GENERAL DISCUSSION All four papers were the subject of the discussion that follows.

Gregory Mankiw opened with a question about one of the findings in Christopher House and Linda Tesar's paper. They had found that imposing a labor or consumption tax and putting the proceeds toward paying off foreign creditors would severely depress GDP and, therefore, not raise as much revenue as one might hope. But Mankiw thought the correct parameter for evaluating this would be the uncompensated elasticity of labor supply, which was either close to zero or even backward-bending in the long run, and as a result it should not have a large effect on GDP after all. He wondered if their finding differed from this because, rather than following the standard assumption that income effects are similar to or somewhat larger than substitution effects, as he assumed, they had treated substitution effects as larger than income effects. Or was it because of Keynesian effects from sticky prices and, if so, how long do those effects last?

In Mankiw's view, the reason one cannot simply tax labor or consumption in Greece to pay off all the creditors is that there are limits to how much one can apply such methods and not because of Keynesian or neoclassical effects found in the modeling, such as income and substitution effects. He thought it probably has more to do with the political instability and tax evasion that would result at a certain point.

Ben Friedman spoke up to comment on the political-economy implications of the Greek problem, including the threat it posed to the structure of the euro area. He was surprised none of the authors had mentioned the banks and the way they were bailed out. In his opinion, it was a great tragedy that the Europeans paid, and are still paying, a great price for the way they handled their bank bailout. In the United States, by contrast, the government let the banks absorb losses during the crisis and then recapitalized those that needed recapitalizing, including some very large ones such as Citibank and Bank of America. The Europeans shied away from that approach and instead moved many of the questionable debts, as soon as it became clear the Greeks might default, from the banks' balance sheets to those of the central banks. Friedman thought Carmen Reinhart and Christoph Trebesch were right in concluding that debt relief is what has been needed all along. Private sector lenders know how to handle the situation of borrowers being in trouble and figuring out what to do with those debts, even though it may be a messy solution—it is after all what bankers get paid to do. But when debts are on the balance sheets of the official lenders, one is stuck in the fiction that they must never accept a default.

If the upshot were just a matter of some governments having to take losses that they did not want to admit, that might not have been too serious, Friedman argued, but now it has reached the point at which it has affected the high politics of the European Union (EU). He offered by way of analogy the situation in the Americas today in which Argentina is in default to many lenders, many of them domiciled in the United States. One cannot easily imagine President Obama being asked what his opinion is on Argentinian debt—he would probably respond by asking reporters why they thought he should have an opinion on the subject at all—and it certainly does not affect the high politics between Argentina and the United States. By contrast, up until the refugee crisis hit Europe, Angela Merkel, the Chancellor of Germany, was unable to hold any press conference without being asked what she thought about the Greek crisis.

David Romer had three big-picture questions stemming from three of the papers. He commended Christopher House and Linda Tesar for their paper's narrow focus on the feasibility of tax and spending options for solving the debt problem, which he read as concluding that those options are inadequate due to what amount to leakages in dynamic scoring. His first question was why House and Tesar did not take the next step and examine alternative ways to solve the problem. Two methods occurred to him: debt write-downs, which Reinhart and Trebesch mentioned in their paper, and structural reform, which Yannis Ioannides and Christopher Pissarides underlined as an approach with potentially enormous value. If Greece could raise its growth through other means, it could solve the debt problem by making the denominator in its debt ratio bigger.

Second, he was curious how far Reinhart would be willing to take her policy prescriptions. Would she advocate abolishing foreign borrowing if, for example, she were the newly installed president of a Latin American country? Certainly higher Greek domestic saving would be great, but achieving that is extremely hard. One could imagine instead returning to the practices of the 1950s and 1960s, when there was little mobility in international capital. Is that what she would ideally like to see?

His third question was aimed at Beatrice Weder di Mauro and coauthor Julian Schumacher, who advocated that the International Monetary Fund (IMF) abolish its systemic exemption. While it seemed true that the IMF had set up an incredibly discretionary process and that there were big disadvantages of that, it also appeared that if the IMF had not been willing to break its rules and had allowed Greece to go into a disorderly default in the crisis period of 2010, the systemic consequences would have been enormous. Romer said he certainly would not have advocated that the IMF simply abandon Greece to default. He wondered whether there might be a middle-ground approach that would allow for discretionary actions in exceptional circumstances without sacrificing all the benefits of a rule-based approach. His impression was that the authors had not fully articulated their position, and he wanted to hear more.

Bradford DeLong was struck by a finding in Reinhart and Trebesch's paper showing that, historically, real ex post returns on defaulted bonds were in the range of one to five percent, despite the losses due to haircuts and arrears. Notwithstanding Jeremy Bulow and Kenneth Rogoff's demonstrations that one should never do so, when crises come creditors somehow have enough control to squeeze the lemon hard, regardless of the excess burden in taxes and other costs imposed on the Greeks.

