



## ***STUDY QUESTIONS***

### ***FINANCIAL INSTABILITY & CRISES: CAUSES, MODELS, AND PREDICTION***

*Financial crises have occurred throughout history but have recently been more global in their impact and more virulent in terms of their effects on financial markets, incomes, and economic growth. Steps taken in response to the 2008 Global Financial Crisis and 2020 “Covid Crisis” to help stabilize financial systems and support recoveries have dramatically changed the global economic landscape. Increased geopolitical tensions are generating further changes as governments seek to build resilience to new sorts of crises and risks. These responses to past crises and emerging risks will leave a long-term legacy that shapes opportunities and risks in the future. This section of the course evaluates the causes of financial crises, why they often come as a surprise, and why they can have such devastating and long-lasting consequences. It focuses on key historical events to introduce the terminology and frameworks that will be used intensively throughout the rest of the course. By the end of the section, students should be able to look at key macro and financial statistics for different countries and evaluate which are at greatest risk of having an economic or financial crisis in the future.*

#### **1. Introduction: Macro-Financial Stability in a (Less?) Globalized World**

This class begins with a general overview of the course, before introducing the first section: the risks from macro-financial instability in a globalized world. It begins by putting recent events in the historical context and discussing how crises present pivotal challenges for governments, individuals, and companies around the world. Increased globalization through trade and capital flows has provided substantial opportunities for countries and companies, but has also increased the risks from macro-financial instability. This has contributed to a backlash against globalization, and when combined with the recent increase in geopolitical tensions, is leading to fundamental shifts in the global trade and financial system. This discussion sets the stage for the deeper analysis of the causes and consequences of financial crises over the next few weeks. Why do these financial cycles occur again and again? How have the liberalization of financial markets and new forms of financial intermediation contributed to these cycles? How can responses aimed at mitigating the negative effects of crises aggravate longer term challenges? Will increased fragmentation in the global trade and financial system aggravate or mitigate these risks around crises? Which countries are most likely to gain (and lose) from these changes?

- What recent macro-financial events are key to understanding the business and policy environment today?
- Why do crises occur again and again? Does globalization and financial liberalization make countries more prone to crises or safer?
- Why do we care so much about financial crises? How are they different than recessions?
- Which countries are most likely to benefit, and which to lose, from heightened geopolitical tension and global fragmentation?
- What will be on the cover of the *Economist* at the start of next year’s GECO class?

## 2. **Exchange Rate Basics: Mexico’s “Tequila” Crisis**

This case describes the background to and direct aftermath of the 1994 Mexican peso collapse—an example of a country that embraced globalization and market-friendly reforms that initially seemed to be very successful—before leading to a painful financial crisis and sharp currency devaluation. This class uses this episode as an introduction to national income accounting and understanding exchange rates—key concepts that will be used throughout the class. **Read the reference material on national income accounting and exchange rates carefully.** For the Mexico case, you can skim the historic detail on Mexico, but spend more time with the data for the 1994 period at the end (which we will use for the class discussion). If you are unfamiliar with macroeconomic terminology and/or are used to only using the US dollar, this will be a lot of material and it will be helpful to review the optional reading on exchange rates, as well as the reference material listed at the start of the syllabus.

- What is National Income Accounting? What are the key components? How do these terms (such as “investment”) differ from more traditional use of these words?
- What are the key differences between a fixed versus flexible exchange rate? What are the main advantages and disadvantages of each?
- How does a fixed exchange rate become overvalued or undervalued?
- What role did the exchange rate regime play in the peso collapse in December 1994? What other factors were important? How important were short-term triggers versus structural problems internal to Mexico?

## 3. **Financial Crisis Basics I: Intro to the BB-NN Model and Balance of Payments**

This session develops the basic framework and model for analyzing crises that will be used throughout this course—the BB-NN model. The framework is also used by some market analysts to analyze the outlook for emerging markets. This is dense material and the most technical class of the semester. To begin, read the note on Balance of Payments accounting—the international counterpart to National Income Accounting (covered in the last class). This terminology is central to the BB-NN model. Then review the handout on the BB-NN model carefully and watch the videos made for this material. If you have not used this model, also consider attending the Q&A session with the TAs for more practice with the model.

- What is Balance of Payments accounting? What are the key components? How does it relate to National Income Accounting?
- How do you locate a country (the dot) relative to the three lines in the BB-NN model? Where was Mexico in the BB-NN model in 2003?
- What moves the country (the dot) and the lines in the BB-NN model? What changed in the BB-NN model over the course of 2004 to put additional pressure on Mexico?

