “The External Sector” Chapter 4 in Vol. I, *Financial Programming and Policies*, pp 175-181.
2. International Monetary Fund, 2014, “Are Global Imbalances at a Turning Point,” Chapter 4, *World Economic Outlook*, October (Washington).
3. Blanchard, Olivier and Milesi-Ferretti, Gian Maria, 2011, “(Why) Should Current Account Balances be Reduced”, IMF Staff Discussion Note SDN/11/03.
4. Ghosh, Atish, and Uma Ramakrishnan, 2012, “Current Account Deficits: Is There a Problem?” *Finance & Development Magazine*.

Lecture 11: Assessing Competitiveness and the Exchange Rate (1.5 hours)

- Describe measures of competitiveness and related concepts:
 - Price and non-price competitiveness
 - Unit labor costs
 - Export market shares
- Discuss equilibrium exchange rates (PPP-based, External Balance Assessment (EBA))

Workshop 11 (1.5 hours)

Objective: Implement methods to analyze competitiveness and to assess exchange rate misalignment

Activity: The workshop (1) computes export market shares and analyzes measures of competitiveness; (2) analyzes trends in exchange rates; (3) applies the External Balance Assessment (EBA) methodology to the regional country case and comparator countries; (4) considers misalignment of exchange rate in the context of EBA results and relevant external indicators.

References

1. International Monetary Fund, 2013, “External Balance Assessment (EBA) Methodology” December (Washington). Working Paper WP/13/272.
2. Catao, Luis, 2007, “Why Real Exchange Rates?,” *Finance & Development Magazine* Vol.44 (3).

UNIT 10: EXTERNAL DEBT SUSTAINABILITY AND FOREIGN RESERVE ADEQUACY

Lecture 12 (1.5 hours)

- Introduce indicators of external risk
- Discuss the International Investment Position (IIP)
- Examine IMF reserve adequacy metrics
- Introduce a framework for external debt sustainability assessment

Workshop 12 (1.5 hours)

Objective: Conduct an assessment of external debt sustainability and reserve adequacy

Activity: The workshop (1) analyzes external debt sustainability; (2) calculates reserve adequacy measures.

1. International Monetary Fund, 2015, “2015 External Sector Report,” July (Washington).
2. International Monetary Fund, 2011, “Assessing Reserve Adequacy,” IMF Policy Paper, February (Washington: International Monetary Fund).

3. International Monetary Fund, 2013, “Assessing Reserve Adequacy—Further Considerations,” IMF Policy Paper, February (Washington: International Monetary Fund).

UNIT 11: ASSESSING RISK

Lecture 13 (1.5 hours)

- Identify key macroeconomic vulnerabilities & risks
 - Vulnerabilities, especially weak economic and financial fundamentals
 - External risks, including shocks from other countries
 - Domestic risks, including risk that policies are not fully implemented and political risks
- Develop a taxonomy of crisis
- Present a risk assessment matrix

Workshop 13 (1.5 hours)

Objective: Derive a country risk assessment matrix, based on an evaluation of external and internal vulnerabilities

Activity: The workshop (1) identifies a set of possible shocks that might threaten the economy; (2) considers the likelihood of realization of shock; (3) considers the potential impact.

References

1. IMF Institute, 2013, “The Baseline Scenario” Chapter 7 in Vol. I, *Financial Programming and Policies*, pp 175-181.
2. Rosenberg, Christoph, et al, 2005, “*Debt-Related Vulnerabilities and Financial Crises: An Application of the Balance Sheet Approach to Emerging Market Countries*” IMF Occasional Paper 240.
3. IMF, “Guidance Note for Surveillance under Article IV Consultation,” pp 13-18, May 2015
4. IMF, 2010, “The IMF-FSB Early Warning Exercise: Design and Methodological Toolkit” (Washington).