Echoing Romer's question to Reinhart, DeLong asked: Is it really the case that a country should never borrow in a currency it cannot print unless it happens to be Canada or Australia? And if so, should a country never let its firms borrow in a currency that it cannot print, because the private debt will be turned into a public debt during the crisis when everyone is looking to kick the can down the road? DeLong wondered whether alternative baselines were needed to assess this. Likewise, he wondered what would have been the macroeconomic consequences for Texas in the early 1990s had the U.S. government insisted that Texas reimburse the Resolution Trust Corporation for payments made to depositors in the Texas savings and loan crisis.

Kevin O'Rourke agreed with Romer's point that rules should be waived when there is a real systemic risk, but he also thought it should have a corollary requirement. In the case of deciding not to restructure a debt because of the systemic risk involved, should not the attendant cost be shared among all the members of the system that is being protected? He also agreed with DeLong's concern about the dangers that flow from private sector borrowing abroad. O'Rourke reminded everyone that in Europe, democracy resides at the level of the nation-state rather than at the trans-European level, so when a nation's sovereign decision-making is disrupted by debt crises, even temporarily, it creates a serious political problem. This led him to wonder whether, lacking a proper banking union, cross-border banking and lending should be reconsidered altogether.

He also pointed out a seeming contradiction between two of the papers. As he understood it, Weder di Mauro argued that the present value is what matters most when assessing debt levels, whereas Reinhart's paper alluded to the face value of a debt actually mattering most for economic performance. Both views seemed plausible to him, so he would need to see more empirical evidence to choose between them.

Maurice Obstfeld found it striking that the Greek crisis started out as a debt crisis and only later evolved into a banking crisis centered on the relationship between the European Central Bank (ECB) and the Greek banks. He concurred with Weder di Mauro and Schumacher's observation that when the European Stability Mechanism (ESM) tries to evaluate systemic risk, it rates any risk of default as systemic, and added that this is mainly because a country in default might have to leave the eurozone due to the position of its banks. Obstfeld concluded that to make the ESM function credibly, for example so that collective action clauses can allow countries to actually default, one would need to have a complete banking union, something that is not present in the eurozone. The lack of such a union is an Achilles' heel in the eurozone arrangement today, but it seemed to him that a banking union could be established and would stabilize the eurozone, solving part of the ESM problem, even if it created political problems.

Ricardo Reis found it surprising that the central bank did not play a more central role in the presentations, especially as it concerns Greece. The Bank of Greece is the main source of outside funds for Greece, through its access to the ECB, its effect on interest rates, and in determining how much banks can raise. Moreover, as part of the euro system, the Bank of Greece is no longer able to choose monetary policy for Greece to accommodate fiscal policy changes there, so this key determinant of fiscal multipliers works quite differently from the model in the House and Tesar paper. Finally, while Weder di Mauro and Schumacher had focused on the public debt, Reis thought their analysis neglected the very large liabilities the Bank of Greece holds to the rest of the euro system, both through the Emergency Lending Assistance (ELA) program and through the target program.

It worried Reis that Greece's central bank still has in place capital controls with limits on deposits. A problem arises once many Greek citizens expect the country to exit the euro. For Greeks today, taking currency out of a bank means getting foreign currency, whereas leaving money in a bank risks seeing it decline in value after Greece leaves the euro. As a result, the optimal strategy for individuals is to get as many euros into their pockets as they can, even though this leaves a money multiplier equal to one—essentially eliminating the banking system. Whether the government raises taxes, forgives debt, reassesses sustainability, or engages in structural reforms, the dominant strategy for individual Greeks is to have no banking system working at all, clearly an unsustainable situation. It is no longer simply a debt problem. Reis saw this as ultimately stemming from the way the ECB works, enabling an exchangeability between currency and deposits that has led to a bad speculative equilibrium.

Caroline Hoxby thought the focus needed to be on structural reform, something almost every observer seemed to agree is badly needed. The labor market is very distorted, deregulation is needed, monopolistic and oligopolistic practices such as governmental mispricing of purchases need to be ended—in short it seemed clear that many structural reforms are in order. But the ordinary Greek citizen does not seem to recognize this, and Greek leadership has been weak in supporting it and promoting it. In that regard, she wondered whether being integrated into the EU and the eurozone was helpful for making structural reform, or harmful. On the one hand, it certainly increases the pressure for structural reform because capital flows occur in competition with other European countries that have better institutions. But membership also decreases political pressure for structural reform because it makes it very easy for people to leave Greece and effectively live and work elsewhere.