## 4. **Financial Crisis Basics II: The Taper Tantrum and India in the BB-NN Model**

This case focuses on the “Taper Tantrum” in 2013—when the US Federal Reserve discussed cutting back its purchases of US government bonds, generating a sharp financial market reaction, increased borrowing costs and large capital outflows from many emerging markets. Many people worried that another “tantrum” would occur in 2022-23 as the US raised interest rates aggressively to fight inflation (and some argue that it was concerns about provoking another “tantrum” that made the US slow to raise interest rates, contributing to the recent spike in inflation). This class will focus on the impact of the Taper Tantrum on India. India had embarked on a program of structural reform and financial liberalization, supporting a period of rapid growth and enthusiasm about India’s prospects. This experience is used to continue to build the basic framework for analyzing crises used throughout this course—the BB-NN model.

- Should India’s balance of payments in 2012 have been a cause of concern? Why or why not? What is similar/different between Mexico in 1993 and Iceland in 2007? How important were short-term triggers versus structural problems internal to India?
- Where was India in the BB-NN model in 2012 (using 2011/2012 data) just before the “taper tantrum”?
- What changed in the BB-NN model over the course of 2013 to put additional pressure on India? Where was India in August of 2013—and what changed in the model? What should Rajan do?
- Why was there no “tantrum” in 2021-2023 when the US Federal Reserve began tapering and then hiked interest rates aggressively? What has changed in countries such as India?

### **5. Bubbles, Iceland’s 2008 Meltdown: Lessons for Today’s Financial Innovations?**

This class shows how financial liberalization and financial innovation can lead to excesses, misallocation, and severe financial crises in advanced economies as well as in emerging markets. Financial liberalization allows greater capital inflows from abroad and can lead to substantial currency overvaluation. Financial innovation can further support leverage and make it more challenging to understand risks and exposures. Weak regulation of the financial system, moral hazard, corruption/crony capitalism, and investor psychology can further aggravate these risks and lead to speculative bubbles in everything from tulip bulbs to housing prices to fishing licenses. Once the excesses exist, a seemingly small piece of news can generate a sharp and massive unwinding of positions, collapse in financial institutions and freefall in prices. The extreme excesses—and then collapse—in Iceland’s financial system in 2008 provides a colorful (and painful) example of these financial challenges at the heart of most crises. For background on Iceland, read the more entertaining summary in *Boomerang* (by Michael Lewis), and then just skim the HBS case on Iceland, focusing on the material related to the exchange rate and the data relevant to Moody’s 2008 rating decision. (You can skip the historic background and debate on EU membership). The class will focus on the vulnerabilities that led to Iceland’s 2008 crisis, but if you are interested in what happened afterwards, see the optional reading on “Iceland: Cracks in the Crust”, or for a recent bubble that sounds familiar, see the optional reading on “Regression to the Means”. This experience provides important lessons for thinking about recent financial innovations and new forms of money—from stablecoins and bitcoins to different types of digital currencies.

- Should Iceland’s balance of payments in 2007 been a cause of concern? Why or why not?
- If you were a Moody’s analyst in May of 2008, would you have recommended downgrading Iceland’s Aaa sovereign debt rating?
- What are the costs and benefits of capital account liberalization and financial innovation? Why does this combination often generate asset bubbles and pricing that seem far removed from “fair value”? Why is it hard for people to see risks in real time?
- Are financial innovations today—such as stablecoins, bitcoins, and digital currencies (such as the digital euro) on track to be the next “tulips”?

### **6. Contagion--The SVB Ripple vs. The Global Financial Crisis (GFC) Tsunami**

Why are some financial crises relatively short-lived and contained—while others spread around the world and cause a global recession? In 2007 most commentators believed that problems in the U.S. subprime market would be contained to the U.S. housing market, but a year later, major banks around the world needed bailouts and the world experienced its worst recession since the Great Depression. In contrast, when Credit Suisse, Silicon Valley Bank (SVB) and several other regional banks in the US collapsed—the effects were short-lived and contained. This class compares the causes of the 2008 Global Financial Crisis to those discussed in earlier crises, highlighting increased vulnerabilities from the rapid growth in non-bank financial intermediaries (i.e., the “shadow” financial system). This growth has continued and contributed to recent periods of market turmoil. Some of these events have been short lived and limited to

the country where the turmoil originates, while in other cases they have generated contagion to other parts of the financial sector, and in some cases to economies around the world. The class discusses the channels by which financial and economic contagion can occur, why it often comes as a surprise, and how vulnerable the global economy is today to different forms of contagion today. For the long reading on “The Big C”—you can just read the introduction (pgs 23-28), and skim any sections later if interested in the technical details.

