

# Teaching an Undergraduate Elective on the Great Recession (and the Covid-19 Recession, too)\*

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## Abstract

We describe an undergraduate economics elective focused on the Great Recession and the Covid-19 recession beginning in 2020. We have taught the course at both liberal arts colleges and research universities, and at all levels of the curriculum ranging from a first-year seminar to an upper-level elective. This paper focuses on the course design with intermediate macroeconomics as a prerequisite. The course outline described in this paper introduces material in seven units: the housing bubble and asset pricing, housing policy and history, propagation and panic, monetary policy, fiscal policy, aftermath and international perspectives, and the macroeconomics of Covid-19. In the course design, we also provide sample assignments and readings.

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The Great Recession and Covid-19 recession are arguably the two most significant macroeconomic events since the Great Depression. They have revolutionized how central banks conduct monetary policy and revitalized the use of fiscal policy for economic stabilization. Economists, especially in macroeconomics, continue to incorporate lessons from these recessions into their scholarship, leading to both a “renaissance” in research on fiscal policy<sup>1</sup> and a major re-thinking of how central banks should conduct monetary policy.<sup>2</sup>

Even though the Great Recession ended in 2009, it is yet to fully make its way into the teaching of undergraduate economics despite the important lessons highlighted by the events of the crisis and aftermath that can and *should* change the way we teach macroeconomics to undergraduates (Blinder 2015). Some introductory and intermediate macroeconomics courses do make efforts to incorporate a discussion of the Great Recession into the curriculum. But, as their basic short-run framework, most of these courses still typically teach some version of the aggregate supply and aggregate demand (AS/AD) model that mostly ignores financial factors.<sup>3</sup> Gartner, Griesbach, and Jung (2013) find that these courses feature contain “much the same lineups of models as they did before the crisis.”

In some versions of these classes, the Great Recession may be treated as an extension or supplement to the curriculum as an illustration how financial factors can enrich these types of models to explain rare, but important, periods of financial distress.<sup>4</sup> Rarely, is the Great Recession incorporated directly into the core material or models of these classes. This is partially due to the ubiquitous problem of semester time constraints as noted by Blinder (2015), “. . . as we grapple with what to add, we must be mindful of . . . the law of conservation of teaching weeks: We don’t have any more than we used to”. Thus, while there is merit to reevaluating aspects of the existing introductory and intermediate macroeconomics curriculum, the reality is that the syllabus for core economics courses are already at (or above) capacity. Existing electives in macroeconomics may also provide some treatment of the models and literature regarding the Great Recession; but again, only at a cursory level. Advanced courses in macroeconomics, which are taken by few undergraduates, may study Dynamic Stochastic General Equilibrium (DSGE) models, one iteration of which includes financial frictions.<sup>5</sup>

The Great Recession deserves more attention in undergraduate economics curriculum. The sig-

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<sup>1</sup>See Ramey (2019).

<sup>2</sup>See Kuttner (2018).

<sup>3</sup>Araujo, O’Sullivan, and Simpson (2013) provide a post-Great Recession discussion about what should be taught in Intermediate Macroeconomics.

<sup>4</sup>Jones (2018), a popular Intermediate Macroeconomics textbook, has two chapters in Part 3, The Short-Run, dedicated to the Great Recession

<sup>5</sup>Our own advanced macroeconomic classes include models with financial accelerator effects. Examples include Bernanke, Gertler, and Gilchrist (1999), and Iacoviello (2005). Solis-Garcia (2018) provides an overview of teaching DSGE models to undergraduates.

nificance of the Great Recession warrants consideration not only within the core economics courses, but as a stand-alone new course. Likewise, even though scholarship on the Covid-19 recession is in its infancy at the time of our writing, it is already time to start teaching its lessons to undergraduates. This paper presents an elective originally titled “The Great Recession” through 2019 and renamed “A Tale of Two Recessions” starting in 2020. We have taught this course over a dozen times at a variety of institutions including a research university and two liberal arts colleges. Ours is not the only undergraduate course focused on the Great Recession<sup>6</sup> But to the best of our knowledge, ours is the first, originally offered under the title “The Recession of 2009” at the University of Kentucky in the Fall of 2009 and the most frequently offered. We have taught it as a first-year seminar to students with no previous coursework in economics and as an upper-level elective with both intermediate macroeconomics and econometrics as prerequisites. In this paper, we present a version for students who have had intermediate macroeconomics.<sup>7</sup> The readings, curriculum, and many of the assignments, however, can be adjusted to make them appropriate for students at different levels. In all cases, the class has been very well received, and we believe that it has been a worthy part of the respective institutions’ economics majors.

The paper proceeds as follows. We begin by briefly making the case for why a course on these two recessions deserves a place in the curriculum of more undergraduate economics programs. Then, we present a roadmap for teaching the course by describing each unit in 2-3 week blocks starting with the the housing bubble that preceded the Great Recession through the global financial crisis of 2008 and the policy response and ending with a two-week comparison with the Covid-19 recession. For each unit, we present sample assignments as well as readings.

## **1 Why Offer “A Tale of Two Recessions”?**

Most economics majors only take three or four electives. Therefore, it should be a high bar for offering an elective on these two recessions at the expense of canonical courses such as labor, public, or monetary economics. We start by noting one important, but not sufficient benefit—the course has always been popular with students with strong enrollments, and it has always ranked among the best reviewed class offered by the instructors. When we first offered it in 2009, the students were justifiably concerned with the Great Recession’s impact in their careers. By 2019, student demand was still very high, although many described it as a class on “economic history.” Finally, demand surged again in 2020 as students feared the economic fallout from the Covid-19 pandemic.

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<sup>6</sup>For example, Nobel Laureate Paul Krugman offered one at Princeton in 2014.

<sup>7</sup>The version of the course described in this paper does not require an econometrics prerequisite, but throughout we provide opportunities to incorporate that skill set if students have taken it.

Student interest, of course, is insufficient to justify using valuable time in the economics major on a specific topic. It is also important that the class allow students to develop their theoretical and empirical skills and build on the foundation developed in intermediate macroeconomics. First, there is ample data from the recessionary periods that allows students to improve their data collection, manipulation, statistics, or econometric skills. For example, we provide a sample assignment where students collect data on leading economic indicators and use it to describe the current risk of a recession starting within the next 6-24 months. Second, the course provides students an opportunity to build their theoretical knowledge by augmenting traditional models, which dominate introductory and intermediate macroeconomics, with financial factors. Models from other areas, such as asset pricing and principal-agent frameworks, can also be used in this course.

Another advantage of the course is that it is highly interdisciplinary—a feature that is especially valued by many liberal arts colleges. Business cycles are firmly in the domain of macroeconomics. But proper treatment of the Great Recession and the Covid-19 recession requires discussion of connections with other disciplines. Concepts and methodologies from diverse areas, including macroeconomics, microeconomics, law, finance, political science, and other disciplines, contribute to understanding these phenomena. For example, understanding the Great Recession requires that students have some knowledge of how financial assets, including mortgage-backed securities, are priced. Asset pricing is an important topic that many students will see very little of in traditional economics coursework.<sup>8</sup> For inexperienced students, this may entail a relatively non-technical discussion of the fundamental factors that influence asset prices and how non-fundamentals lead to the potential for speculative bubbles. More advanced students, however, benefit from a more formal mathematical model of asset prices.

