

## Special Feature B

# Rethinking Fiscal Policy In An Era Of Low Interest Rates

by Martin S. Eichenbaum<sup>1</sup>

*Secular stagnation and low real interest rates compel us to re-think the extent to which fiscal policy should be used to combat recessions. This paper argues that we should adopt a system of asymmetric, automatic stabilisers. Programmes like unemployment benefits would, by law, become more generous when macro indicators hit pre-specified targets indicating that the effective lower bound constraint on interest rates was binding. Programmes would revert to normal levels when those macro targets returned to pre-specified levels. An even more ambitious programme would involve legislated, asymmetric changes in tax rates.*

## Introduction

The natural rate of interest,  $R^*$ , is the real short-term interest rate that is expected to prevail when an economy is at full strength and inflation is stable. There is widespread agreement that  $R^*$  has fallen. This decline means that, absent a change in our current monetary policy regime, the effective lower bound (ELB) constraint on interest rates will be a binding constraint on monetary policy far more frequently in the future than in the past.

Unconventional monetary policies can play a positive role when the ELB is a binding constraint. But we should not be overly sanguine about how effective those policies are. We should also be skeptical that new monetary strategies like price-level targeting can deal effectively with the ELB constraint. Since I am not willing to adopt a higher average inflation target, I am forced to re-think the role of fiscal policy in fighting recessions.

To be clear, I believe that when the ELB isn't binding, fiscal policy isn't a very powerful stabilisation tool.<sup>2</sup> But fiscal policy can be extremely powerful when conventional monetary

policy has been neutered by a binding ELB constraint.<sup>3</sup> A critical challenge facing macroeconomists is to devise a practical framework for using fiscal policy when we need it. A programme of asymmetric automatic stabilisers and what Correia *et al.* (2013) call 'unconventional fiscal policy' is such a framework.

The key idea is that changes in traditional stabiliser programmes and certain tax rates would kick-in and kick-out automatically when an easy to measure and simple-to-communicate macro variable hits a pre-specified target. On purely economic grounds, my preference would be for the target to be the short-term monetary policy rate. Asymmetric programmes would begin when the short-term policy rate hits the ELB constraint. They would end when the actual short-term policy rate returned to central bankers' self-declared long-term neutral rate.

A trigger strategy for asymmetric automatic stabilisers and unconventional fiscal policy would make the expanded use of fiscal policy for stabilisation purposes explicitly linked to a

<sup>1</sup> Martin S. Eichenbaum is the Charles Moskos Professor of Economics at Northwestern University. Professor Eichenbaum visited MAS in March 2019 as the MAS-NUS Term Professor in Economics and Finance. The views in this article are solely those of the author and should not be attributed to MAS.

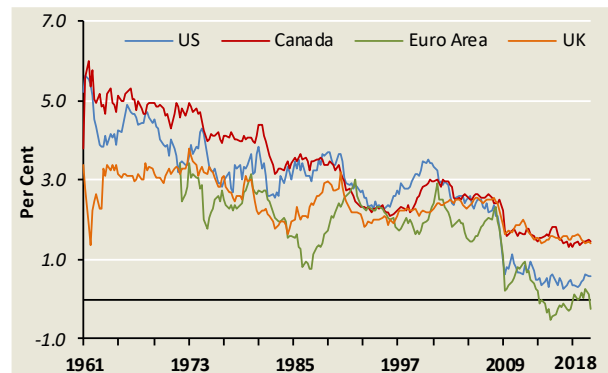
<sup>2</sup> See Eichenbaum (1997), Auerbach (2002) and Feldstein (2002a) for pre-financial crisis expositions of the limited efficacy of discretionary fiscal policy as a stabilisation tool.

<sup>3</sup> See for example Feldstein (2002b), Christiano, Eichenbaum and Rebelo (2011) and Blanchard and Leigh (2013).

binding-ELB episode. I understand the political problems of seeming to give central bankers fiscal powers. So it might be preferable to make the key trigger variable some measure of aggregate economic activity that is not under the direct

control of monetary policymakers, e.g. a moving average of the unemployment rate. It certainly wouldn't be the first time that the second-best economic policy corresponded to the first-best politically feasible policy.