- Were the causes of the 2008 crisis in the US substantially different than the crises in Mexico, India and Iceland? Was the US current account deficit a concern?
- Was foreign financing of the US deficit a key cause of the 2008 crisis? What happened to this foreign financing during the crisis?
- What is financial contagion? How are crises transmitted across countries? Why did a crisis that originated in the U.S. housing market in 2008 cause such widespread global contagion?
- How were the 2023 banking collapses (i.e., SVB and Credit Suisse) different than the banking collapses in 2008? Why were the contagion effects more limited?
- How have changes in financial intermediation increased or decreased vulnerability to contagion today? How will increased geopolitical tension and fragmentation in the global trading system affect contagion in the future?

## **7. Predicting Crises**

This class takes the concepts, models and country-specific lessons from previous classes and shows how they can be used to evaluate in real-time whether a country is likely to experience a period of financial instability or full-blown crisis. The first handout is a reference on indicators to evaluate whether a country is vulnerable to a crisis and will be a useful reference for much of the semester. The main assignment describes unidentified countries that could be vulnerable. Come to class prepared to discuss which countries you think will experience a crisis and why. Use the reference material in the first reading for the assignment. We will spend a substantial portion of class discussing these anonymous countries and students will be cold-called to provide assessments. Useful reviews that should help tie this material are: *Sudden Stops* (pages 1-3 and the Appendix, but skip the historic parts) and the material on exchange rates (available at the start of the reading packet).

- What statistics would you suggest monitoring as early indicators of a crisis?
- Which of the countries in the assignment are most likely to have a crisis? Why?
- Which of the countries in the assignment appear to be in a good macroeconomic position? Why?
- Do you think it is possible to develop a quantitative “early-warning system” to predict the timing or probability of crises? Why or why not?

## **8. Guest Speaker: Investing in a World of Macro Volatility and Global Shocks**

To finish this first section of the course, we will hear from two prominent and highly successful Portfolio Managers from Fidelity Investments on how they interpret and trade on the macroeconomic news and vulnerabilities discussed throughout the semester. Come with questions!

## **ACHIEVING MACRO & FINANCIAL STABILITY IN A GLOBALIZED WORLD**

*Governments around the world reacted to the Covid-19 pandemic with unprecedented fiscal and monetary stimulus. Some new programs had never been used before—while others built upon what were thought to be “once-in-a-lifetime” responses to the Global Financial Crisis. This expansion of government interventions sparked a heated debate on the benefits and costs of these programs—particularly as inflation spiked to levels not seen since the 1970s—and who should be making these decisions. This section of the course looks at various policy options to recessions and crises—including monetary policy, fiscal policy, exchange rate policy, reserve management, macroprudential regulations, and capital controls. It evaluates what factors determine how a country chooses between these different policies, including how the options are even more limited in currency unions (such as the Euro area). By the end of this section, students should not only be able to understand how each of these policies works, but also be able to predict what policies a country is likely to choose in response to different events. The ability to predict policy responses is crucial for businesses to be able to plan for how the macroeconomic environment could change, including the possible effects on pricing decisions, input costs, borrowing options, access to foreign currency, restrictions to supply chains, and broader risks to cross-border transactions.*

### **9. Responding to the COVID-19 Pandemic: Tricks and Traps Interpreting Macroeconomic Data**

After a prolonged recovery from the 2008 Global Financial Crisis, the world was finally expected to experience a period of solid and synchronized growth in 2020. Then the Covid-19 pandemic hit. What started as a health emergency quickly caused unprecedented volatility in financial markets and a more severe global recession than experienced after the 2008 Global Financial Crisis. The “sudden stop” in capital flows was also sharper than during the Taper Tantrum and Global Financial Crisis, and many people predicted another period of contagion and series of financial crises across emerging markets. With economies locked down and no clarity on the timing or efficacy of a vaccine, it was impossible to predict the economic impact and extent of the recession. Governments and central banks responded forcefully with a multifaceted set of tools, but it was impossible to calibrate the appropriate amount of support given the uncertain economic outlook. This unprecedented policy responses helped support workers and firms and then contributed to the rapid recovery as vaccines were rolled out. This unprecedented policy support, however, also led to a new set of challenges, including contributing to a sharp spike in inflation and surge in debt burdens. This class focuses on the challenges in interpreting data and calibrating policy responses. It sets the stage for the more detailed analysis of different policy responses in the remainder of this section. Skim the beginning of the HBS Case (with an overview of the early stages of the pandemic) and focus on the sections on the Economic Disruption and Policy Responses (pgs 8-16).