We also discuss how microeconomic theory forms a basis for the macroeconomic behavior that defines both recessions. We discuss why lenders originated so many highly risky subprime mortgages in the 2001 to 2006 period, and why credit-rating agencies issued grades that now seem so flawed. We introduce agency theory and discuss how compensation structures might prevent or contribute to such sub-optimal behavior. In addition, we also consider the microeconomic basis for government intervention in housing or financial markets, focusing on potential inefficiencies in these markets (*e.g.* social capital externalities in housing markets or systematic risk in financial markets) and how policies may address them. Legal constraints and regulations frequently enter the conversation. One example is the lack of Federal Reserve bailout of Lehman Brothers where that firm's financial situation may have made a bailout illegal under the Federal Reserve Act.<sup>9</sup> Accounting rules, such as the distinction

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<sup>8</sup>This is particularly relevant for liberal arts institutions or those without a business program that do not regularly offer finance courses.

<sup>9</sup>Ball (2018) provides a good reference for students interested in this issue.

between book value and mark-to-market accounting, are important for understanding the financial crisis. Political considerations are also relevant, especially when examining the policy response. Finally public health is clearly central to the Covid-19 recession. We have seldom seen students so engaged as when we discuss the joint economic and public health outcomes from non-pharmaceutical interventions such as mask wearing and business and school closings.

The interdisciplinary nature of the course opens up opportunities to bring in professionals from outside of academia. For example, as macroeconomists, we tend to discuss how the Federal Open Market Committee chooses its Federal Funds rate target while paying far less attention to how that policy is implemented.<sup>10</sup> A guest speaker from the Federal Reserve Bank of New York, however, provided much greater detail on this topic while also exposing students to potential career paths at the Federal Reserve. Another guest speaker, an executive at American International Group Inc. (AIG), provided students with a micro-level view of the financial crisis, including the similarities between modern insurance companies and hedge funds, quite distinct from the view presented by us as academic macroeconomists. Finally, an Assistant Director of the Consumer Financial Protection Bureau (CFPB) discussed with students the role of financial education and consumer protection in the Great Recession.

The course has proven to be popular and a productive avenue to develop student's critical thinking and analytical skills. But we have also heard from many students, especially those in finance-related fields, that the course and its treatment of macro-finance topics has proven to be highly useful to them in resume building, interview conversations, and success in the workforce. Examples include students interviewing at central banks, investment banks, and government agencies such as the Congressional Budget Office, FDIC, CFPB, and Deutsche Bank.

We summarize the course's objective with four learning goals, First, examining recent macroeconomic events refines students' economic intuition and quantitative skills. Second, analyzing recent policy, including monetary, fiscal, and public health, bolsters students' ability to conduct cost-benefit analysis. Third, students learn to identify and reference economic evidence to better explain macroeconomic events and policy. Fourth, students develop a better understanding of the intersections of macroeconomics with other disciplines including finance, political science, law, and public health.

In the next section, we provide a roadmap for teaching the course.

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<sup>10</sup>Wolla (2019) provides an approachable analysis of how monetary policy implementation has changed since the financial crisis.

## 2 Course Design

The course content described below presents one iteration of the course offered at the upper-level with intermediate macroeconomics as a prerequisite during a fifteen week semester.<sup>11</sup> For the upper-level version of the course, we rely primarily on academic articles to deliver content.<sup>12</sup> The course is taught in a seminar format where students read journal articles, complete assignments related to that work, and come together in class to discuss. Often, students will engage with the content through presentations and structured debates. Depending on the course material, some lecture is also used to introduce new ideas and tools to students beyond the prerequisite knowledge.

The course material is divided into seven sections.

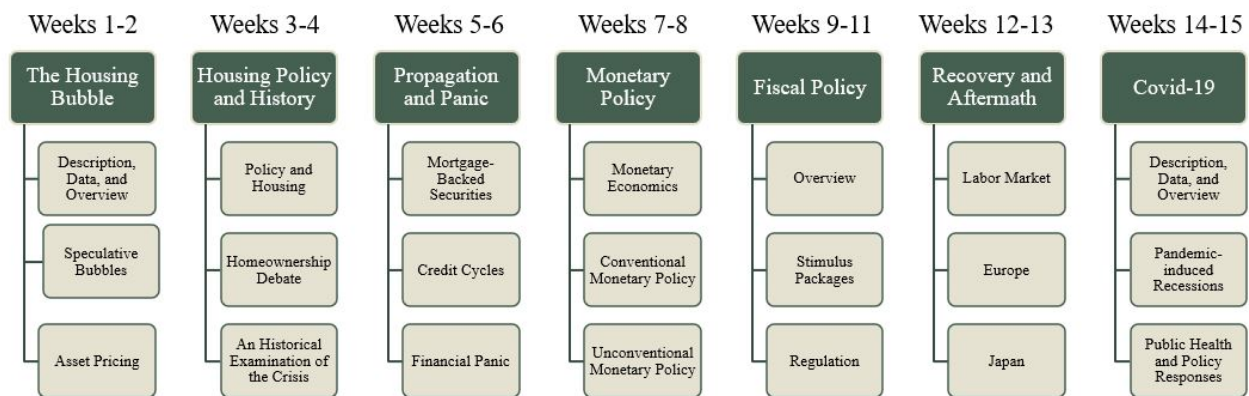


Figure 1: The Great Recession Units

In the subsections below, we describe the content of each unit. We also mention sample assignments throughout each section; and at the end of each unit, provide more details on one assignment in particular. The assignments ask students to use and develop a variety of skills including oral and written communication, critical thinking and analysis, collaboration, and empirical techniques.<sup>13</sup>

Another important component of this course is a final research paper. There are many topics related to the Great Recession and the Covid-19 recession that we cannot cover in detail during the semester due to time constraints. Students are encouraged to make an aspect of these recessions that

<sup>11</sup>If the course is taught at lower levels, readings typically consist of popular press articles, books written for general audiences, and some scholarly pieces often from outlets such as the *Journal of Economic Literature* or the *Journal of Economic Perspectives*.

<sup>12</sup>We also assign some films. One example is Bernanke (2012), a four part series of lectures from Ben Bernanke with the last two dedicated to the financial crisis. Other examples include popular films such as *Inside Job*, *Margin Call*, *The Big Short*, and *Too Big too Fail*.