**Chart 1**  
**R\* Estimates for Advanced Economies**



Source: Federal Reserve Bank of New York; Holston *et al.* (2017)

## We Live In A Low R\* World

The natural rate of interest,  $R^*$ , plays a key role in monetary policy. That's because over long periods of time, in an inflation-targeting regime, when the economy's resources are fully utilised the short-term policy rate,  $R$ , is equal to  $R^*$  plus the monetary authority's target rate of inflation,  $\pi^*$ .

$$R = R^* + \pi^* \quad (1)$$

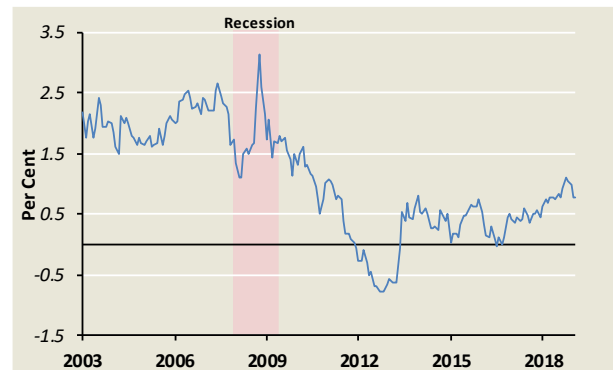
There is growing evidence that  $R^*$  has fallen. Chart 1 displays estimates of  $R^*$  in the United States, Canada, the UK and the Euro Area. These estimates are updated versions of the ones in Holston *et al.* (2017).<sup>4</sup> Note the pronounced decline in the estimated value of  $R^*$  in all of these countries. Williams (2017) reports that the average value of the estimates fluctuated between 2% and 2.5% in the 1990s through the mid-2000s. It then fell to about 0.5% around 2009 where it has stayed since then. Sophisticated econometrics aside, various measures of the real interest rate like the annual yield on the 10-year US Treasury inflation-indexed bonds have also fallen. (Chart 2)

There is much debate over the precise reasons for why  $R^*$  has declined. Holsten *et al.* emphasise that the fall coincided with a decline in the trend growth rate of output. Consistent with the notion that global real factors are at work, Williams (2017) notes that expected returns for various types of assets have fallen along with  $R^*$ . Financial factors like a rise in the global demand for risk-free assets may also have played a role in the decline of  $R^*$ .

Given an unchanged inflation target, equation (1) implies that central banks should have been persistently revising downwards their estimates of the long-run policy neutral interest rate. This prediction is strongly borne out by the data. The so-called 'dot plot' is published after each meeting of the US Federal Open Market Committee (FOMC). It shows the FOMC members' projections of where the Federal Reserve's target interest rate (the federal funds rate) should be at the end of the various calendar years shown, as well as in the long run. The latter refers to the level of the federal funds rate after the Federal Reserve has finished normalising policy from its

<sup>4</sup> These estimates are available at <https://www.newyorkfed.org/research/policy/rstar>.

**Chart 2**  
**10-Year Treasury Inflation-Indexed Security, Constant Maturity**



Source: Board of Governors of the Federal Reserve System

current levels. In March 2014, the median projection for the ‘long-term rate’ was 4.0%. In March 2019, the corresponding projection had fallen to 2.75% (<https://www.bloomberg.com/graphics/fomc-dot-plot/>). This value is strikingly close to the Federal Reserve’s inflation target of 2% plus 0.58%, Holsten *et al.* (2017)’s estimate of  $R^*$  in the US as of Q4 2018.

### Low $R^*$ and Monetary Policy

The implications of the fall in  $R^*$  and the long-run neutral rate,  $R$ , for monetary policy are dramatic. In the eight recessions since 1957, the Federal Reserve dropped the nominal and real federal funds rates by about 500 basis points (see Summers, 2018). But if we start moving the federal funds rate down from around 2.75%, monetary policymakers will run out of conventional ammunition to deal with a recession. The ELB constraint on short-term interest rates will be binding.

Summers (2018) argues that the annual probability of a substantial downturn in the US economy is about 15%. This estimate implies that once in every seven years the US will be in a downturn. Assume, as Summers does, that in a recession, the policy rate will be constrained by the ELB for three years. Then we will be at the ELB for short-term interest rates about 30% of the time. Using a much more formal econometric framework, Kiley and Roberts (2017) reach similar conclusions.

The economic and social costs of ineffective monetary policy are likely to be very large. Kiley and Roberts (2017) estimate the costs to be roughly US\$2 trillion over a decade. And these large estimates abstract from political economy considerations. Surely the dangers from populism and bad policy are linked to the frequency and intensity of recessions. There is enormous uncertainty associated with any estimate of the costs of ineffective monetary policy. But prudence dictates that we give those estimates great weight.