UNIT 12: WRAP-UP

Lecture 14 (1.0 hours)

- Review key takeaways from the course
- Review key policy issues
 - Macroeconomic policy mix (short-term monetary and fiscal policy stance)
 - Fiscal issues (e.g. structural, sustainability)
 - Financial stability
 - Growth policy and structural (e.g. product and labor markets) reforms

- Review expectations for the group presentations

GROUP PROJECT AND PRESENTATION

Workshop 14 (10 hours)

Objective: To provide an overall assessment of state of selected economy (**10 hours**)

Analysis:

The assessment will

- diagnose the current situation in the economy to inform policy decisions of authorities;
- specify areas of vulnerabilities;
- outline general directions for macroeconomic policy adjustment.

Output:

- A powerpoint presentation for a briefing with the Minister of Finance and the Governor of the Central Bank

ANNEX 1. REGIONAL CASE STUDIES

Region	Country
Africa	South Africa (2010)
Asia	India (2018Q1)
Asia	Indonesia (2017/2018Q3)
Asia	Malaysia (2017)
Asia	South Korea (2013)
Asia	Sri Lanka (2018)
Asia	Vietnam (2016)
Europe & Middle East	Georgia (under construction)
Europe & Middle East	Turkey (2015)
Western Hemisphere	Costa Rica (2013)

ANNEX 2. DESCRIPTION AND OBJECTIVES OF THE ONLINE VERSION (MDSx)

TARGET AUDIENCE: All government officials are welcome to register. The course is particularly relevant for officials in central banks and ministries of finance or economy who are directly involved in diagnosing the state of the macro-economy and making projections. The course is offered in English.

REQUIREMENTS AND QUALIFICATIONS: Some knowledge of economics is helpful. Basic Excel skills and access to a computer with a reliable Internet connection and a Google Chrome web browser are essential.

COURSE DESCRIPTION: This online course, presented by the IMF Institute, is designed to build up participants' ability to assess a country's macroeconomic situation; it emphasizes practical tools for use in day-to-day macroeconomic analysis. The course covers assessments of

- the current state of the macroeconomy;
- the stance of fiscal and monetary policy;
- financial stability; and
- the medium-term prospects of the economy, taking into account the sustainability of public and external debt, possible misalignments of the exchange rate, and vulnerabilities arising in the different sectors.

The course uses a case study to illustrate application of these tools and to show how they can contribute to the policymaking process.

COURSE OBJECTIVES: Upon completion of this course, participants should be able to:

- Analyze potential output and calculate output gaps, identify the expenditure composition of growth, measure inflation, and assess inflation sources.
- Assess the stance of monetary and fiscal policy and interpret financial sector soundness and risk indicators.
- Analyze public and external debt sustainability and the external position and evaluate possible exchange rate misalignment.
- Assess the medium-term prospects of the economy, taking into account the sustainability of public and external debt, and identify impediments to long-term growth.