<sup>13</sup>A sample syllabus and course schedule are available in an online appendix.

the class omits or mentions only briefly the basis of the course's required research paper. Students are instructed to choose their own topic and develop a well-defined, innovative research question. The methodology used to answer the research question can either be theoretical, empirical, or a comparative literature review depending on the student's academic background. The assignment is scaffolded throughout the semester incorporating drafting, feedback, and revision.<sup>14</sup>

In addition to a term paper and the written assignments for each of the seven units, all students also participate in at least one policy debate. These and are designed to improve students' communication, critical thinking, and presentation skills. Appendix A.4 provides more detail on one sample debate assignment, as well as the topics for the fall 2020 semester.

## 2.1 A Sample Plan for the Course

### Weeks 1-2: The Housing Bubble and Asset Pricing

Weeks 1 and 2 discuss the housing price bubble that occurred from 2001 through 2006 and the catastrophic collapse of housing prices which began in 2007. We start with a discussion of housing price and quantity data, emphasizing housing's historic role as a leading economic indicator. First, students are introduced to data showing the increase in housing prices during the early 2000s. We emphasize that an increase in asset prices does not always mean that there is a bubble. Instead, we define a speculative bubbles as a deviation from an asset's fundamental value. For real estate, we describe the fundamentals as: i) the utility that people obtain from living in residential real estate and ii) the productive value of commercial real estate. Data on the price-to-rent ratio are shown to students to demonstrate that it is now widely accepted there was a real estate bubble in the early 2000s. Other time series are presented to show the change in real housing prices and the differential rise in home prices in the United States.

In Week 2, we take a closer look at asset pricing with an emphasis on how speculative bubbles may arise. We start with a simple model setting the fundamental value of an asset equal to the stream of discounted for fundamentals over an infinite horizon where the fundamental value may be measured as dividends for stocks or rents for housing. We then consider several fundamentals based explanations for housing price inflation: i) low interest rates ii) financial innovation iii) increases in productivity and wealth. We then take the basic asset pricing model:  $q_t = \frac{E[q_{t+1}]}{1+i_t} + s_t$ , where  $q_t$  is the asset price and  $s_t$  is the fundamental value, and iterate it forward. This shows that under rational expectations

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<sup>14</sup>The final course paper assignment prompt, as well as various components of the final paper due throughout the semester and the corresponding rubrics can be found in an online appendix. This process-oriented approach to writing-in-the discipline enhances student learning through the iterative research process (Underwood and Marshall 2019; McGoldrick 2008).

there is no future price in our final asset price equation and no speculative motive thus exists. Next, in the context of this simple asset pricing model, we present four explanations for the increase in real estate prices that occurred in the early 2000s. The first is that people cannot correctly price housing and their expectations are irrational or completely erroneous. The second possible reason is that the expected discounted stream of fundamentals changed by lower interest rates and/or higher rents. There is evidence that lower interest rates during this time did at least moderately contribute to the housing bubble. Explanations three and four expose students to theories of bounded rationality such as adaptive learning and herd behavior. These can be treated with popular press pieces for inexperienced students.<sup>15</sup>

### **Sample Assignment**

In this assignment, students write a memo to a policymaker regarding whether a certain type of asset is currently in a bubble. This is particularly interesting as students consider recent events including the subprime automobile loan market and the emergence of cryptocurrencies such as Bitcoin.

### **Weeks 3-4: Housing Policy and History**

We begin this unit by examining a long-standing macroeconomic debate on the costs and benefits of U.S. government promoting homeownership as a policy goal. Students learn about how government intervention and institutions, such as the government-sponsored enterprises (GSEs), attempt to correct any externalities associated with homeownership and whether the benefits of these interventions outweigh the costs. Students read papers that discuss or estimate the externalities associated with homeownership.<sup>16</sup> The social benefits of increased access to mortgage markets are factored in and students are asked to weigh these benefits against the costs, including the risk of increased volatility. Students also become familiar with other relevant aspects of the housing market including mortgage-backed securities (MBS), credit rating agencies, and credit default swaps.<sup>17</sup>

This unit also gives students their first extensive exposure to the role of monetary policy. The class first considers whether loose monetary policy by the Federal Reserve and other central banks, keeping

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<sup>15</sup>For example, Robert Shiller's article in the *New York Times* entitled "How a Bubble Stayed Under the Radar" or formal scholarly work such as Bikhchandani, Hirshleifer, and Welch (1992).

<sup>16</sup>For example, DiPasquale and Glaeser (1999) offer an econometric analysis appropriate for advanced students, and DiPasquale (2011) provides a less technical overview for students at a lower level.

<sup>17</sup>For introductory-level students, Marginal Revolution University offers a free classroom simulation exercise on securitization available here: <https://mru.org/teacher-resources/active-learning/teaching-great-recession-securitization-simulation>.



rates “too low for too long,” was a major driver of the housing bubble. Gelain, Lansing, and Natvik (2015) and Rudebusch (2009) are useful sources. We then consider whether monetary policy should, in general, attempt to control asset pricing bubbles.

The later part of Week 4 places the events of the Great Recession in an historical context. Common trends in boom and bust cycles are examined including famous asset price bubbles in equities, land, commodities, and foreign exchange markets. We discuss theories of business cycles financed by credit developed in the 19th and 20th centuries by Wesley Mitchell, Irving Fisher, Hyman Minsky, and Charles Kindleberger. Here, students read Bordo (2008) and Collyns (2007) as background for these conversations. Time-permitting, we also consider the hypothesis of Leamer (2007) that housing is the dominant component of the business cycle.

### **Sample Assignment**

This assignment is a formal team debate over the costs and benefits of homeownership. In groups, students are required to present an argument “for” or “against” homeownership based on a position randomly assigned to them. Part of the purpose of this assignment is to refine students collaborative and oral communication skills, in addition to actively engaging with the content and material. Students are also encouraged to consider alternative viewpoints given that they have no choice in debate position. This assignment could require students to present econometric evidence (if they have the appropriate background), but this is not required. The format of the debate as well as information on the required submission of an annotated bibliography are detailed in Appendix A.2.

### **Weeks 5-6: Propagation and Panic**

Weeks 5 and 6 examine how the crisis in housing, a fairly small part of the U.S. economy, spread to the rest of the economy, leading to the Great Recession. It is important to expand students’ knowledge of macroeconomics by incorporating connections with the financial sector. This includes introducing students to the field of macro-finance through examining the stylized fact that agents tend to become more risk averse during recessions and that the resulting deleveraging is a major driver of the resulting loss in output and rise in unemployment. The course also discusses the distinction between insolvency and illiquidity and how this relates to the central bank’s role as the lender of last resort.