- How were the initial effects of the Covid-19 crisis similar the financial crises studied earlier? How were they different?
- Is it surprising that most large emerging markets “defied gravity” and avoided a major financial crisis during Covid-19 (even if they suffered a severe recession and health crisis)?
- How was the recovery from the 2020 recession different than after the 2008 crisis?
- How did the large fiscal and monetary stimulus packages in response to Covid-19 create challenges over the next few years?
- What are the challenges in setting policy during periods of crisis and heightened uncertainty? Is it better to provide too much support than risk providing too little?

## **10. Monetary Policy I: Conventional Policy - Setting Interest Rates in the US Today**

Most large countries have traditionally relied on monetary policy as their primary tool for stabilizing growth and inflation. This “first-line-of-defense” has many advantages over fiscal policy, such as not generating an increase in debt and being set by technocrats (i.e., less affected by politics). This class develops the basic framework used by central bankers to set interest rates and discusses which economic statistics are most important in evaluating how central banks adjust monetary policy. Then it uses the Taylor rule to evaluate how monetary policy has been set recently in the US and assess if recent adjustments in interest rates were justified. Did central bank responses to the pandemic contribute to the inflation spike in 2022-2023? With inflation falling sharply and nearing 2% targets in most advanced economies today, should central banks view their strategy over the last few years (of being slow to raise rates and then raising them aggressively) as a success? What were the risks and lessons learned? This class focuses on “conventional” monetary policy (i.e., adjusting interest rates) and leaves a discussion of “unconventional” tools (such as asset purchases) to the next class. It also focuses on the tradeoffs for larger economies and leaves some of the secondary effects that can be more important for smaller economies to a later class.

- How is monetary policy supposed to work in a large economy? What are the challenges and longer-term concerns?
- What are the key variables that you should watch to determine if a central bank should raise or lower interest rates?
- Was the monetary policy response to the post-pandemic inflation appropriate? What were the tradeoffs and risks from the strategy of delaying rate hikes and then hiking aggressively?
- How should the Federal Reserve adjust interest rates at its next meeting on May 20, 2024? What are the key tradeoffs they should consider? What statistics are important to make your decision?

## **11. Monetary Policy II: “Unconventional” Policy - Central Bank Balance Sheets in a World of Increased Political Pressure and Financial Stability Risks**

With interest rates near zero in many economies in 2009 and in 2020, many countries adopted “unconventional” forms of monetary policy to provide stimulus in response to the Global Financial Crisis and Covid-19—such as quantitative easing, forward guidance, negative interest rates, and various credit and liquidity support programs. This has caused central banks to accumulate massive stocks of government assets and intervene in markets in ways that can involve large losses. Many of these actions are controversial and have led to a political backlash against central bank independence. This class discusses the advantages and disadvantages of these tools, particularly buying and unwinding assets (QE and QT) when attempting to simultaneously manage inflation, growth and financial stability risks. After discussing basic concepts, the class will draw lessons from the bond market crisis in the UK in October 2022 (instigated by problems with LDI investments in pension funds). The class will end with a discussion of the arguments made by Treasury Secretary Bessent in the last reading, in which he is highly critical of this expansion of central bank powers. The initial reading on central bank responses to Covid-19 can be skimmed as background to how central banks arrived in this challenging situation today.

- How was the response by central banks to the Covid-19 pandemic different than before 2008? How was it different then during the 2008-2009 Global Financial Crisis?
- What are the advantages and disadvantages of “unconventional” monetary policy to stimulate the economy (as compared to the “conventional” tool of adjusting interest rates)?
- Why did the Bank of England start purchasing government bonds during the LDI crisis in 2022 while it was in the middle of a rate hiking cycle and reducing its holdings of government bonds?
- Are the concerns in the article by Treasury Secretary Bessent about central banks valid? Why or why not? Should central banks continue to prioritize shrinking their balance sheets (QT) as financial stability risks increase?