What about unconventional policy such as quantitative easing and forward guidance? Theoretical considerations aside, the practical evidence on the efficacy of these alternatives to conventional policy is murky. My own reading of the evidence is that the policies were helpful. But I remain skeptical about the ability of these alternatives to fully substitute for conventional monetary policy measures. As I write, the 10-year US Treasury rate is roughly 2.45% and the 10-year rate on German government bonds is negative  $-0.01\%$ . Presumably these rates would be even lower if the Federal Reserve and the European Central Bank (ECB) cut short-term interest rates in a race to the ELB. In the US case, the 10-year rate might fall by one percentage point before we hit the ELB. How much good do we think pushing long-term rates beyond that level would do? German short-term rates are already negative. How much lower could the ECB move those long-term rates? Even if they could,

would it do more harm than good, once we take into account the implications for the health of the financial system?

Forward guidance involves promises made when the ELB is binding to keep policy rates lower than normal after an ELB episode. Through the magic of rational expectations and the term-structure theory of interest rates, these promises about future short-term interest rates lower current long-term interest rates. Recent research shows that, as a matter of theory, the efficacy of forward guidance is very sensitive to the assumption of rational expectations.<sup>5</sup> This sensitivity is concerning because no one should take the hypothesis of rational expectations as being literally true. Perhaps even more alarming, there is no reason to think that markets will, in the future, find forward guidance credible. The Federal Reserve moved to raise policy rates when inflation was at or below 2%. Such actions, while perhaps justified by various considerations, have considerably undercut any credibility that central banks had about future forward guidance.

### What about Alternative Monetary Policy Frameworks?

Policymakers and researchers have actively searched for alternatives to the current inflation-targeting framework that could better deal with the low  $R^*$  world. See Bernanke (2017) for a useful review. Price-level targeting is, in principle,

a clever way around the ELB conundrum. Basically it's a strategy for committing to forward guidance. So too is Bernanke's proposal to apply a price-level target and the associated "lower-for-longer" principle only to periods around ELB episodes, retaining the inflation-targeting framework and the current 2% target at other times.

Of course neither strategy is without problems. First, there is the basic question of how long it would take people to understand any new strategy. Second, there is a time consistency question involved with any version of price-level targeting. Would policymakers actually be willing to slow down the economy enough to reverse the effects of a supply shock to the price level by running inflation lower than 2%? And if they tried to do that, how would legislators react?

Of course we could simply raise  $\pi^*$ , from 2% to 3% or 4%. That strategy would certainly mitigate the ELB problem. We would in effect agree to pay a higher insurance premium in all normal periods to have the option of cutting lower interest rates at the onset of recessions. This idea is worth considering. But I am skeptical. Granted, there is nothing special about 2%. But it took us a long time to anchor inflation expectations at that level. I have very little confidence in economists' predictions about the short-term consequences of trying to de-anchor inflation expectations from 2% and re-anchoring them to some higher number.

## Discretionary Fiscal Policy

I have argued that we are now in a world where monetary policy won't, on average, be as effective at stabilising output as it used to be. If you agree with me, then you are forced to reconsider the conventional wisdom about whether fiscal policy should be assigned a large role in fighting recessions.

In Eichenbaum (1997) I wrote that 'There is now widespread agreement that counter-cyclical discretionary fiscal policy is neither desirable nor politically feasible.' Feldstein (2002a) wrote that 'Monetary policy is ... generally accepted as the

policy of choice when ... stimulating a weak economy.'

The consensus about the limited role for fiscal policy in stabilising the business cycle was one of the important themes of the 2002 Jackson Hole symposium on monetary policy. That consensus reflected two fundamental considerations. The first was political. It's hard to design and implement wise discretionary fiscal policy in the middle of a crisis. It's even harder to take away things that you give people in a fit of discretion.

<sup>5</sup> See for example Angeletos and Lian (2018), Farhi and Werning (2018), Gabaix (2018), and Woodford (2018).

The second consideration is economic. Most forms of discretionary policy just aren't very powerful in a 'normal' downturn. The 'multiplier' for discretionary increases in government spending is substantially less than one (see Ramey and Zubairy, 2018). A good estimate is the one hard-wired into pre-crisis IMF spreadsheets: on average, real GDP goes up by about 50 cents for a dollar increase in government spending. Tax cut multipliers are perhaps a bit larger.

The basic reason for the small multiplier is that expansionary fiscal policy leads to higher real interest rates as governments borrow more and central banks raise rates in response to declining output gaps and rising inflation. Rising real rates crowd out private consumption and investment spending, partially offsetting the direct effect of expansionary fiscal policy.