In week 5, students are introduced to a very simplified New Keynesian theoretical model. The various versions of the AS/AD model that students see in both introductory and intermediate macroeconomics are not well suited for periods of financial distress. To provide students with an appropriate theoretical understanding of the financial crisis and ensuing recession, we expand the models typ-

ically covered in these courses to incorporate financial features which capture aspects of the Great Recession. There is a long literature within macroeconomics that does this, ranging from Fisher's (1933) early work on debt-deflation to more recent work on financial accelerator effects in modern macroeconomic models (Iacoviello 2005). Our approach is to focus on how, during periods of financial distress, borrowers must pay a heightened credit spread above the risk-free interest rate. For students at all levels, we discuss how credit spreads rise during financial crises both because default risk is higher and because lenders become more risk averse.<sup>18</sup>

It is straightforward to add credit spreads to most commonly used business cycle models by assuming that agents must borrow at a risky interest rate that includes them. We discuss how combinations of low inflation/output can lead to financial distress and induce lenders to require larger credit spreads. We then show how an initial reduction in aggregate demand, such as the bursting of an asset pricing bubble that lead to low combinations of output and inflation, can be amplified by financial factors. We begin with an ordinary aggregate demand curve. Then, we assume that if a linear combination of output and inflation fall below some exogenous threshold, higher credit spreads result, reducing investment. Re-calculating the aggregate demand curve, students see that it lies further to the left, amplifying the initial shock to aggregate demand. Next, we show that if the shock causes the central bank to hit its effective lower bound, then the aggregate demand curve lies still further to the left, providing a second source of amplification.

Week 6 applies what students learned from the theoretical modeling to the events of the Great Recession that propagated the initial shock to the housing market into the financial sector. First, data is presented on employment, inflation, real GDP, real estate prices, and the S&P 500, and we consider trends in these variables pre- and post-financial panic. The stock market and housing prices were falling prior to 2008; however, it was not until financial panic set in that real GDP, inflation, and employment also declined.

In order to understand the propagation and panic of the Great Recession, students need to recognize the credit expansion that preceded it. Mizen (2008) provides two explanations that are explored here: i) the Great Moderation and ii) the global savings glut. Next, signs of initial problems in the financial market are discussed, primarily causes and consequences of subprime loan defaults. Finally, students learn about how the popularity of mortgage-backed securities transferred mortgage risk to investment banks and financial markets more generally. In addition, these assets purchased with high amounts of leverage amplified the initial effects of default and caused a reduction in access to credit. The beginning of the financial panic set in after events surrounding Bear Sterns, Fannie Mae and

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<sup>18</sup>For more advanced students, we have developed a homework assignment based on Gilchrist and Zakrajsek (2012) who distinguish between these factors.

Freddie Mac, and Lehman Brothers, all of which are discussed in detail.

### **Sample Assignment**

The purpose of this assignment is to develop students' skills at collecting, analyzing, and interpreting macroeconomic data. Specifically, they are asked to identify a set of leading economic indicators and assess what their current values tell us about the risk of the economy falling into recession over the next 6-24 months. We typically suggest that students choose one variable related to housing, and one related to bond markets (often the slope of a yield curve).<sup>19</sup> But we also encourage them to be creative, picking at least one variable that is off the beaten track. Typically, students are very enthusiastic about this project, possibly because recession risk is highly relevant to their career outlook, and it is an opportunity to improve their data and empirical skills.

This assignment adapts well to students with different levels of experience. Appendix A.3 provides two versions, one for students who have taken an econometrics class and another for students who have not. The former introduces students to binary choice estimators such as probit and logit, explains how they differ from linear probability models (OLS), and asks students to estimate the risk of an NBER dataed recession using different estimators. The assignment for students without econometrics is similar in spirit but less technical. Students graph their data, note whether their potential leading economic indicators tend to move before, during, or after a recession has begun, and discuss if there are currently any worrisome signs in their data.

### **Weeks 7-8: Monetary Policy**

Having discussed the events of the financial crisis, and the related theory, we next turn to the policy response to the crisis. Week 7 reintroduces students to the theory and evidence behind monetary policy. Students have a basic understanding of monetary policy from their earlier coursework, but it is important to remind them of several key principles. First, we again use a simple New Keynesian AS/AD demand model to demonstrate that the central bank chooses the target rate of inflation which persists in the long run and results in no trade-off with potential output. Second, the empirical evidence suggests that in developed countries with low to moderate inflation, the long-run level of inflation does not significantly affect growth (Temple 2000). Third, there is often a short-run trade-off between output and inflation that can be demonstrated again using the simple New Keynesian model and the constrained optimization problem for central banks. Fourth, empirical evidence suggests that

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<sup>19</sup>More advanced versions of the course have asked students to read and evaluate Leamer (2007) as evidence of this connection housing's role as a leading economic indicator

monetary policy has real effects on the economy. Fifth, the evidence remains preliminary on whether unconventional monetary policy has the same stimulative effects as conventional monetary policy.<sup>20</sup> Finally, to provide some historical context, we discuss how fiat money has stabilized the U.S. economy (Bernanke 2004).

In week 8, we discuss how central banks use newer tools (*e.g.* reverse-repo loans and interest on reserves) to hit their target interest rates and why asset purchases can be regarded as a distinct policy since 2008. Many students enter the class with the outdated view that central banks set their target interest rates almost exclusively through open market operations, and that a central bank's balance sheet is merely the opposite side of the policy coin as its interest rate policy. So, it is important students understand the mechanisms of modern monetary policy tools. Many regional Federal Reserve banks provide relatively non-technical discussions of interest rate implementation targeted at students.<sup>21</sup>

Then, we move on to discussing “conventional” monetary policy which we define as simple interest rate policy. It is straightforward to explain why the Federal Reserve and other major central banks quickly decreased rates to near their effective zero lower bound. Rudebusch (2009) provides an approachable treatment of the effective lower bound and how it severely constrained the Federal Reserve during the Great Recession. Thus, we revisit the debate over whether the Federal Reserve contributed to the housing bubble by keeping rates “too low for too long.”<sup>22</sup> This is a good chance to expose students to empirical work appropriate for their level. For inexperienced students, this might entail comparing the federal funds rate under the original Taylor rule (1993) to the actual federal funds rate prior to 2005. For students with knowledge of econometrics, this can instead entail a look at more sophisticated empirical work that tries to quantify the Federal Reserve's role in the financial crisis.<sup>23</sup>

We finish this section of the course with material on the unconventional monetary policies pursued by central banks including quantitative easing, forward guidance, negative interest rates, etc. The biggest challenge with this material is that there is still no consensus on either the mechanisms surrounding how some of these policies work (especially quantitative easing) or on the empirical support for their effectiveness. We take this as an opportunity to show how new policies can drive modern economic research and how this research can then influence policymakers. The regional Federal Reserve banks are again especially useful for providing reading materials for less experienced students.<sup>24</sup> Students who have taken econometrics can be exposed to more academic research on unconventional

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<sup>20</sup>See, for example, Gambacorta et al. (2014), Williamson (2016), and Engen et al. (2015).

<sup>21</sup>See Williamson (2016) and Wolla (2019).

<sup>22</sup>Taylor (2014) provides an approachable critique of policy's role in the crisis.

<sup>23</sup>See Gelain, Lansing, and Natvik (2015).

