

## **The London Consensus: Fiscal Policy and Public Debt**

### **I. Introduction**

The original formulation of the Washington Consensus included three priorities for fiscal policy (Williamson, 1989):

- 1) Pursue fiscal discipline to avoid the macroeconomic instability associated with excessive debt issuance or money creation.
- 2) Keep public expenditures focused on basic health, education, welfare, and infrastructure, and away from sectoral subsidies of dubious social and economic value.
- 3) Raise tax revenues from a broad tax base, holding marginal tax rates at moderate levels.

A generation later, most economists are still in broad agreement with these three principles. But during these three-and-a-half decades, academic views and actual practice have shifted, in ways that complement—but also in some aspects contradict—them. After all, public debt has risen since the Great Financial Crisis (GFC) by more than ever during peacetime in many advanced economies. The governments of both advanced and emerging nations today often react to crises with aggressively countercyclical fiscal policies, as they did both during the GFC and during Covid-19. And the International Monetary Fund routinely recommends progressive tax systems and the use of taxes and transfers to redistribute from the rich to the poor as part of the job of stabilizing business cycles. In short: there is a great deal more fiscal activism than the Washington Consensus recommended.

Now, it is one thing to try to fulfil both the old and the new role for fiscal policy; it is something else to be able to do it. The new fiscal activism requires that governments borrow at times of crisis, when private sector agents often cannot. History shows that not all governments retain unfettered market access at reasonable interest rates (or any rates at all) during periods of financial strain. Only those with manageable debt levels and strong fiscal institutions do. These are the prerequisites for safeguarding the privileged role of public debt and being able to undertake an activist fiscal policy.

This essay develops these points and proposes a new and broader perspective on fiscal policy and debt management, adding two principles to Williamson's: a rationale for the new activism on both spending and taxation, and a revamped perspective on fiscal discipline and public debt.

## II. Fiscal activism

At the time of the Washington consensus, it was widely accepted that countries should run fiscal deficits during economic contractions and surpluses during expansions, either because of neoclassical tax smoothing or because of Keynesian output stabilization. Those ideas remain valid and widely accepted today. But there are three additional reasons for fiscal activism, which we analyse in what follows.

### *Fiscal policy as insurance, completing markets ex post*

People face many risks they cannot insure against. Bad shocks often cause large drops in wellbeing. The uncertainty about whether those shocks will materialise lowers welfare and affects behaviour. Some of the insurable risks are aggregate, so they cannot be pooled and diversified away by traditional insurance. In an ideal world, these risks could be traded and efficiently shared in financial markets, but in the real world they cannot. On the contrary, financial markets often end up amplifying these shocks, and concentrating them in the most vulnerable segments of the population.

One common macroeconomic risk involves losing one's job during a recession. Finding a new job can take a long time, even after the recession is over. Another macro risk is a sudden and large aggregate income loss—during a health crisis like the pandemic—that limits sales for a small business owner. Yet a third one is a large spike in unavoidable spending for households whose rigid consumer basket depends heavily on energy. There is no macro market where, *ex ante*, the millions of people who find themselves in such situations can insure against these contingencies.

In principle, government can help households smooth of consumption across states of the world. Before a shock happens, it can set up automatic stabilizers, like unemployment insurance; afterwards, it can transfer resources to those affected by uninsurable bad outcomes. In addition to the welfare benefits that follow from standard consumption smoothing, there is an important macroeconomic benefit—with a logic that dates back to Keynes—that the literature has emphasized in the past two decades. During a recession, the increased fear of being hit by uninsured shocks leads people to save more, which in turn lowers aggregate demand and deepens the slump, in what is sometimes referred to as a paradox of thrift (Keynes, 1933; McKay and Reis, 2016, Guerrieri and Lorenzoni, 2017). Public provision of social insurance can sever this amplification mechanism, since the government internalizes the effects that prices do not reflect when insurance markets are missing.