Syllabi of Face-to-Face and Online MDS in Comparison

MDS	MDSx
<p>Lecture 1 - Macroeconomic Framework</p> <ul style="list-style-type: none"> · Describe macroeconomic stability and financial stability · Present the macroeconomic framework · Introduce selected indicators table and flow of funds tables <p>Lecture 2 - Supply and Productivity - Tools</p> <ul style="list-style-type: none"> · Review measurement of GDP · Define potential output and output gaps · Introduce time series methods to estimate potential output <p>Lecture 3 - Supply and Productivity – Growth Diagnostics and Structural Reform</p> <ul style="list-style-type: none"> · Discuss production function approach to estimate potential output · Introduce growth accounting · Describe growth diagnostics and discuss structural reform <p>Lecture 4 - Analyzing Aggregate Demand</p> <ul style="list-style-type: none"> · Review expenditure decomposition of growth · Analyze major components of aggregate demand · Describe the use of business cycles and short-term indicators to understand short-term fluctuations <p>Lecture 5 - Analyzing Inflation</p> <ul style="list-style-type: none"> · Discuss cost of excessively high/low inflation · Describe the measurement of inflation, including headline and core inflation · Introduce the Phillips curve and determinants of inflation <p>Lecture 6 - Analyzing Monetary Policy</p> <ul style="list-style-type: none"> · Describe monetary policy frameworks · Introduce Taylor and inflation targeting rules · Assess monetary policy stance <p>Lecture 7 - Assessing Macro-Financial Linkages</p> <ul style="list-style-type: none"> · Motivate the importance of assessing financial sector risks · Highlight the impact of financial conditions to macroeconomic outlook and vice versa · Review financial sector soundness indicators <p>Lecture 8 - Assessing Fiscal Policy</p> <ul style="list-style-type: none"> · Review fiscal accounts · Calculate and interpret the cyclically adjusted and structural fiscal balances · Assess the stance of fiscal policy <p>Lecture 9 - Assessing Fiscal Sustainability</p> <ul style="list-style-type: none"> · Analysis of public debt dynamics · Introduce fiscal sustainability assessment · Show IMF debt sustainability framework <p>Lecture 10 - Assessing the External Position</p> <ul style="list-style-type: none"> · Review the balance of payment accounts · Analyze the current account and links to domestic demand · Analyze the capital and financial accounts <p>Lecture 11 - Assessing Competitiveness and the Exchange Rate</p> <ul style="list-style-type: none"> · Describe measures of competitiveness · Present and illustrate IMF approaches to exchange rate assessments <p>Lecture 12 - Assessing External Debt Sustainability and Foreign Reserve Adequacy</p> <ul style="list-style-type: none"> · Examine IMF reserve adequacy metric · Introduce framework for external debt sustainability assessment <p>Lecture 13 - Assessing Risk</p> <ul style="list-style-type: none"> · Identify key macroeconomic vulnerabilities · Develop a taxonomy of crisis · Describe risk assessment matrix 	<p>Module 1 - Supply and Productivity</p> <ul style="list-style-type: none"> Supply Constraint The Cobb-Douglas Approach Interpreting the Growth Decomposition <p>Module 2 - Potential Output and Output Gaps</p> <ul style="list-style-type: none"> Aggregate Supply and Aggregate Demand, the Price Level and Equilibrium Potential Output and Output Gaps Diagnostic Tools - Estimating Potential Output/Output Gap <p>Module 3 - Analyzing Aggregate Demand</p> <ul style="list-style-type: none"> Growth Decomposition in Excel and Its Interpretation Analysis of Consumption and Investment Aggregate Demand, the Business Cycle, and Co-movements <p>Module 4 - Analyzing Inflation</p> <ul style="list-style-type: none"> Concepts and Measurements Determinants of Inflation The Phillips Curve <p>Module 5 - Analyzing Monetary Policy</p> <ul style="list-style-type: none"> Keys for Monetary Policy Diagnostics Linking Tools to Frameworks and Mechanisms Diagnostic Tools <p>Module 6 - Macrofinancial Linkages</p> <ul style="list-style-type: none"> A first look at the banking system balance sheet: capital adequacy and asset quality Looking further: Vulnerabilities arising from shocks to earnings, liquidity, and exchange rates Introducing variability: Z-score and other measures <p>Module 7 - Fiscal Policy</p> <ul style="list-style-type: none"> Cyclically-Adjusted Fiscal Balance Fiscal Stance and Fiscal Impulse Fiscal Multipliers <p>Module 8 - Fiscal Sustainability</p> <ul style="list-style-type: none"> Public Debt Dynamics Stabilizing Debt Macro-Fiscal Risks <p>Module 9 - The External Position</p> <ul style="list-style-type: none"> An Overview of the Current Account Alternative Perspectives of the Current Account Drivers of The Current Account <p>Module 10 - The Real Exchange Rate and Competitiveness</p> <ul style="list-style-type: none"> Nominal and Real Effective Exchange Rates External Balance Assessment <p>Module 11 - External Sustainability and External Vulnerability</p> <ul style="list-style-type: none"> External Debt Sustainability Reserve Adequacy <p>Module 12 - Risks and Vulnerabilities</p> <ul style="list-style-type: none"> Risks and Vulnerabilities Interrelated Risks and Vulnerabilities The Risk Assessment Matrix (RAM)