## 12. Fiscal Policy: The IS-LM Model and US Fiscal Fights

Many governments announced massive fiscal packages in response to Covid—in addition to the monetary policy responses discussed in previous classes. A framework to evaluate these types of responses are the AS-AD and IS-LM models. This class introduces the easiest version of these models (for large and/or closed economies). **Review the handout and watch the video before class—especially if you have not seen these models before—as they will be developed further and become more complicated.** This class will focus on how fiscal policy works, different forms of fiscal policy, and what determines its effectiveness. It will use examples from the US “fiscal fights” over the last few years, including the debate over Biden’s *Inflation Reduction Act* and Trump’s *Big Beautiful Bill*. You can skim the articles on these packages and just focus on the main tenets so that we can apply them to the models in class. This discussion will also compare the pros and cons of monetary versus fiscal policy—highlighting how fiscal policy can affect the supply-side (i.e., improve potential output) and accomplish other goals (i.e., around distributional, climate, or geopolitical concerns). In today’s environment with high interest payments on unprecedented outstanding debt, however, governments may be more constrained and face difficult tradeoffs and tension with central banks. Related discussion around debt will be saved for a future class.

- How is fiscal policy supposed to work? What are the challenges and longer-term concerns?
- What are the pros and cons of monetary versus fiscal policy? What determines which policy is more appropriate at any time?
- How should an optimal fiscal stimulus be designed? What are the advantages and disadvantages of different approaches? What determines the fiscal multiplier? Are the roles and effectiveness of fiscal policy different during a financial crisis or during a pandemic?
- What are the arguments for and against the fiscal stimulus in response to Covid in 2020? What are the arguments for and against Biden’s *Inflation Reduction Act* in 2022 and Trump’s *Big Beautiful Bill* in 2025? What are key differences? How do each of these fiscal packages affect the US in the IS-LM and AS-AD models?

## 13. Policy Responses in a Global World: Egypt and the Open-Economy IS-LM Model

This class extends the analysis of monetary and fiscal policy in the IS-LM and AS-AD to the more complicated version for “small-open economies”. This model takes into account feedback mechanisms from the rest of the world and shows how the effectiveness of both monetary and fiscal policy can depend on a country’s exchange rate regime, size, and links to the rest of the world. **Carefully review the handout on the small economy IS-LM model in advance and/or watch the recitation as we will apply the model in class but not go over the background material.** The class will use this framework to discuss the current challenges in Egypt and the advantages and disadvantages of using monetary vs. fiscal policy to respond to recent macroeconomic challenges (high energy and food prices, slower growth, higher borrowing costs, wars in Ukraine and the Middle East, etc). Egypt has needed several financial bailouts over the last few years—and is often in disagreement with the groups providing the funds (from the IMF to Saudi Arabia) on policy adjustments (such as whether to keep the exchange rate fixed or devalue). If you’d like more technical background on the IS-LM model (which is not necessary for the class), you can review the optional textbook reading.

- What determines if a country is a “small open economy” when deciding which version of the IS-LM model to use?
- How does the impact of fiscal policy and monetary policy change when you take into account feedback mechanisms in a small-open economy (i.e., what changes in the more “global” version of the IS-LM model)? How does this change the pros and cons of each policy?
- What determines whether a country should use monetary versus fiscal policy?
- Why do the IMF and Saudi Arabia want Egypt to devalue? Why is Egypt opposed? What are the pros and cons of Egypt shifting to a flexible exchange rate?

#### **14. The Whole Toolkit: Standard and Unorthodox Policy Responses for Turkey in 2023**

In some circumstances, monetary and fiscal policy are limited or ineffective (such as due to constraints in the open-economy IS-LM model or high debt) and countries turn to other policies to support growth, maintain price stability, and address financial vulnerabilities. With long-term interest rates increasing since 2022 and higher debt levels, the risks and tradeoffs for fiscal and monetary policy have increased in much of the world. This class will use the example of Turkey at the start of 2023 to work through these challenges for smaller, open economies in the context of the IS-LM and BB-NN models. In addition to fiscal and monetary policy, the class will evaluate several additional policy options: exchange rate adjustment, reserve management, macroprudential policy, capital controls and more “unorthodox” approaches. In the readings, focus on the advantages and disadvantages of each policy—both in general and for Turkey at the start of 2023. The class will also link to the discussion on exchange rates from the beginning of the course (so review the background reading at the start of the packet if needed). The end of the class will discuss Turkey’s shift to more standard policy responses in the later part of 2023.