The standard objection to public insurance provision is moral hazard. But the shocks in question are macroeconomic, and depend less (or not at all) on individual actions. This reduces the scope for moral hazard. In the standard story, people who have insured their bicycles are then more likely to leave them unlocked or in unsafe locations, so that the “shock” of having the bike stolen will happen more often. That is not the case with aggregate shocks, because no single person can make them more frequent.<sup>1</sup> Moreover, government can

---

<sup>1</sup> Nor can people insure *ex ante*, because the relevant insurance markets do not exist. Their only option open to them is to engage in self-insurance: for instance, a small business owner could accumulate large cash reserves, or establish access to a sizeable credit line. But that is expensive, inefficient, and creates the aggregate demand

observe, however imperfectly, the realization of these shocks. All these reasons amount to a case for government to intervene.

Examples of these general principles are easy to come by. Take unemployment insurance: governments have chosen not just to have a system of unemployment insurance, but they predictably raise its coverage and generosity once a recession begins. Another example is that during the pandemic, governments put in place new temporary programs designed to allow businesses survive the downturn. The furlough scheme in the UK is a good example (Shearer, 2021). And, during the 2022 energy crisis, the new activism was evident in the novel transfer programs targeted to the most affected households.

These new policies have often been large and, in some cases, very large. Germany, for instance, spent 200 billion euros, or over 5% of GDP, to subsidize consumers during the 2022 spike in energy prices (Bachman et al, 2022; Lindner, 2023). The new activism mostly involves transfers to households and businesses. It is different from the Keynesian activism, consisting of government purchases of goods and services, the old Washington consensus focused on.

The new case for activism has limits, which can be trespassed. The new policies ought to provide transfers only to those especially affected by shocks. Looking back at the measures taken during the pandemic or the energy crisis, that was often not the case, raising the costs of these programs while lowering their effectiveness. Moreover, targeting those affected is not the same as targeting those who are poor on average. Insurance is not the same as redistribution. If rich households were affected by the shocks, they could also be recipients of transfers. In practice, this is seldom the case because higher savings and wealth allow the rich to self-insure, but it is still an important principle to keep in mind.

Nor does the new emphasis on insurance provision need to imply a larger state. The argument is not about the size of government across the business cycle, but about activism during recessions. The average size of the state could remain unchanged if during the upswing government lowered spending and accumulated assets (or repaid debts) to make activism easier to finance during turbulent times. We return to this topic below.

The need for and the desirability of these policies varies from country to country. Different societies have different social insurance arrangements to deal with the “missing markets” problem. In some countries, family and kinship ties can be more effective than government in providing insurance. In other nations, government may get a bigger “bang for its buck” by subsidizing private agents or providing public guarantees that spur the emergence of private markets for insurance, instead of insuring households directly via transfers. And, of course, the extent to which public insurance crowds out or complements private insurance depends both on context and on policy.

---

effect that deepens slumps. In extreme cases, it is unlikely that a small business owner, for instance, even if very prudent, could have enough cash in hand to keep paying all employees for six months or a year while receiving zero income, as it happened during the pandemic.

### ***Fiscal policy as market-maker of last resort***

Related to the need to create missing markets is the need to sustain existing markets when they are near collapse. Whereas the first new role for fiscal policy focuses on households and businesses unable to purchase insurance, this second role focuses on the markets and institutions that provide the limited insurance that does exist. Under this logic, a fiscal intervention is triggered by the infrequent (but potentially very costly) collapse of certain markets, especially financial markets. Access to insurance disappears precisely when it is most needed —during crises. (Brunnermeier and Reis, 2023).

The 2007-08 financial crisis provides a prime example. Government, broadly defined to include both treasuries and central banks, stepped in to provide emergency credit, subsidies, public guarantees, asset purchases and capital injections, either to replace the financial markets that had disappeared or to keep markets operating.

This kind of market failure results from financial imperfections that the academic literature has long explored. To take just one example, imagine that lenders will not allow firm or household debt to rise beyond a certain multiple of collateralizable assets such as real estate or physical capital. Then, if a recession lowers the value of these assets, firms and households can no longer borrow as much as they did before. Households are forced to cut consumption and firms to reduce investment. This in turn deepens both the recession and its associated welfare losses (Kiyotaki and Moore, 1997).

