

INTERNATIONAL MONETARY FUND

**IMF Institute for Capacity Development (ICD)
Joint Vienna Institute (JVI)**

Course on External Vulnerabilities and Early Warning Exercise (JV 15.37)

Vienna, Austria

**December 7-18, 2015
Program¹**

Monday, December 7

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| 9:00 a.m. – 9:20 a.m. | | Administrative Briefing Mr. Maksym Dutsyak Joint Vienna Institute (JVI) |
| 9:20 a.m. – 9:30 a.m. | | Opening Session Mr. Norbert Funke, Director, JVI, Mr. Gianni De Nicolò, Senior Economist, IMF ICD; Mr. Seung Mo Choi, Economist, IMF ICD; Mr. Maksym Ivanyna, Economist, JVI. |
| 9:30 a.m. – 10:00a.m. | | Initial Test |
| 10:00 a.m. – 10:15a.m. | | Coffee Break |
| 10:15 a.m. – 11:45p.m. | L-0 | Vulnerabilities and Crises <i>Mr. De Nicolò</i> 1. Sources of fiscal, financial and external vulnerabilities 2. Debt, banking, and currency crises 3. Impact of crises on growth and welfare 4. Course objectives and roadmap |
| 2:00 p.m. – 5:15p.m | Unit 1 | Forecasting methods for tail risks <i>Mr. De Nicolò and Mr. Ivanyna</i> |
| | L-1 | 1. Definition and measurement of tail risks 2. Methods to signal and predict distress and crises: a. Probit/Logit regressions b. Quantile regressions |
| | W-1 | Predicting currency crises via Probit/Logit regressions |

¹ Unless otherwise stated, coffee breaks will be held from 10:30 a.m.–10:45 a.m. and from 3:30 p.m.–3:45 p.m.

Tuesday, December 8

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| 9:00 a.m. – 12:15 p.m. | Unit 2 | Fiscal Vulnerabilities I: Assessing Debt Sustainability <i>Mr. Ivanyna</i> |
| | L–2 | 1. Debt sustainability, debt crises, and growth 2. Deterministic debt sustainability analysis in closed and open economies 3. Risk-based DSA |
| | W–2 | 1. Debt-stabilizing primary balance 2. IMF’s approach to DSA 3. Thresholds for short-term debt, financing needs |
| 2:00 p.m. – 5:15 p.m. | Unit 3 | Financial Vulnerabilities I: Taxonomy and measurement of financial risks <i>Mr. Choi</i> |
| | L–3 | 1. Financial risks taxonomy 2. Indicators of risks (CAMEL) 3. Financial soundness indicators |
| | W–3 | Workshop on financial soundness indicators |

Wednesday, December 9

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| 9:00 a.m. – 12:15 p.m. | Unit 4 | External Vulnerabilities I: Bond yields and sovereign default risk <i>Mr. Ivanyna</i> |
| | L–4 | 1. Determinants of sovereign risk and defaults: a. Market perceptions vs. macroeconomic fundamentals b. Vicious circle of default probability and financing needs 2. Rollover and financing risks indicators 3. Market valuations of sovereign default risk Determinants of sovereign risk and fiscal crisis |
| | W–4 | Analysis of sovereign risk |
| 2:00 p.m. – 5:15 p.m. | Unit 5 | Financial Vulnerabilities II: Implementing Stress Testing <i>Mr. De Nicolò</i> |
| | L–5 | 1. The Five Steps of Stress Testing 2. Single-Factor Sensitivity Analysis a. Liquidity risk b. Exchange rate risk c. Interest rate risk d. Credit risk |
| | W–5 | Bank stress test (Croatia) |

Thursday, December 10

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| 9:00 a.m. – 12:15p.m. | Unit 6 | Fiscal Vulnerability II: Short-term risks <i>Mr. Ivanyna</i> |
| | L–6 | 1. Interest rate growth differential and public debt 2. Growth and interest rate shocks and debt sustainability 3. Stochastic DSA |
| | W–6 | Stochastic DSA |
| 2:00 p.m. – 5:15 p.m. | Unit 7 | External Vulnerabilities II: Current Account Imbalances <i>Mr. Choi</i> |
| | L–7 | 1. External vulnerability indicators 2. External balance assessment (EBA) |
| | W–7 | External balance assessment (EBA) |

Friday, December 11

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| 9:00 a.m. – 12:15 p.m. | Unit 8 | Financial Vulnerabilities III: Financial Cycles, Business Cycles and Systemic Risk <i>Mr. De Nicolò</i> |
| | L–8 | 1. Financial cycles and business cycles 2. Financial stress and economic downturns 3. Systemic risk measurement: indicators and CoVar |
| | W–8 | Detecting Financial Vulnerabilities |
| 2:00 p.m. – 5:15p.m. | Unit 9 | Fiscal Vulnerability III: From Fiscal Stance to Fiscal Gaps <i>Mr. Ivanyna</i> |
| | L–9 | 1. Debt level and debt sustainability 2. Fiscal gaps: Definition and arithmetic 3. Long-term adjustment needs to satisfy government intertemporal budget constraint |
| | W–9 | 1. Public debt thresholds 2. Arithmetic of fiscal gaps and long-term adjustment needs |

Monday, December 14

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| 9:00 a.m. – 12:15p.m. | Unit 10 | Financial Vulnerability IV: Spillovers and Contagion <i>Mr. Choi</i> |
| | L-10 | 1. Cross-Sectional Components a. SIFI Identification b. Network Approach 2. Network Measures of Systemic Risk a. Diebold-Yilmaz b. CoVaR |
| | W-10 | Illustration of a network model |
| 2:00 p.m. – 5:15p.m | Unit 11 | External Vulnerability III: Reserve Adequacy <i>Mr. De Nicolò</i> |
| | L-11 | 1. Definition of reserve adequacy 2. Trends in reserve holdings 2. Analytics of reserve holdings 3. Normative assessments of reserve holdings |
| | W-11 | International Reserves Adequacy Metrics |

Tuesday, December 15

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| 9:00 a.m. – 12:15 p.m. | Unit 12 | The IMF's Vulnerability Exercise for Advanced Economies (VEE) <i>Mr. Choi</i> |
| | L-12 | 1. Mechanics of the VEE 2. Sectoral/Market Vulnerability Indices |
| | W-12 | A VEE Exercise |
| 2:00 p.m. – 5:15 p.m. | Unit 13 | The IMF's Vulnerability Exercise for Advanced Economies (VEA) <i>Mr. De Nicolò</i> |
| | L-13 | 1. Mechanics of the VEA 2. Selected methods |
| | W-13 | A VEA Exercise |

Wednesday, December 16

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| 9:00 a.m. – 12:15p.m. | Unit 14 | Vulnerability Assessment Warm-Up <i>Counselors</i> |
| | W-14 | Vulnerabilities through a case study: A helicopter tour |
| 2:00 p.m. – 5:15 p.m. | Unit 15.1 | Case Studies: Preparation for Participant presentations |

Thursday, December 17

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| 9:00 a.m. – 12:15p.m. | Unit 15.2 | Case Studies: Preparation for Participant presentations <i>Facilitated by counselors</i> |
| 2:00 p.m. – 3:30 p.m. | Unit 15.3 | Case Studies: Preparation for Participant presentations <i>Facilitated by counselors</i> |
| 3:45p.m.-5.15p.m. | O-1 | Case Studies: Participant presentations |

Friday, December 18

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| 9:30 a.m. – 11:00 a.m. | Final Test and Course Evaluation |
| 11:00 a.m. – 12:00 p.m. | Closing Session and Presentation of Certificates |