- How has the sharp increase in global borrowing costs (from higher interest rates in major economies combined with higher risk aversion) affected Turkey in the IS-LM model?
- What are the pros and cons of using monetary and fiscal policy?
- What are the pros and cons of letting the exchange rate automatically adjust to a shock (depreciate/appreciate) or setting a fixed exchange rate at a new level? What are the costs and benefits of using reserves to stabilize an exchange rate?
- What are the costs and benefits of capital controls? Of macroprudential regulation?
- What policy would you recommend for Turkey in early 2023? What are the “unorthodox” policies they adopted? Why? Why did they change approaches after the May 2023 election?

#### **15. Predicting Country Responses**

This class links insights from throughout the semester to work through how different countries evaluate the various economic tools they could use given their current vulnerabilities and the global economic environment. More specifically, the class will focus on the period in the spring of 2020, as the world realized that Covid could not be contained. Markets froze up, the cost of borrowing spiked, and most emerging and developing economies experienced sharp capital outflows. How should different countries respond? What are the advantages and disadvantages of the different tools discussed over the past few weeks? How does each country’s macroeconomic situation (evaluated using the framework from the first part of the course) affect the tradeoffs involved with each tool? How do these tradeoffs and decisions change for countries in the Euro area? Most of the class will be spent looking at the situations of different countries (in the handout), discussing their options, and predicting how they are likely to respond. The last reading (which can be skimmed) suggests different strategies for firms to prepare for and survive (or even thrive) recessions and crises.

- Use the framework developed in the class on “Predicting Crises” to evaluate each country’s vulnerabilities and constraints. Then evaluate which of the policy tools discussed above would have made sense in the spring of 2020. Which of these options makes the most sense for each country: monetary policy (tighter or looser), fiscal policy (tighter or looser), exchange rate adjustment, reserve management, macroprudential regulation, capital controls or anything else?
- How does membership in a currency union such as the Euro area affect a country’s decisions?
- What other political, historical, or institutional factors are important in evaluating how a country responds?
- How should a company prepare if you believe a recession or financial crisis is coming soon?

## **16. Guest Speaker: President of a Federal Reserve Bank**

Will discuss the economic outlook, risks to the global economy and role overseeing the district and setting monetary policy for the United States. Come with questions!!

### ***LONGER-TERM GLOBAL ECONOMIC CHALLENGES AND OPPORTUNITIES***

*Over the decade after the 2008 Global Financial Crisis, policymakers focused on strengthening financial systems and supporting employment and growth during the prolonged recovery. During the Covid pandemic, they prioritized responding to the health crisis and supporting the economy during lockdowns, before quickly shifting to fighting inflation. As inflation has largely stabilized, attention has focused on building economic resilience in the face of heightened geopolitical tensions and risks. This focus on immediate challenges has meant insufficient attention to many longer-term risks faced by countries around the world. Moreover, many of the emergency policies adopted in response to 2008 Global Financial Crisis, Covid pandemic, and increased geopolitical tensions will further aggravate these imposing long-term challenges—particularly through the accumulation of debt. The pandemic, however, has raised awareness of the need to focus on and prepare for major challenges in advance—or suffer much worse consequences. This section of the class will use the models and frameworks developed through the semester to analyze major challenges facing many countries today. We will also incorporate a deeper discussion of the political and institutional factors that determine how these challenges are (or are not) addressed in different countries. This includes a closer look at the implications for different companies and individuals, as well as how to build support for economic policies that have short-run costs and distributional implications, but large aggregate benefits over time.*

## **17. Deficits and Debt I: Sustainability in Japan – Entering a New Era?**

Debt has reached record levels in much of the world. Part of the recent surge in debt levels reflects the massive fiscal packages responding to the pandemic. Since the pandemic, however, budget deficits have remained large in much of the world—despite strong recoveries. Higher borrowing in the 2010s and early 2020's was partly justified by the decline in global interest rates over 2008 – 2021, leading many people to argue these higher debt levels were sustainable. This mindset has been difficult to reverse as borrowing costs have increased and appear likely to remain elevated for the future. Politicians have enjoyed being relatively unconstrained in their ability to increase spending without raising taxes—allowing them to avoid difficult choices. The situation is looking increasingly unsustainable in some of the world's largest economies, however, especially as aging populations aggravate these fiscal pressures. This class introduces key definitions and concepts for analyzing debt around the world. We will focus on the situation in Japan—a country which has managed record debt levels for an extended period, but just elected a new prime minister whose plans may further aggravate debt concerns. We will use this example to develop the  $r$ - $g$  framework for understanding debt dynamics and evaluating what determines sustainability. The discussion should explain why some people are not worried about large debt burdens, while others see them as a ticking time bomb. The next class will continue this discussion and focus on solutions and strategies to address high debt burdens.