Even worse, the literature shows that crises can also become self-fulfilling. Continuing with the same example, if the borrowing constraint depends on the price of the collateral, and that price falls in response to the expectation that households will not consume and firms will not invest, then the tightening of borrowing constraints causes that expectation to be confirmed (Woodford, 1986; Liu and Wang, 2014; Céspedes, Chang and Velasco, 2022).

The role for the government here is related to, but also different from, the previous role we discussed. Now, an activist fiscal policy can eliminate the bad equilibrium by committing to use government resources to provide public credit or to buy assets, preventing the downward-spiral of prices. This can stop the amplification that arises from the fire sale of assets, and can avoid the self-fulfilling pessimism that results from the endogenous tightening of borrowing constraints.

Why should government be in the business of providing such support? What can it do that the private sector is not able to do? Uniquely, government (at least in advanced economies, and sometimes in emerging markets) can borrow when others cannot. So, the government can become a lender-of-last-resort or a market-maker-of-last-resort, responding to aggregate shocks, when others are illiquid. In the best-case scenario, and if it is credibly and readily available, the fiscal bazooka may not need to be used. The simple expectation that government would intervene to rule out the bad equilibrium keeps the economy tied to the mast of the good equilibrium.

Notice how different from the conventional rules this new role of fiscal policy is. The focus here is not on aggregate demand management or on helping firms directly through bailouts. Rather, it is on supporting the normal functioning of financial markets.

Again, this new activist role for the government is subject to caveats. When it comes to financial institutions, moral hazard is at the forefront. Banks may overborrow if they expect the government to step in later, and this places a constraint on how much the government can and should do. But this does not mean it should do nothing. Intervention brings benefits; moral hazard can bring costs. Standard economic calculus suggests that the optimal policy should be somewhere in the middle: large enough to make a difference and rule out the bad equilibrium, but not as large as it could be.<sup>2</sup>

A second caveat is that for political reasons, policies that are meant to be temporary could end up being permanent. For instance, long-run credit subsidies could allow inefficient firms to survive and reduce aggregate productivity (Buera et al, 2013). But again, this is not an argument for doing nothing, but for designing policies in a way that ensures that they will be as temporary as needed. One way to do that is to introduce state-contingent sunset clauses in the legislation that authorizes the initial fiscal intervention. An alternative is to enhance the quality and autonomy of fiscal and monetary institutions, as we discuss below.

There is one last constraint on fiscal policy that is central. The government can only step in as a lender of last resort and market-maker of last resort if it retains the ability to borrow during a crisis, when no one else can. The new interventionism implies much-increased borrowing during turbulent times, a point to which we now turn.

### ***The amplitude of the fiscal balance***

In principle, providing transfers to the most affected by a recession is consistent with raising taxes on the least affected and conducting a zero-deficit fiscal policy. But completing markets ex-post will often come with larger public deficits. One reason is that insurance should be intertemporal, across groups that live at different times as well as across groups alive today. The “less affected” groups are not just a subset (possibly small) of those alive today, but also those who will live through better times (with an expansion in economic activity) after the crisis. Accomplishing this intertemporal risk-shifting is another dimension in which government can complement private markets.

Being a market-maker or lender of last resort could be accomplished without public deficits: the government could accumulate savings that it then disburses during crises. But that is unlikely to be the first-best policy, because holding those assets in a liquid reserve is typically expensive. But for some countries, especially open emerging economies, this may be the only available option. For these countries, an increase in the public deficit (in response to a fire sale after an asset price drop) is likely to be accompanied by a rise in the current account deficit. Being able to borrow abroad to finance that larger deficit is far from guaranteed, especially if

---

<sup>2</sup> Of course, ruling out bad equilibria can require doing “whatever it takes”, as the world learned from Mario Draghi during the European debt crisis of a decade ago.

the asset price that collapses is the (nominal and real) exchange rate, since this lowers the present value of the government's future revenues when measured in foreign currency.