So both politics and economics underpin the conventional wisdom that, in normal times, we should leave stabilisation policy in the hands of central bankers. But what about abnormal times? The depth and length of the Great Recession demonstrated with brutal clarity that monetary policy can't always do the job, certainly not when the ELB constraint is binding. That's the bad news. The good news is that while monetary policy is less powerful under those circumstances, fiscal policy is more powerful.

To begin with, it's highly unlikely that government borrowing will put substantial pressure on real interest rates in a deep recession. Households and most businesses weren't exactly screaming for loans in 2011. Second, when the ELB is binding and short-term nominal interest rates are stuck at zero, a rise in inflation reduces real interest rates. But that decline encourages private spending. A rise in private spending leads to a further rise in output and expected inflation, a further decline in the real interest rate and a further rise in consumption and investment. So when the ELB constraint is binding, expansionary fiscal policy leads to a virtuous cycle that crowds in private consumption and investment, precisely the opposite of what happens in normal recessions.<sup>6</sup>

In short, when the ELB constraint binds, we expect the multiplier to be larger than one. Of course the exact size of the multiplier depends on the precise form that discretionary policy takes, how timely it is, and a country's openness to trade, pre-existing debt situation and exchange rate regime.<sup>7</sup> Still, for most countries, there is ample reason to believe that fiscal policy is more powerful when the ELB constraint binds.

Why shouldn't we just rely on emergency discretionary spending in a crisis when the ELB constraint binds? To begin with, political economy considerations make the nature and size of discretionary fiscal policy uncertain. Even worse it takes time to actually implement the programmes that legislators agree on. In addition, some projects like large infrastructure projects naturally have slow spend-out rates. Implementation lags substantially reduce the size of the multiplier, especially if it means that stimulus planned for an ELB episode actually comes on line after the ELB is not binding any more. So multipliers that are, in principle, large can, in practice, be small.

What do the data say about whether we can count on discretionary fiscal policy in tough times? Consider the index of fiscal policy developed at the Brookings Institute's Hutchins Center (Chart 3). This index depicts the contribution of federal, state and local fiscal policy to near-term changes in US GDP. It includes both the direct effects of government purchases as well as the more indirect effects of government taxes and government transfers. When the index is positive, the government is contributing to real GDP growth. When it is negative, the government is subtracting from real GDP growth. The message from Chart 3 is clear: rather than being a positive force, fiscal policy was actually a drag on the US economy from 2011 on.

Furman (2018) reviews the fiscal actions of the US government during the Great Recession. He argues that 'political fiscal fatigue' played an important role in the premature withdrawal of

<sup>6</sup> For a formal exposition of these ideas see Eggertsson (2004, 2011) and Christiano, Eichenbaum and Rebelo (2011).

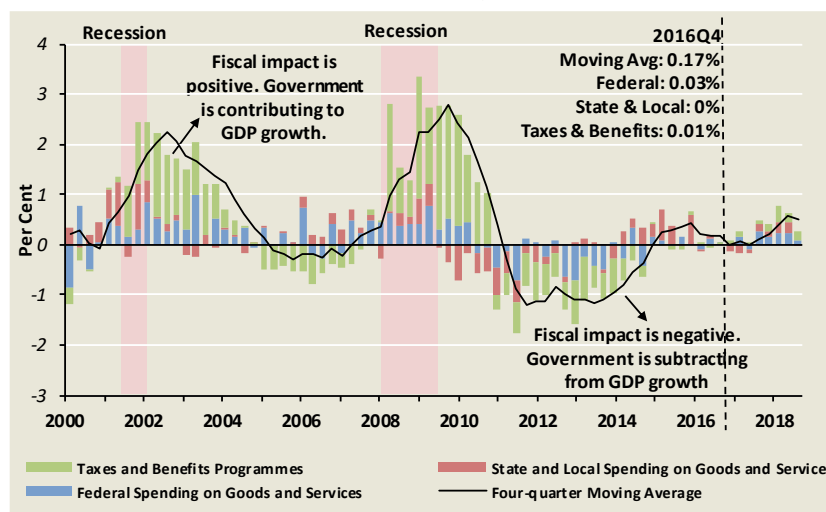
<sup>7</sup> See Batini *et al.* (2014) for a discussion.

stimulus during the Great Recession. He cites the evolution of unemployment benefits as a case in point. Consistent with practice in past recessions, the US Congress passed extended unemployment benefits in June 2008 when the unemployment rate was 5.3% and the long-term unemployment rate (defined as those unemployed six months or more) was 1.0%. Incredibly, Congress then allowed extended benefits to expire at the end of 2013, when the unemployment rate was 6.7% and the long-term unemployment was 2.5%. Perhaps even more dramatically, state and local government spending actually contracted, substantially contributing to the slow recovery. Chart 3 indicates that state and local governments acted as a drag on the economy from Q3 2009

until 2013. Remarkably, the Federal government spending and taxes and benefit contributed negatively to real GDP growth from 2011 on. This record is hardly a testimony to the wisdom with which US policymakers conducted fiscal policy.