- What are the major concerns about high debt levels? Why are some people not worried about high debt levels in many economies today?
- What determines if a debt burden is sustainable? What has changed in this debate over the last decade? What types of debt are riskier? Which types are less of a concern?
- How are budget deficits, national savings, investment and current account balances related?
- Did the surge in inflation over 2022-23 make debt more or less of a concern in most countries? Why or why not?
- Do you support the plans announced by Prime Minister Takaichi of Japan at end-2025 to provide a fiscal stimulus and support another interest rate hike? Why or why not?

## **18. Deficits and Debt II: Strategies and Solutions**

This class continues the discussion on deficits and debt, but shifts to policy options to reduce debt burdens—focusing on the situation in the United States. Some alternatives for addressing high debt levels include: expansionary monetary policy (inflation), fiscal austerity (through spending cuts or revenue increases), raising growth/supply, and financial repression. The homework assignment provides a concrete example of the difficult tradeoffs involved in adjusting fiscal policy to put debt on a sustainable path in the US—a country which has an easier situation than many others. (For more background on the US debt situation, review the optional readings on “Putting US Fiscal Policy on a Sustainable Path”, as well as from the last class on “Risks and Threats from Deficits and Debt” from the CFRB. Even after deciding how to split any fiscal consolidation between spending cuts and revenue increases, additional choices must be made on how to cut spending and raise revenues. Many of the issues around debt sustainability have no “right” answers and require making difficult choices and tradeoffs...although some choices have stronger theoretical and empirical backing than others (including different “dynamic” effects on the economy over the longer term). After finishing the homework assignment that reflects your own preferences, you can review the optional reading (*CRFB Fiscal Blueprint for Reducing Debt and Inflation*), which is one proposal to put US debt on a sustainable path.

- What are the key options for putting debt on a sustainable path? In addition to fiscal policy, is there a role for monetary policy? A role for exchange rate policy?
- Focusing on fiscal policy—how do you prioritize reducing spending versus raising taxes? Are there better/worse ways to reduce spending? To raise taxes? What are the pros and cons of a wealth tax?
- How do aging populations make it more difficult to put debt on a sustainable path? How does this complicate the political economy of reducing debt burdens?
- What policies and institutions are most useful in order to put debt on a sustainable path? How does this debate change in countries that do not have independent currencies and central banks (such as the euro area)?

## **19. A New Form of Warfare? Tariffs, Trade Restrictions and Chokepoints**

The global economic and financial architecture is in the midst of a sea change. The rules-based system of recent decades centered on multilateralism and building trade and financial links across countries is now transitioning to a power-based system based on unilateralism, transactionalism and mercantilism. These changes do not just reflect a change in who sits in the U.S. White House, although President Trump’s policies have accelerated these changes. Although the era of “hyperglobalization” helped reduce inflation, spur strong growth and raise over a billion people out of extreme poverty, the rapid integration of large, low-income countries into the global trading system was extremely painful for some individuals and companies and generated legitimate questions about how trade can be “fair” when countries have different goals, rules and economic systems. The pandemic and recent increase in geopolitical tensions have further aggravated these concerns and triggered a surge in restrictions on trade and financial flows to accomplish multifaceted goals. Countries are also becoming more aware of the power of “chokepoints”—such as in specialized semiconductors in the US and rare earths in China—causing countries to respond by attempting to build resilience to these threats. This class will begin a discussion of these new forms of warfare by focusing on trade “weapons” and leaving a discussion of financial “weapons” to the next class.

- What are the costs and benefits of free trade? What has changed to shift more countries to support trade restrictions, protectionism, and a greater focus on domestic production?
- What is the impact in the US of higher tariffs in the economic models used in class? What is the impact on countries outside the US? How should countries respond?

- What is the impact in China of restrictions on rare earth exports in the models used in class? What is the impact on countries outside China? How should other countries respond?
- What are other “weapons” countries have used related to global trade? What are the advantages and disadvantages of different approaches? Have these weapons been successful at accomplishing their goals?
- Assume a new President is elected in the US. What advice would you give him/her on trade policy? Should the US keep the tariffs? Why or why not?