When public borrowing at times of crises is possible, this need not mean more deficits more often. On the contrary, it can mean larger surpluses in good times to pay for the larger deficits in bad times. As in our earlier argument, here as well the case is for a larger amplitude of the public deficit, not for a larger deficit on average.

In addition to the “risk-sharing-across-time” argument, there is an independent case for running larger deficits during turbulent times. Over the last twenty years, advanced economies have experienced an excess of savings relative to the ability of those economies to channel savings to productive investment projects. This has caused low equilibrium real interest rates, and therefore nominal interest rates have hit the zero lower bound more often. It is widely accepted that under the zero lower bound, fiscal policy can and should take over from monetary policy as the main tool to stabilise the economy across the business cycle (Blanchard, 2023).

Moreover, nearly two decades of new research on the liquidity trap have yielded novel and varied argument on why the multipliers of fiscal policy can be enhanced by targeting transfers to groups with different marginal propensities to consume. As a result, the composition of spending and other interventions is key, not just their size, as was the case in older Keynesian analysis (Eggertsson, 2010). Finally, the last twenty years also saw a widening wedge between the returns to private investment and the interest rate on government bonds. Fiscal and monetary policies may be able to crowd in private investment if it manages to affect this wedge (Reis, 2023).

An important caveat is that savings and investment move around, and so do real interest rates. When the zero lower bound does not bind, monetary policy —conventional or unconventional— should still play a central role in stabilization. Moreover, in the years since the Washington Consensus more nations, especially in emerging markets, have moved toward flexible exchange rates and reasonably de-regulated capital accounts. In those circumstances, monetary policy is more effective than fiscal policy in stabilizing output and employment.

### **III. Preserving fiscal space through prudent debt management**

More fiscal activism and a greater amplitude of fiscal deficits and surpluses requires that governments retain their ability to borrow during crises. But this is not something that happens automatically. Rather, fiscal space should be built and preserved.

#### ***Build and respect strong fiscal and monetary institutions***

The fact that fiscal policy could be conducted in an optimal way does not mean that it always or often is. Far from it: the political economy of fiscal policy is challenging and intricate (Alesina and Perotti, 1995). Many scholars have documented the tendency of many countries

to run a deficit over the whole business cycle, implying a “deficit-bias” and a persistent trend of debt accumulation. Also well documented is the common pro-cyclicality of deficits (the opposite of what old and new arguments prescribe), prompted by the fact that borrowing constraints often become looser in good times and tighter in bad times, especially in emerging markets (Alesina et al, 2008, Ilzetzki and Vegh, 2008). If fiscal policy suffers from both a deficit bias and from procyclicality, then the fiscal space the government needs to play the role of market-maker and maker-creator will be absent.<sup>3</sup>

Creating fiscal space is not easy, but both academics and policymakers have learned a great deal since the Washington consensus on how to create strong and credible fiscal institutions that deliver it. On the side of monetary policy, the expression of these lessons is central bank independence, designed to preserve price stability, prevent fiscal dominance, and keep the public debt reasonably free from inflation risk. On the fiscal side, the debate is much less settled and there exists no one-size-fits-all policy recommendation. Yet there is growing agreement that medium-term fiscal frameworks and fiscal rules (with escape clauses for recessions) can all help in this regard (Blanchard et al, 2010).

Over the last two decades many countries have adopted fiscal rules of one kind or another, so there is plenty in that experience to learn from. There have been both successful and unsuccessful experiences with fiscal rules, in developed and emerging markets alike. Among advanced nations, the debate within the Eurozone has been particularly rich, with the principles that guide fiscal rules in Europe currently being revised and updated (Ilzetzki, 2021; Blanchard et al, 2022). Among emerging nations, arguably the most successful experience with fiscal rules is that of Chile, a country that since 2000 has managed to keep public debt low, did not lose market access during the GFC and the COVID crisis, and managed to pursue counter-cyclical fiscal policies (including some lending and market-making of last resort) during both crises (Céspedes et al, 2014).