Arguably the situation in Europe was more complicated. But fiscal policy almost certainly contributed to the depth of the recession. See Blanchard and Leigh (2013), Eichenbaum, Rebelo and de Resende (2016) and Takagi (2016). Looking across the US and European experiences, I conclude that we just can't count on discretionary fiscal policy to pick up the mantle when monetary policy can't do what it normally does.

**Chart 3**  
**Contribution of Fiscal Policy to US Real GDP**



Source: Hutchins Center calculations from Bureau of Economic Analysis data

## Asymmetric Automatic Stabilisers

The previous considerations suggest that an effective way to deal with the ELB conundrum is to institute a programme of asymmetric, automatic stabilisers.

Why automatic stabilisers? First, expanded automatic stabilisers are triggered on and off by economic conditions. This trigger structure is clearly preferable to relying on the politics of the moment. By construction, stimulus starts quickly when it has the most effect and ends when it isn't needed. Second, policies that are designed and

legislated outside of a crisis are far more likely to be better thought out, more carefully vetted and better communicated than discretionary acts designed in the middle of a crisis.

Third, because expanded automatic stabilisers would be embedded in our legal framework, households, firms and sub-national governments would be more likely to factor expanded benefits into their decisions than discretionary fiscal policy. This advantage is potentially very important. For good reasons, households are

afraid of losing their jobs in a severe recession. So it's natural for them to increase precautionary savings, before and during a severe recession. Even though this rise is privately optimal, it is deeply counter-productive from a social point of view and makes a bad situation worse. In fact, the fear of a severe recession and an ELB episode could easily become self-fulfilling. The more certain people are that they'll get expanded help in a severe recession, the less they feel a need to build up precautionary savings. So expanding the help that we offer to people in such episodes reduces the amount of help that they will actually need.

Why asymmetric stabilisers? There are important negative effects associated with many automatic stabiliser programmes and limited benefits during normal times. But the benefits rise dramatically when the ELB constraint is binding.<sup>8</sup> So it makes sense to invoke changes in automatic stabilisers only when we hit pre-defined macro triggers.

To be concrete, consider a programme that already exists in many countries: unemployment insurance. On the positive side, such insurance reduces precautionary savings and raises the income of people who have a high marginal propensity to consume. But the aggregate impact of these effects is reasonably small in normal recessions. After all, relatively few people become unemployed in a normal recession and, at least in the US, unemployment is for the vast majority of people a short-lived phenomenon.

On the flip side, in normal times, a rise in unemployment insurance benefits has important negative effects. By increasing workers' outside options, a high level of unemployment benefits leads to an increase in wages and a fall in the number of vacancies posted by firms. So high benefit levels tend to reduce average levels of employment. Moreover, in a normal recession, expanded benefits lead to a rise in real wages which exerts upwards pressure on inflation, potentially leading to a rise in interest rates. This effect dampens the positive effects of unemployment insurance on aggregate demand.

Christiano, Eichenbaum and Trabandt (2016) argue that the positive impact of unemployment

benefits is likely to be much higher when the ELB binds. First, changes in demand are particularly powerful in deep recessions. This is exactly the kind of situation where you want to prevent rises in precautionary saving. Expanded unemployment benefits do exactly that. Second, if more generous unemployment benefits put upward pressure on wages and inflation when the ELB binds, they lower real interest rates. That's just what we want.

In reality, extending unemployment insurance benefits during times of high unemployment has become standard operating procedure in many countries. In the US, unemployment insurance already has a degree of asymmetric automaticity. The extended benefits programme provides for an additional 13 or 20 weeks of jobless benefits (beyond the usual 26 weeks), and is currently triggered automatically when a state's unemployment rate rises above 5%. As noted above, Congress often enacts additional discretionary increases in unemployment insurance coverage. Normally, the federal government covers half the cost of the extended benefits. But it paid the entire bill in the aftermath of the financial crisis. This action was very important because states operate under balanced budget constraints. If states had to spend more money on unemployment insurance, they would have had to cut back on other expenses.