Hoxby's comments prompted Donald Kohn to raise the issue of competitiveness. To remain in a currency union permanently and avoid serious economic pain, a country has to find a way to be competitive. What struck him about Ioannides and Pissarides's paper was the finding of a lack of price responsiveness as compared to wage responsiveness. Kohn wanted to know if the labor market was more competitive than the goods and services market, or if perhaps the declines in wages were concentrated in the public sector, where the prices cannot adjust. Are prices set in the EU common market framework? Whereas labor market costs do seem to be adjusting, prices in the product market do not, and this begs the question of what the right structural reforms might be.

Martin Baily added to the discussion of structural reform by noting a point raised at previous Brookings Panel conferences, namely that if structural reforms are in the first instance job destroying, in a Keynesian situation they can actually make things worse. Structural reforms that give new businesses a chance to open are certainly good, Baily said, but they will not raise employment when, for example, they allow big-box stores to arrive and drive out small businesses. Episodes like this might raise productivity but would not raise GDP. He felt structural reforms needed to solve the employment problem first before focusing on enhancing productivity. Baily also proposed that the problem of tax evasion in Greece is a priority. He recalled recent news reports citing high rates of uncollected statutory taxes, so that a better long-term solution than raising tax rates would be to increase rates of compliance. The assessment of the two papers is that Greece's situation remains gloomy, and he found the solutions offered in the papers to be limited. Across Europe there is an aggregate demand problem, especially severe within Greece, and solutions should aim firstly at that problem. A contractionary fiscal policy—even in the form of collecting more uncollected taxes—may not be the right road in the short run.

Martin Feldstein agreed with Baily about the need for increased economic growth in Greece to finally resolve the problem, adding that nothing in the most recently negotiated deal suggested the potential to accomplish this. He has heard the same from European acquaintances he has spoken to about this—people who are much closer to the Greek crisis and its coverage.

Richard Cooper shifted the discussion to what he labeled the psychological side of structural reform. He noted Ioannides's report that not only ordinary Greeks but even Greek leaders felt unpersuaded about the need for reform, and had two questions for him. First, might the word *adjustment* be more useful in public debates, since the elements assumed to be in structural reform are understood very differently by different people? And second, what did Ioannides think about presenting the public with this simple proposition: One cannot consume more than one earns or produces without borrowing from some third party? Such a simple statement should be easy to get across to ordinary households. The Greek public appeared not to understand the gravity of running a current account deficit of 10 percent of GDP as well as a budget deficit in some years. Was this due to politicians' failure to communicate the issue to them? Or was it a failure of journalists and economists?

Ioannides replied by reminding everyone that the U.S. public did not seem to understand the same problem either. To that comment, Cooper answered, somewhat tongue in cheek, that the American public understood the problem of deficits quite well but simply dealt with them by thinking the U.S. government could borrow endlessly. Greece, by contrast, could not borrow, once the severity of its crisis was revealed, and that is the crux of the problem, Cooper said. Deficit adjustment then became necessary by simple arithmetic. To him, the real question was, why was that lesson not brought home to the Greek public? Or was the situation perhaps a collective gamble that Greece could dragoon the rest of the Europeans into lending more to them?

The authors of the four papers responded next, beginning with House. He noted that his and Tesar's paper had relied on certain parametric choices in the modeling, including their use of Greek tax return data to measure the taxable base of labor income, which is not the same as the overall amount of labor income earned in the model. He added that Mankiw was correct in thinking that sticky prices and sticky wages are influencing the results, since price and wage rigidity are substantial in their model and dominate the model behavior, particularly in the short run. Concerning Greece's liability to outside creditors, it is measured in nominal terms, so production and consumption are not identical between Greece and the rest of Europe, and movements in relative terms of trade also interfere with the results.

In response to Romer's inquiry about ways to improve the Greek situation beyond tax and spending cuts, House said that in addition to debt write-downs, another tool is to allow Greece to delay repayment and to do so at below-market rates. This would mean setting up extremely favorable loan terms while keeping the face value of the debt fixed. It would create some breathing room although, admittedly, it would also run into a credibility problem.

Ioannides spoke next. He responded, first, to Hoxby's concern for the importance of structural reforms and the uncertainty whether achieving buy-in for them is easier or harder due to the free movement of labor that EU membership enables. He believed the net effect has been to make it easier, and certainly easier than under autarky, because membership has made the public more apt to learn from the successes of other countries, and in fact Greece's attachment to having a European identity has been a driver of much of the politics. Related to the last point, he mentioned the advantages of EU membership in enabling the importation of technology, research, and university education, with all their links to industry. In Greece today the linkages between industry and the universities are weak, so they represent an area that can be strengthened and should become a priority.

Price rigidity is indeed a problem, he added. Reforming the labor market was easier by comparison, and it should be recognized that workers today are receiving a fraction of what they were paid before the reforms. Product market reforms were in the agreements, as well, but implementing them has not been given priority and it is harder to carry out. Labor and product markets were certainly grossly noncompetitive up to the onset of the crisis in 2010.