Both research and practice have highlighted one trade-off that is increasingly clear: rules must be sufficiently simple so that they can be understood by citizens and, especially, by market participants. But, and at the same time, they must be sufficiently adaptable and flexible to deal (perhaps via escape clauses) with large unforeseen shocks. The strong principle guiding this and other trade-offs is that credible budget institutions and sound public finance management during good times preserve market access during recessions and crises.

### ***Transparency and communication to prevent self-fulfilling debt runs***

The seminal work of Guillermo Calvo (1988a) emphasized the potential for multiple equilibria and self-fulfilling sovereign debt crises. If debtholders, who are concerned about a higher risk of default (whether via inflation or outright non-payment), demand higher risk premia and therefore higher interest rates, they make it more expensive for governments to service the debt. This increases the risk of default and can make the initial worries self-fulfilling (see also Lorenzoni and Werning, 2019).

---

<sup>3</sup> Moreover, a well-formulated fiscal policy can lower the frequency with which a market-maker and market-creator of last resort will be needed.

Because indebtedness does not have to be very high to place a country in the multiple equilibrium region, few nations are immune to these risks. Multiplicity can occur even at low levels of debt, since a very high interest rate can make even small debts unsustainable. But multiple equilibria are more likely when debt is high; then, even a small increase in the interest rate investors demand can make default fears self-fulfilling. The maturity of the debt maturity also plays a crucial role. If average maturity is short and therefore a large share of the debt needs to be rolled over every period, then it is more likely that small shifts in expectations can cause the government to become illiquid (Rodrik and Velasco, 2000). Self-fulfilling debt panics are also more likely when public debt is denominated in foreign currency, as is often the case in emerging markets, since in that case the local central bank cannot serve as a lender of last resort (Chang and Velasco, 2001).

One implication is that the sustainability of the public debt should be understood as probabilistic and potentially subject to sharp and sudden changes. Another implication is that public debt management requires communication and steering of beliefs, to select the best possible equilibrium and prevent others from happening. Institutional design can help: constitutions and laws that rule out some policy actions also prevent policy traps driven by self-fulfilling expectations.

### ***Protecting the special (and potentially fragile) nature of the public debt***

Until recently, the global decline in real interest rates had increased fiscal space as governments could issue more bonds to satisfy the excess supply of private savings. But the demand for publicly-issued paper does not depend only on global savings and investment. The government can borrow at lower rates than private agents because of the special features of government debt that rise to a “debt revenue” (Reis, 2022). Preserving these special features requires special care and management.

Government debt is the most liquid security in most countries’ domestic financial market. Households and businesses facing the uninsured risks we emphasized earlier rely on this liquidity when they save for a rainy day that can arrive when it is least expected. In turn, the collapse of financial markets, which we also discussed earlier, is often associated with private assets becoming hard to sell and the premium on the liquidity of public debt rising. In fact, the classic expression of the market-maker of last resort involves not the fiscal authorities directly, but rather the central bank intervening to preserve the liquidity of public debt. This kind of liquidity-preserving intervention is very different from monetary financing, which was the big concern of the Washington consensus (although drawing the line between the two of them in practice and in real time can be hard).

Another special feature of government debt comes from its safety, or at least the perception of safety. In crises, if public debt is perceived as safe (as is usually the case in advanced economies) then the government gains fiscal space even as private entities lose it. The upshot is that governments not only borrow at rates lower than private agents, but also have that borrowing capacity preserved during crises —but only as long as they can keep the liquidity and safety of the public debt.



The “debt revenue” resulting from the special liquidity properties of public debt has limits; it cannot finance a fiscal deficit of any size, indefinitely. Moreover, the gap between the private real rate of interest and the rate the government has to pay is in itself a function of the size of outstanding public debt. As governments issue more debt to take advantage of that gap, it can shrink, and even disappear altogether—in which case the public debt is no longer “special”.