## **20. Guest Speaker: Russia and Ukraine: Stabilizing the Economy in the Face of War and Sanctions**

This session will hear first-hand from a senior official who worked intensively on Russia over much of the last decade. This armchair conversation will discuss how the Russian government used the standard macroeconomic tools discussed in this class to manage the extreme volatility and economic pressures around multiple wars and sanctions regimes. We will also discuss how the G-7 has been extremely creative in developing new financial “weapons” to use against Russia—and how Russia has adapted.

## **21. Financial Warfare, Global Imbalances and the Future of the Dollar**

This class shifts the discussion on new tools of warfare from restrictions on trade to those on financial flows and assets. These new financial “weapons” are multifaceted, from limiting the ability of banks to make dollar loans, to limiting access to the SWIFT payments system, to seizing central bank reserve assets, to limiting the ability of ships to obtain insurance. The use of these financial weapons has raised concerns in non-western countries about their vulnerability to these financial chokepoints, prompting financial innovation and increased efforts to reduce reliance on US dollars. The “demise” of the dollar has been forecast many times, however, and the data on whether the dollar is losing its dominance is mixed. There are currently a lack of viable alternatives to the dollar—as every currency, alternative asset, and even entire asset markets have their own disadvantages. Financial innovation and new forms of money, however, such as bitcoins, stablecoins, and digital currencies may present viable alternatives and change demand for different currencies. This class provides an excellent opportunity to review many of the models used throughout the class to analyze the impact of financial weapons.

- What different financial weapons have been used over the last few years? What are the costs and benefits? How do they work in the IS-LM framework and BB-NN models?
- What are key financial chokepoints today? Will these chokepoints still be effective in a decade?
- Is the era of dollar dominance nearing an end? What could replace the dollar? What will be the impact of increased use of stablecoins or a digital euro?
- What is the impact on the US in the models if the dollar loses its status as the preeminent reserve currency? What are the effects on other countries?

## **22. The Rise and Fall of Nations: Risks, Challenges, and Opportunities**

This is the last traditional class and will bring together many of the themes discussed throughout the semester to discuss the outlook for the global economy, as well as for individual countries and regions. The global economy has been through the most tumultuous two decades since the World Wars—from the Global Financial Crisis, to the Covid-19 pandemic and subsequent surge in inflation, to today’s heightened geopolitical tensions and reshaping of the global trading system. The aggressive fiscal and monetary responses also changed expectations about the role of government. These types of periods of accelerated change create substantial challenges, as well as opportunities. Different countries will evolve, adapt and respond to these changes in different ways—with their policy options based on their pre-existing characteristics and economic constraints, as well as how they evaluate different tradeoffs.

Critically important will be how these policies and decisions affect productivity growth—the elixir that raises incomes and can help address many imposing challenges (including debt burdens). How countries balance responding to imminent risks with long-term challenges will be critical for where and how businesses should operate over the next decade—and beyond.

- What are the major risks and opportunities for the global economy over the next decade? What indicators will you track to evaluate if these materialize? Why is the impact on productivity growth so critical for the outlook? How can businesses prepare?
- What factors will determine how countries balance policy choices that are politically popular in the short-term but increase the risk of crises and slow growth over the longer term?
- Which countries are more likely to emerge from these structural changes, risks and opportunities in a stronger position? Which countries are more vulnerable? Will there be another dramatic shift in global economic power over the next decade?
- Are there any outside-the-box scenarios we are missing?

### **23. Final Exam**

Closed-book exam in class. No electronics but students will be given a small “cheat sheet” and can bring in 1 page of notes. Sample tests from previous years will be provided online before exam.

### **24. Open Forum (aka Ask me Anything)**

This is the last chance for the class to meet and has no preset topics, assigned reading or formal lecture. Instead this “open forum” is a chance for students to ask questions on any macro and international economic topics that have not been covered yet – or for any topics that were covered but you have additional questions. This is a chance to ask “serious” questions about the challenges in specific countries, economic concepts, research results, etc. This is also a chance to ask more speculative and fun questions and explore the softer aspects of policymaking in the global economy—including how decisions are made and some of the more personal experiences of Professor Forbes at the White House, US Treasury, Bank of England, and recent international meetings. Feel free to send any specific questions in advance—or simply come to class ready to raise any topics of interest. What we discuss is up to you!