<sup>24</sup>The New York Federal Reserve's *Liberty Street Economics* blog is a good example. See Luck and Zimmermann (2019) for an example on the effectiveness of Quantitative Easing.

monetary policy's effectiveness.<sup>25</sup>

## Sample Assignment

The purpose of this assignment is to improve students' writing. Students are asked to write a short (2-3 pages) memo to the Chair of the Federal Reserve. The memo should state what policy actions the FOMC should take at its next scheduled meeting (*e.g.* the Federal Funds rate target, asset purchases, etc.), how it should change its statement, and what, if any, forward guidance it should provide. Students are encouraged to articulate the tradeoffs associated with their policy recommendation, and to provide relevant economic or financial data in support of their policy.

## Weeks 9-11: Fiscal and Regulatory Policy

Weeks 9-11 focus on fiscal and regulatory policies. Many students come into the course having seen that the government spending multiplier equals  $\frac{1}{1-MPC}$ , regardless of the circumstances, and that the tax multiplier equals  $\frac{-MPC}{1-MPC}$ . Assuming a marginal propensity to consume equal to 0.9, this may lead them to expect implausibly large benefits to fiscal stimulus, with a spending multiplier of 10 and tax multiplier of  $-9$ . Thus, we begin this unit with a general overview on fiscal policy, taking care to consider how its effectiveness depends on the state of the economy. From a theoretical perspective, any model with a convex aggregate supply schedule (even if its derivation is entirely ad-hoc) suffices to show how fiscal policy is more effective during economic downturn. Montford and Uhlig (2009) provide a simple framework for representing the present value of changes to GDP from different types of fiscal shocks. This incorporates both the duration and strength of the effect and can be simplified for undergraduates. This paper also provides empirical estimates for deficit-financed tax cuts or spending increases, as well as balanced-budget spending increases. There are also other good empirical papers discussing the actual value of multipliers that may be chosen depending on the students' econometric backgrounds. These include Ramey (2011), which provides an excellent survey for students with little statistical training, and Iletski, Mendoza, and Vegh (2013), which is a good choice for more experienced students.

After discussing fiscal policy in general, we move on to examine the specific measures adopted during both the Great Recession and the Covid-19 recession. Here, we discuss the difference in tax

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<sup>25</sup>Examples which support the effectiveness of unconventional policy include Gamborta, Hofman, and Peersman (2014), and Engen, Laubach, and Reifschneider (2015). Williamson (2016) provides a more skeptical view.

rebates and tax cuts and their relative stimulative power. The 2008 tax cut, which provided households with one-time tax cuts of \$600 to \$1200 offer a good opportunity to discuss temporary versus permanent income shocks in the context of the life cycle model.<sup>26</sup>

We then consider the different components of the 2009 American Recovery and Reinvestment Act (ARRA), a much larger stimulus. We consider reasons for why different components (*e.g.* infrastructure spending, aid to state and local governments, etc.) may have different multipliers and compare these to the Congressional Budget Office's ex-post estimates of their effectiveness.<sup>27</sup> Next, we consider additional fiscal measures, including the sequestration after the Great Recession, while also analyzing the possible downsides of increased federal debt. For this final topic, we consider evidence from Reinhart and Rogoff (2010), including the controversies regarding that paper's replicability. This gives students exposure to the process of academic research and hopefully teaches them to approach high profile results with a healthy dose of skepticism. Finally, we explore the provisions of the CARES act and other legislation in response to the Covid-19 recession. Carroll *et. al.* (2020) provide a good resource for understanding the CARES's impact on the economy. We also ask students to compare and contrast this legislation with that of the Great Recession. One additional assignment, which works for all levels of students, is to have students write a policy memo to legislators discussing whether direct payments to households are an effective means of stimulus or whether those funds should be used in other ways.

After discussing fiscal policy, we turn our attention to the regulatory changes brought about by the Great Recession with an emphasis on Dodd-Frank. In our experience, most students have a weak grasp of the potential economic rationales for this kind of regulation. Too often, students enter the class with preconceived universal views in favor of, or against, more regulation. So, we begin this unit with some microeconomic theory, taking the students through different types of market failures and how they might be addressed through more regulation. We especially focus on systematic risk as an externality and how different provisions of Dodd-Frank (*e.g.* stress testing, requiring that originators hold a share of the assets that they issue) may improve welfare.

We conclude this section by briefly discussing the automotive bailout. This is somewhat of a stray topic that could just as easily have fit into the monetary policy unit. In addition to discussing the details of the bailout, mostly using popular press articles, we also discuss the distinction between insolvency and liquidity and how this difference impacts the ability of most Central Banks to intervene

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<sup>26</sup>Steindel (2001) provides an accessible overview of the topic. Sahm, Shapiro, and Slemrod (2010) and Shapiro and Slemrod (2009) provide empirical estimates of the MPC in 2008 following the tax rebates.

<sup>27</sup>August 2011. "Estimated Impact of the American Recovery and Reinvestment Act (ARRA) on Employment and Economic Output from April 2011 Through June 2011."

and bankruptcy law.<sup>28</sup>

As with all units in the class, we mix in policy debates throughout this unit. Common topics have included whether or not the ARRA was an effective policy, whether Dodd-Frank makes future financial crises less likely, and whether the Federal government was acting in the country's best interest to rescue U.S. automakers.<sup>29</sup> Another common, short writing assignment is to ask each student to write a policy memo advising a government on the best course for upcoming fiscal policy. The nature of this assignment has evolved over time. During the period of very low unemployment in the U.S. between 2016 and 2020, students typically focused on proposing a policy course to gradually move the U.S. to a sustainable fiscal path. Starting in the fall 2020, however, we expect that students will focus on how fiscal policy should respond to the latest recession brought about by the Covid-19 pandemic.

### **Sample Assignment**

This assignment once again focuses on students' writing and we work with students to incorporate feedback from their assignment on monetary policy. Here students again write a policy memo. This time it is to the Congressional leadership advocating for their preferred course of fiscal policy. The nature of this assignment depends on the state of the business cycle. During downturns, students are encouraged to design a policy that can best stimulate the economy. When the labor market is near full employment, however, students are encouraged to design a policy that ensures that the U.S. is on a sustainable fiscal path. In all cases, students are asked to explicitly state how they view the tradeoff between more economic activity and more debt generated by a more expansionary fiscal policy.

Both this writing assignment, and the one connected to the unit on monetary policy, are appropriate for students with or without econometrics. Our expectations do vary, however. We encourage more advanced students to incorporate econometric evidence on the effectiveness of monetary and fiscal policy into their memos.

The purpose of this assignment is to improve students' writing. Students are asked to write a short (2-3 pages) memo to the Chair of the Federal Reserve. The memo should state what policy actions the FOMC should take at its next scheduled meeting (*e.g.* the Federal Funds rate target, asset purchases, etc.), how it should change its statement, and what, if any, forward guidance it should provide. Students are encouraged to articulate the tradeoffs associated with their policy recommendation, and to provide relevant economic or financial data in support of their policy.