Across the world, the degree to which market participants view government debt as safe and liquid is dramatically different. The US may be able to take the safety of its Treasuries as given, but even the other richest economies of the world cannot, as the 2022 mini-budget crisis in the United Kingdom revealed. Emerging and developing economies face a fickle demand for government bonds. The privileged borrowing position of the public sector can quickly vanish, since the special role of public debt as provider of liquidity can be (and often is) displaced by foreign currency or foreign bonds. Flight to safety at the time of crises manifests itself also as a flight away from the public debt of certain countries and towards that of others, such as the US. Minimizing these problems requires an effective international architecture, a subject to which we now turn.

### ***The importance of international financial architecture***

For all countries but the US, national fiscal and monetary institutions must be complemented with international institutions that help preserve fiscal space and permit fiscal activism. These include the IMF, at the forefront, and more recently regional financing arrangements, such as the ESM in Europe, the Chiang Mai agreement in East Asia, and the FLAR in Latin America. Rather than discuss what each should do, we focus on what as whole they should strive to accomplish.

First, and as a global by-product of the need to complete markets, the global financial safety net should provide targeted emergency fiscal support. Not only do some of the arguments that we made about aggregate shocks at the national level translate to the global level, but so do its limitations on what government can accomplish. Globally, this support can help compensate for the fickle nature of fiscal capacity discussed above, and preserve it *ex ante*, helping keep the public debt of the affected country safe.

Second, and as a manifestation of the need for market-making of last resort, the global financial safety net should stand ready to anchor governments to the “good equilibrium”. It should help prevent the self-fulfilling pessimism that can cause runs on government debt, a spike in interest rates, and a collapse in a government’s borrowing capacity. This does not mean, of course, financing each and every fiscal deficit, regardless of circumstances. Instead, it requires a strong commitment to support institutions that are solvent.

Third, and closely related, the Washington Consensus view that the international financial architecture should provide emergency financing during balance of payments crises deserves to be reinforced. These crises need not occur because of excessively expansionary or imprudent fiscal or monetary policies but can occur because of “sudden stops”: bouts of self-

fulfilling pessimism that causes capital to flow out and asset prices to drop, impairing international creditworthiness (Calvo, 1998).

The overall message is that the new fiscal activism, if it is to be feasible and successful beyond the US and a handful of advanced economies, requires a global financial safety net that is both vastly larger and more agile than what is in place today.

#### **IV. Conclusion**

A new London Consensus should supplement the three fiscal policy principles of the Washington Consensus with two new ones:

- 1) Pursue fiscal activism focused on, first, offsetting uninsured shocks to income via targeted transfers, and, second, on preserving markets and the flow of credit through crises, above and beyond standard government purchases meant to regulate aggregate demand.
- 2) Make sure that these larger cyclical budget deficits are sustained by strong institutions, national and international, which keep debt sustainable and preserve the safety and liquidity of government bonds.