Concerning Baily's point about the significance of uncollected taxes in Greece, Ioannides agreed that they represent a big problem. Businesses are also in arrears to the tax authorities, so the shockingly high number cited earlier of 85 percent of taxes uncollected might not be far off if the sum total of arrears is included. More importantly, Ioannides said, one needs to know how much can realistically be collected. The tax authorities have made progress in identifying what a realistic compliance rate is. It turns out that if the compliance rate in Greece had been, prior to the onset of the crisis in 2010, the same as the average rate across the eurozone, there would have been no debt problem in the first place. The money that could have been collected was actually there, but the Greek government was just not doing its job in collecting.

Finally, he said, while the outlook of the Greek people concerning the seriousness of the debt is puzzling and even the more educated know little of the country's tragic history in this area, he remains hopeful that progress is being made. He believes that working with other Greek economists to educate the public and speak with the press are deeply important, and noted his own efforts to contribute to that as a blogger. A part of the public, especially in the unfolding political parties, understands the need for reform.

Reinhart then added her responses to the mix of author comments. Noting that a few speakers had raised the issue of banks and wondered why they were a focus of interventions, she pointed out that contagion was a serious concern. Although it was true that the Greek crisis had started as a debt crisis, not a banking crisis, that was not the case in the other countries, where the official sector took over privately held Greek debts to thwart the risk of contagion. She agreed with those who thought this approach has caused delays in the recovery, and not just in Greece, noting that in other crises public and private restructurings occurred much quicker.

The elephant in the room, Reinhart said, was the problem of Greece's external dependence, something Romer and DeLong raised. She believed it could be broken down into three problems to solve. First was the management of the government debt, which the examples of Mexico and Chile have shown to be a problem that can be dealt with. Second was the management of private sector debt, which is much trickier to resolve. She has long been concerned about surges in capital flows due to the procyclical nature of capital markets, which caused especially serious problems in Ireland, Spain, and Iceland. And the third aspect of external debt, which is an endemic problem in Greece, is the public's attitude toward reform measures. How do you convince the public that they will not have their wealth confiscated? Restoring public confidence is very difficult. In 1932, Greeks endured a forcible debt conversion from foreign currency deposits to drachmas, so there is a precedent and the public has grounds to be worried that it will recur.

Finally, concerning making economic growth a priority, an issue Baily and Feldstein had raised, Reinhart pointed out that she and Trebesch had stressed the importance of haircuts for this same reason, to help restore growth. When one looks at restructuring episodes in Latin America, for example, one sees that the Baker Plan, which was to extend maturities, did not conclude the debt crisis there, whereas the Brady Plan, which included haircuts, did.

Weder di Mauro spoke last. Responding to O'Rourke's question whether it is the face value or the present value of debt that matters most, she said what matters for sustainability is the present value, since that is what defines a country's debt repayment burden. Unfortunately, what seems to matter in the headlines is the face value since most commentators are not aware of the highly concessional terms Greece enjoys. In the short run, Greek debt burdens are low. In the medium run, Weder di Mauro said, the repayments will increase and may breach the thresholds applied by the IMF and the ESM. This then raises questions about the need, the timing and the type of possible further restructuring of Greek debt held by the official sector. Restructuring by extending grace periods and maturities for European loans may decrease the medium-run repayment burden. However, it would extend the external dependence of Greece even further and increase the risk of repeated renegotiations and political clashes such as the one witnessed in 2015.

Concerning the role of the banks, Weder di Mauro pointed out that foreign banks took very high haircuts in the debt restructuring of 2012. There was a measure of coercion to achieve this: European governments leaned heavily on their banks and Greece retrofitted collective action clauses in debt contracts. Therefore, Greek debt held by European banks was not simply transferred to the ECB. However, over the course of 2015, the run on Greek banks' deposits had forced the ECB to extend ever more emergency liquidity assistance in order to prevent a shutdown of the Greek banking system and a de facto exit from the currency union.

Finally, Weder di Mauro considered Romer's doubts about her paper's proposal that the IMF end its policy of systemic exemption. Romer had suggested that if in 2010 the IMF had told Greece it could not grant access to a loan restructuring, Greece would have gone into a tailspin, but she believed that what would have happened is that the Europeans would have assisted in restructuring earlier than they did. She did not think Greece would have defaulted and exited the eurozone at that time.

In her view, at the very least the IMF and the ESM need to be clear what they mean by "systemic" risk and should also have to consider the alternative costs, that is, the costs of delayed restructuring and gambling for resurrection. It struck Weder di Mauro that a renewed debate is needed on the access conditions for international financial assistance both at the IMF and the ESM in the cases of doubtful debt sustainability.