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<sup>28</sup>See: Rattner, Steven. 10/21/09. "The Auto Bailout: How We Did It." *Fortune*

<sup>29</sup>We have sometimes divided the ARRA debate into three positions: that it was sound policy, that it was far too small, and that it was far too big. This is useful when there are an odd number of students enrolled in the class.

## **Weeks 12-13: Aftermath and International Perspectives**

Weeks 12 and 13 examine international perspectives as well as the aftermath of the Great Recession. Although we assign this unit two weeks in this outline, we have been flexible in past versions of the class and shortened this unit if time is scarce, while extending it when we have been ahead of schedule. As more Covid-19 related material has become available, we have shortened this unit considerably and there are numerous topics which we have covered in the past which we expect to eliminate due to time constraints in the future.<sup>30</sup>

We focus on three topics in this unit. The first is the European sovereign debt crisis which began in 2008. Lane (2012) provides a survey that is accessible for a wide range of students. We start by reviewing some of economic theory behind sovereign debt crises, material which is commonly available in Introductory or Intermediate Macroeconomics textbooks. We then consider case studies which focus on some of the countries most significantly affected. Greece and Ireland have been popular choices, but students often make other countries the focus of their term papers. We pay special attention to the debate over austerity versus counter-cyclical fiscal policy.

The second topic we cover is whether the Great Recession accelerated pre-existing trends towards greater economic inequality. We assign students sections of Mian and Sufi (2014), which discusses how the housing crash disproportionately impacted poorer households. We also discuss Bayer and Charles (2016), which provides evidence of a disparate impact of the recession on minority groups. The third topic we cover in this unit is why unemployment in the United States was so slow to recover. We consider the secular stagnation hypothesis of Summers (2015), as well as older theories of hysteresis. The course also considers alternate measures of the labor force including U-6, labor force participation, and long-term unemployment. This final topic is a good opportunity to get less experienced students used to collecting and working with economic data.

Debate topics from this unit have included “did the adoption of the Euro make the European recession more or less severe?” and “did the European Central Bank do all that it could to combat the recession in a timely manner?.” A common short writing assignment for students of all levels has been to ask students to analyze why the Eurozone was slower to recover from the Great Recession than the United States, considering the roles of different fiscal situations, monetary policies, as well as luck. This is another assignment that is appropriate regardless of whether students have taken econometrics. Another potential assignment is to examine the roles of different policy decisions on economic inequality.

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<sup>30</sup>Examples include Japan’s long battle with low inflation/deflation and Brexit.



## Sample Assignment

In this assignment, we ask students to compare the economic impact of the Great Recession on the United States and another country of their choosing in a short 3-4 page essay. The goal of this assignment is for students to write in the discipline and use economic terminology and methodology to assess the severity of the crisis internationally. For students without an econometrics background, this can be done with basic descriptive statistics and data visualizations. Instructors can guide students towards economic series that may be useful in their analysis including real home prices, the unemployment rate, gross domestic product, and the inflation rate. Students should also be encouraged to explore decompositions of these variables by different demographic characteristics.

## Weeks 14-15: The Covid-19 Recession

These final two weeks are dedicated exclusively to the Covid-19 recession and its aftermath. This does not imply, however, that only  $\frac{2}{15}$  of the class is spent on this later recession. In the Fall 2020, for example, about half of the class was spent on Covid-19's impact by integrating the relevant material into the other modules. In addition to these two weeks, we included discussion on Covid-19's impact during earlier units on monetary policy and fiscal policy. Furthermore, many class assignments addressed topics related to the Covid-19 recession and comparisons with the Great Recession.

These two weeks are intended to address a pair of questions specific to the Covid-19 recession. First, what are the mechanisms for how Covid-19 induced a sudden and sharp macroeconomic downturn? Theoretical work in this area is progressing rapidly, but in the Fall 2020, we used the framework of Guerriera *et. al* (2020). This paper presents a model with multiple sectors where an exogenous adverse shock to aggregate supply (like the virus) leads to endogenous reduction in aggregate demand as well. This framework can be presented in a simple AS/AD model, or in a more sophisticated setting for more advanced students. Another option is to compare the economic impact of Covid-19 with earlier pandemics, such as the Spanish Flu.<sup>31</sup>

The second question asks what have been the joint public health and economic policy responses to the Covid-19 crisis and how do we evaluate them? From a public health perspective, we consider the nature of trade-offs between measures that seek to reduce disease (*e.g.* stay at home orders) but that may also reduce macroeconomic performance. Work in this area is progressing rapidly. In the Fall 2020, we focused on Baqaee, Mina, and Stock (2020) which estimates the joint economic and public health outcomes (*e.g.* covid-19 deaths) from different public health policies. Stock (2020) provides a less technical summary of this work that may be better suited for students with more limited

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<sup>31</sup>Karlsson, *et. al.* (2014) is a potential paper to use on the economic impacts of the Spanish Flu.

economics backgrounds. Other good sources include Baek *et. al.* (2020), which provides an example of work quantifying the effect on unemployment claims that is approachable to most students, and Misra, Singh, and Zhang (2020), who use zip-code level data to estimate the impact of the interaction of direct payments and stay at home orders. This last paper is better suited for students with some econometrics exposure.

Throughout these final two weeks, we continue discussing the monetary and fiscal policy tools used in response to the pandemic. Debate topics for this unit include “were the public health benefits of stay at home orders worth any economic harm that they caused?” and “was the 2020 CARES stimulus successful at reducing the economic harm caused by covid-19?” Because this is the final unit in the course, we usually allow students to focus on their term papers by not assigning additional writing assignments. But it would be easy to conceive assignments asking students to analyze aspects of monetary or fiscal policy if desired.

This unit is obviously evolving and will continue to for the foreseeable future as to Covid-19 recession and policy responses continue.

### **Sample Assignment**

Because this is the last unit in the course, students are typically fully engaged with their term papers. In the Fall 2020, we thus made this assignment open-ended and graded it lightly. Students were asked “was the economic downturn from covid-19 primarily due to agents’ voluntary reductions in economic activity, or due to governments impositions of non-pharmaceutical interventions (NPIs) including stay at home orders, business closures, and school closures?” Most students chose to summarize the rapidly emerging scholarship in this area. Some students, however, chose to collect data and answer it on their own.

We are sure that scholarship on this question will evolve quickly. In 2020, students were directed to some early work, including Chen, *et. al.* (2020) and Maloney and Taskin (2020), which generally find a small impact of NPIS. They were also directed to other work showing a bigger effect including, Arnon *et, al.* (2020) and Baqae textitet, al. (2020).

## **3 Conclusion and the Future of the Course**

We argue that the Great Recession and covid-19 recession are sufficiently important topics to justify a stand-alone class in an undergraduate economics curriculum. The course has always ranked among the post popular electives offered at our institutions and is flexible enough to be offered at different levels ranging from first-year students to upper level economics majors.