## References

- Alesina, A. and R. Perotti, "The Political Economy of Budget Deficits." *IMF Staff Papers*, Vol. 42, No. 1, March 1995.
- Alesina, A, G. Tabellini and F. Campante, "Why Is Fiscal Policy Often Pro-cyclical?" *Journal of the European Economic Association*, Vol. 6, No. 5, September 2008).
- R. Bachmann, D. Baqaee, C. Bayer, A. Löschel, B. Moll, M. Kuhn, A. Peichl, K. Pittel and M. Schularick, "What if? The Economic Effects for Germany of a Stop of Energy Imports from Russia." ECONtribute Policy Brief No. 028, University of Bonn, March 2022.
- Blanchard, O., G. Dell'Ariccia, and P. Mauro, "Rethinking Macroeconomic Policy," *Journal of Money, Credit, and Banking*, Vol. 42 (Supplement), 2010.
- Blanchard, O., A. Sapir and J. Zettelmeyer, "The European Commission's fiscal rules proposal: a bold plan with flaws that can be fixed." Blog Post, Bruegel, 30 November 2022.
- Brunnermeier, M. and R. Reis, *A Crash Course on Crises: Macroeconomics Concepts for Run-Ups, Collapses, and Recoveries*, Princeton University Press, 2023.
- Buera, F. J., B. Moll and Y. Shin, "Well-Intended Policies." *Review of Economic Dynamics, Special Issue on Misallocation*, 2013
- Calvo, G. A. "Servicing the Public Debt: The Role of Expectations." *The American Economic Review* 78, no. 4, 1988a.
- Calvo, G. A. "Capital Flows and Capital Market Crises: The Simple Economics of Sudden Stops." *Journal of Applied Economics*, Volume 1, Issue 1, 1998b.
- Céspedes, L.F., R. Chang and A. Velasco, "The Macroeconomics of a Pandemic: A Minimalist Framework". *Journal of International Money and Finance*, Volume 127, October 2022.
- Céspedes, L.F., E. Parrado and A. Velasco, "Fiscal Rules and the Management of Natural Resource Revenues: The Case of Chile." *Annual Review of Resource Economics*, 6:25, 2014.
- Chang, R. and A. Velasco, "A Model of Financial Crises in Emerging Markets," *Quarterly Journal of Economics*, Volume 116, No. 2, May 2001.
- Eggertsson, G., "What Fiscal Policy Is Effective at Zero Interest Rates?", in: D. Acemoglu and M. Woodford, eds: *NBER Macroeconomics Annual*, University of Chicago Press, 2010.
- Guerrieri, V. and G. Lorenzoni, "Credit crises, precautionary savings, and the liquidity trap," *The Quarterly Journal of Economics*, Vol. 132, No. 3, 2017.
- Ilzetzki, E. and C. Vegh, "Procyclical Fiscal Policy in Developing Countries: Truth or Fiction?." NBER Working Paper 14191, 2008.

Ilzetzki, E., *Fiscal rules in the European Monetary Union*. Vox EU, 10 Jun 2021

Keynes, J. M., "An open letter to President Roosevelt," *New York Times*, Vol. 16, 1933.

Kiyotaki, N., and J. Moore, "Credit Cycles," *Journal of Political Economy*, 1997.

Lindner, C. "A resilient Germany is weathering the energy crunch." *Financial Times*, 2 January 2023.

Liu, Z. and P. Wang. "Credit Constraints and Self-Fulfilling Business Cycles." *American Economic Journal: Macroeconomics*, 6 (1), 2014.

Lorenzoni, G. and I. Werning. "Slow Moving Debt Crises." *American Economic Review*, 109 (9), 2019.

McKay, A. and R. Reis. "The Role of Automatic Stabilizers in the U.S. Business Cycle." *Econometrica*, 84 (1), 2016.

Reis, R. "Which R-star: Public Bonds or Private Investment? Measurement and Policy Implications." Manuscript, LSE, 2022.

Reis, R. "Debt Revenue and the Sustainability of Public Debt." *Journal of Economic Perspectives*, Vol. 36, No. 4 Fall 2022.

Rodrik, D. and A. Velasco. "Short-Term Capital Flows". *Annual World Bank Conference on Development Economics*, 2000.

Shearer, T. P. "The Coronavirus Job Retention Scheme: How successful has the furlough scheme been and what should happen next?" London: The Institute for Government, 9 September 2021.

A. Neut and A. Velasco, 'Asset Prices and Self-Fulfilling Macroeconomic Pessimism', in Carmen M. Reinhart, Carlos A. Vegh, and Andrés Velasco (eds), *Money, Crises, and Transition: Essays in Honor of Guillermo A. Calvo*. Cambridge, MIT Press, 2008.

Williamson, J. "What Washington Means by Policy Reform". In *Latin American Adjustment: How Much Has Happened?* J. Williamson (editor). Washington, Institute for International Economics, 1990.

Woodford, M. "Stationary Sunspot Equilibria in a Finance Constrained Economy," *Journal of Economic Theory*, 40, 1986.