Prior to covid-19 recession, we were asked “for how much longer do you expect to teach the Great Recession?” Our answer at the time was that we felt it still had quite a bit of shelf life left. The class content has always evolved. Early iterations spent more time on the financial details of the Global Financial Crisis. Later versions redirected much of that time to the aftermath of the Great Recession, including its role in exacerbating pre-existing trends towards greater economic inequality in the United States and some other advanced economies. This has helped keep the course relevant for students who were in elementary school during the Great Recession. The covid-19 pandemic is the latest evolution. The plan provided in this paper only explicitly dedicates two weeks to the covid-19 recession. But when we taught it in the Fall of 2020, far more time was actually devoted to it, as we discussed breaking developments or compared or made comparisons to the Great Recession during every class. The covid-19 recession is in most ways simpler than the Great Recession, a true exogenous shock that unexpectedly hit the economy. But scholarship will surely continue to advance and we will incorporate this into the course while cutting some earlier material to make space. We are especially excited to talk more about the economic impact of public health measures. We also eagerly await more evidence on the effectiveness of the fiscal and monetary response to the crisis. And sometime in the future, hopefully no time soon, we will have to consider how to incorporate the next recession into the curriculum.

# A Appendices

## A.1 A Simple Model of Financial Acceleration

The business cycle model in macroeconomics textbooks typically do not explicitly include financial market frictions which serve to amplify and propagate negative shocks. To illustrate the role of financial factors in turning the 2008 Global Financial Crisis into the Great Recession, we present the following model.

Aggregate supply does not play a major role in the model and any upward sloping AS curve will suffice. We typically remind students of the intuition behind a New Keynesian Phillips Curve:  $\pi_t = \pi_{t+1}^e + \kappa \tilde{y}_t + u_t$  and why firms respond to higher inflationary expectations and output by raising prices. We then impose the assumption that  $\pi_{t+1} = \bar{\pi}$ , where  $\bar{\pi}$  is the target inflation rate. Although we avoid discussing expectations formation detail in detail. Instead, we note that this is a simplifying assumption and that it may be more realistic if think of time periods as consisting of a few years instead of quarters. This then yields the AS curve for the model:

$$\pi_t = \bar{\pi} + \kappa \tilde{y}_t +$$

Moving to aggregate demand. The model can be adapted to most versions of AD. We begin by reminding students of the Euler Equation:  $\tilde{y}_t = \tilde{y}_{t+1}^e - \sigma^{-1}(i_t - \pi_{t+1}^e) + g_t$ . We remind students that  $\tilde{y}_t$  indicates the output gap with negative values indicating a shortfall. We also remind them of the equation's intuition, that households try to smooth their consumption (which equals output) but that they respond to higher real interest rates by saving more and reducing current consumption and investment. Finally, we note that higher values of  $g_t$  may reflect expansionary fiscal policy or changes in asset prices, including housing.

To obtain an AD curve, we then assume that  $\tilde{y}_{t+1}^e = 0$  and that the Central Bank pursues a pure inflation target:  $i_t = \bar{\pi} + 2(\pi_t - \bar{\pi})$ .

$$\pi_t = \bar{\pi} - \frac{\sigma}{2} \tilde{y}_t + \frac{\sigma}{2} g_t \quad (2)$$

We then illustrate how the bursting of the housing bubble in 2007 was a negative shock to  $g_t$ . This leads to the usual decline in output and inflation.

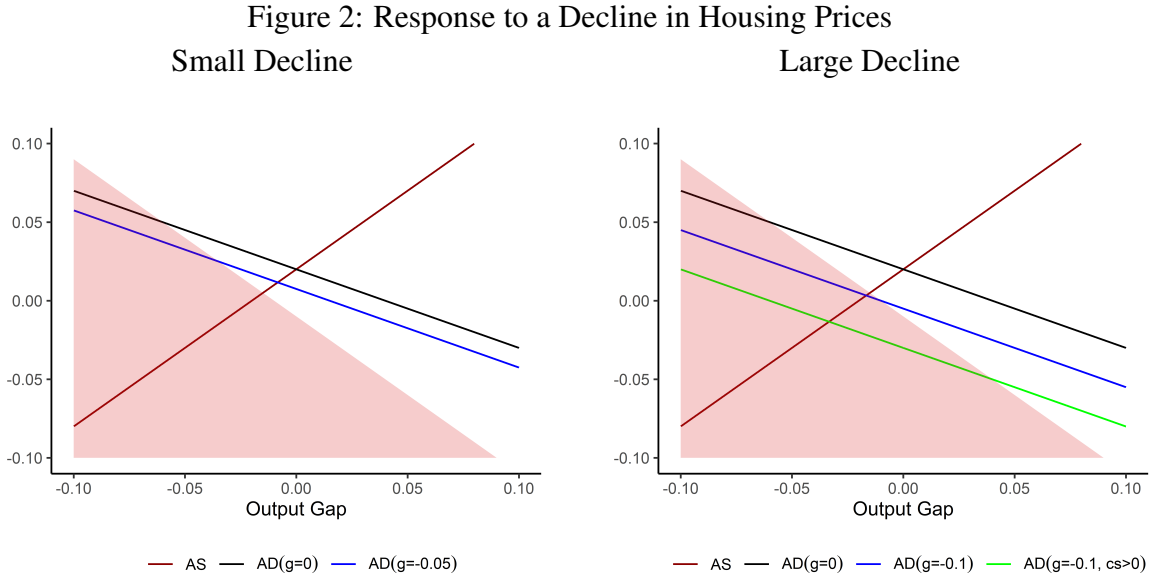
We model frictions simply by adding a credit spread to the real interest rate that lenders face. We model credit spreads as binary, equalling zero in “normal” times but rising to some positive level  $\tau$  if a linear combination of inflation and output is below some threshold. We show students some data on credit spreads (*e.g.* Moody's Baa to Treasury spread, LIBOR-OIS, etc.) to show that while credit spreads are not actually binary, there does seem to be two distinct states.

$$cs_t = \begin{cases} 0 & \text{if } \pi_t + \omega \tilde{y}_t \geq \bar{c} \\ \tau & \text{if } \pi_t + \omega \tilde{y}_t < \bar{c} \end{cases} \quad (3)$$

We discuss how lower inflation may increase default risk by increasing the real value of debts, and why lower national income has the same effect. Equation (3) creates a region (in the bottom left of the AS/AD space) corresponding to financial crises. Resolving for the AD curve if the model is in the financial crisis region yields:

$$\pi_t = \bar{\pi} - \frac{\tau}{2} - \frac{\sigma}{2} \tilde{y}_t + \frac{\sigma}{2} g_t \quad (4)$$

If the initial shock to AD is large enough to move the model into this region, the financial sector amplifies the magnitude of the downturn. Figure 2 shows a small shock ( $g_t = -.05$ ) that is not amplified and a large shock ( $g_t = -.05$ ) that is amplified.<sup>32</sup>



The second source of amplification in the model is the effective lower bound on nominal interest rates, which the model has ignored so far. We now impose a zero-lower bound, pausing for a moment to discuss the feasibility of negative nominal interest rates:  $i_t = \max(0, 2\pi_t)$ . This then yields a kinked aggregate demand curve.

$$AD \rightarrow \begin{cases} \pi_t = \bar{\pi} - \frac{\tau}{2} - \frac{\sigma}{2} \tilde{y}_t + \frac{\sigma}{2} g_t & \text{if } \pi_t \geq 0.01 \\ \tilde{y}_t = -\sigma(\tau - \bar{\pi}) - g_t & \text{if } \pi_t < 0.01 \end{cases} \quad (5)$$

<sup>32</sup>The other parameters in Figure 2 are set to  $\sigma = 1$ ,  $\kappa = 1$ ,  $\omega = 0.95$ , and  $\bar{c} = -0.05$ .



## A.2 Sample Assignment (Weeks 3-4): Homeownership Debate

For this assignment, students are required to present an argument “for” or “against” homeownership. In class, we randomly assign students to one of three groups: Team 1, Team 2, or a moderator. Each team is comprised of 3-4 students and assigned a position on homeownership. The format of the assignment is a debate conducted in class. Students must work together with the entire team, or as a group of moderators; however, each team is subdivided into two parts in order to give everyone a chance to speak during the debate.

Each team is asked to prepare the opening statements and closing statements beforehand (including who is speaking and for how long). Students are also instructed to draft rebuttals and responses based on the anticipated counterarguments made by the opposing team. The moderators will research both sides of the debate to be able to assess the validity of each team’s claims. In addition, the moderators prepare in advance several questions for each team.

Again, the students are asked to base their arguments on research beyond the required readings for the course. Students must also turn in a complete annotated bibliography of all the sources used for this assignment. The debate is structured as follows:

Homeownership Debate		
Duration	Activity	Team
4 minutes	Opening statements	Team 1 part a
4 minutes	Opening statements	Team 2 part a
5 minutes	Break for organization	Teams 1 and 2
3 minutes	Rebuttal	Team 1 part b
3 minutes	Rebuttal	Team 2 part b
4 minutes	Break for organization	Teams 1 and 2
2 minutes	Response	Team 2 part a
2 minutes	Response	Team 1 part a
2 minutes	Break for organization	Teams 1 and 2
2 minutes	Response	Team 1
2 minutes	Response	Team 2
2 minutes	Break for organization	Teams 1 and 2
30 seconds to confer after each question	Questions from moderators	Teams 1 and 2
2 minutes	Break for organization	Teams 1 and 2
2 minutes	Concluding statements	Team 2 part b
2 minutes	Concluding statements	Team 1 part b

### **A.3 Sample Assignment (Weeks 5-6): Estimating the Risk of a Recession**

#### *Assignment for Students with Econometrics*

This assignment asks you to develop an econometric model that quantifies the risk of a recession. You are welcome to use the software of your choice.

1. *Leading economic indicators* are variables that tend to move in advance of the business cycle, as opposed to at the same time, or in response to the business cycle. They are therefore useful to predict macroeconomic conditions. Pick at least three leading economic indicators for your model. Your variables should be monthly or more frequent. Explain your choice.
2. Choose a time frame for predicting a recession. If you choose one year, for example, your model will then predict the probability of a recession beginning within one-year. Obtain the National Bureau of Economic Research's recession dates and construct a variable that equals 1 if a recession begins within your time frame and 0 if one does not. Report descriptive statistics and /or a graph of this variable.
3. Using OLS, regress your recession indicator on the leading economic indicators from #1. The fitted regression (using the "predict" command in Stata). Values will be the probabilities of recession. Report these.
4. Should you add lagged independent variables to your model?
5. What were the odds of a recession just prior to the Great Recession and the Covid-19 recession?
6. Suppose that a your model yielded low recession odds in January 2020. Do you think that would suggest that your independent variables are not good leading economic indicators?
7. Why is your model known as a "linear probability model?"
8. Why are binary choice models, especially probit and logit, often run instead of a linear probability model?
9. Re-run your model using either probit or logit. Describe how your results change.

#### *Assignment for Students without Econometrics*

This assignment asks you to analyze the current risk of a recession. You are asked to collect, present, and analyze macroeconomic data. The St. Louis Fed's FRED database is an excellent source of data.



1. *Leading economic indicators* are variables that tend to move in advance of the business cycle, as opposed to at the same time, or in response to the business cycle. They are therefore useful to predict macroeconomic conditions. Pick at least three leading economic indicators for your model. Explain your choice.
2. Present your data (line graphs are a natural way to do so).
3. For your first leading economic indicator, would an elevated value suggest a higher or lower than usual risk of a recession beginning in the next year? Explain why.
4. How does your first leading economic indicator's current value compare to its historical average? Does it suggest a higher or lower than usual risk of a recession?
5. Repeat #3 and #4 for your second leading economic indicator.
6. Repeat #3 and #4 for your third leading economic indicator.
7. Sometimes economists care about the level of a variable (*e.g.* the current value of the S&P 500), but other times they care about the rate of change (*e.g.* the return on the S&P 500 over the past few months). For your leading economic indicators, do you think think the level or rate of change is more important for predicting the risk of a recession?
8. Overall, do you believe that the risk of a recession beginning within the next year is higher than usual, lower than usual, or about average. Explain why.

## **A.4 Sample Assignment (semester long): Debating a Policy Issue**

This assignment is designed to further students' analytical and public speaking skills. It lasts throughout the term. While expectations of students' performance depend on the level of the class, the assignment itself does not. About once a week, a pair of students are assigned a topic to present to the. For the Fall 2020, the topics were:

1. U.S. policy promoting home ownership has done more harm than good.
- 2.: Fannie Mae and Freddie Mac are culpable for the Subprime Mortgage Bubble.
3. The Federal Reserve's monetary policy between 2000-2007 ("too low for too long") made the 2008 financial crisis worse.
4. Congress should intervene to end the "investor pays" model for credit rating agencies.
- 5.: The U.S. government should have saved Lehman Brothers.
- 6.: CAREs and subsequent fiscal policy has effectively mitigated the economic impact of covid-19.
7. Non-conventional monetary policy is effective at mitigating recessions?
8. Regulatory changes since 2008 make future financial crises much less likely.
9. The American Recovery and Reinvestment Act was worth it.
- 10 The Euro has made the Eurozone's economy more stable.
11. Lockdowns were the correct policy to combat covid-19.

To incentivize students to carefully research their topic, both students are required to prepare both sides of the argument. Students are instructed that their goal is to provide value to the discussion beyond what has already been discussed in class. A coin flip then determines which student will present which side of the argument. Students are expected to speak for 5-10 minutes, followed by questions from the instructor and their classmates.

In addition to providing students with experience in researching a policy issue and publicly presenting their views, this assignment has also been helpful in creating a more interactive classroom. These student presentations have often sparked longer conversations that lead to interesting aspects of the two recessions which we otherwise would not have discussed in the class. We have also observed numerous cases of a student who had previously been quiet in the class, taking ownership in their topic, gaining confidence, and then becoming a more active participant in the class.

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