But why should individuals or states have to guess about the magnitude and timing of extensions? Surely it makes sense to eliminate this source of uncertainty. To be concrete, we could by law mandate that if the federal funds rate hits 25 basis points, we automatically move to an extended benefits programme under which the federal government pays 100% of the cost of up to 52 additional weeks of higher benefits for states experiencing rapid job losses or high unemployment.

More generally, in the US we could legislate automatic grants from the national to state and local governments that begin and end in response to macro triggers. Federal fiscal relief, say in the form of a higher federal share of Medicaid spending, reduces the need for states to reduce

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<sup>8</sup> See Christiano, Eichenbaum and Trabandt (2016) and McKay and Reis (2016).

spending or cut or raise taxes, or both, in a recession. In this way we would prevent cuts in government spending during an ELB episode and shut the spigot off when the aid is no longer required. As with unemployment benefits, something analogous to this grant approach happens now in the US with Medicaid, health care

for low-income individuals. The cost-sharing formula for this programme between the states and the federal government isn't explicitly cyclical. It should be. For a series of concrete proposals for the US see for example Bernstein and Spielberg (2016).

## Unconventional Fiscal Policy

Given the importance of the ELB conundrum, why stop with asymmetric increases and decreases of existing transfer and social insurance programmes? Why not pursue unconventional fiscal policy along the lines analysed by Correia *et al.* (2013)?

The basic idea is to write into law macro triggers for temporary tax cuts and triggers for ending those cuts. Tax schedules would automatically change in extreme circumstances when the ELB becomes binding and revert to their old levels when a crisis is over. In principle, time-varying tax rates can reproduce exactly the outcomes that would obtain if monetary policy didn't face an ELB constraint (see Correia *et al.*, 2013 for a formal analysis of this point).

The reader will no doubt find these types of proposals 'exotic'. But it's the basic idea behind the policy that Feldstein (2001, 2002a, 2002b) advocated for Japan: temporarily suspend the VAT, and commit to raising it two years later. In effect put consumption on sale. It's also the basic idea behind temporary tax credits to boost private investment.

Some countries like the US don't have a VAT or a general sales tax. But 45 of the 50 states do have a sales tax. Blinder (2001, 2016) proposed that in those cases the federal government offer to replace the lost revenue of sub-national governments that agree to cut sales tax for a fixed period of time.

The key difference between Blinder-Feldstein-like proposals and 'unconventional fiscal policy' is that changes in tax policies would, by law, be set-off by pre-defined macro triggers. This point is crucial: pre-defined triggers will lead to more sensible outcomes and avoid potentially perverse incentives associated with simple time-dependent rules.

Asymmetric automatic stabilisers and unconventional fiscal policy are not a panacea. If nothing else, they all involve potentially serious time consistency issues when times are good and tax cuts are supposed to be reversed. But writing asymmetric automatic stabilisers or unconventional fiscal policies into law in tranquil, prosperous times would surely help.

## Conclusion

I have argued that, because of the fall in the natural real interest rate, the ELB constraint on monetary policy will likely bind with uncomfortable frequency. Absent changes in our policy mix, the social cost of these episodes will be large. We should by all means explore alternative monetary policy strategies to deal with the problem. But absent a willingness to permanently raise inflation targets, I am skeptical that existing alternatives can, by themselves, deal

with the problem. We must look at the other tools in our policy quiver.

Surely we can do better than mad dash discretionary fiscal policy designed and implemented in the cauldron of a crisis. We should adopt a programme of asymmetric automatic stabilisers. My own preference is for the asymmetries to kick in exactly when monetary policy loses its power, i.e. when central bankers



announce that the ELB constraint is binding. The asymmetries should end, when policy rates indicate that the ELB is no longer a binding constraint.

I am acutely aware of the political challenges involved in such an initiative. Also I have no doubt that the right programme of asymmetric automatic stabilisers will vary across countries. Skepticism is warranted. But it was also warranted when we moved to flexible inflation targeting and quantitative easing.

I may or may not have moved your priors about fiscal policy. If I haven't, the ball is in your court.

Would you rather raise inflation targets to get around the problem of more frequent ELB episodes? And if not that, then what? Eliminate currency and roll the dice on financial stability with negative real interest rates? No, thank you.

If I have budged your priors about fiscal policy, the time to start down the path is now, with the firm understanding that the perfect should not be the enemy of the good. It will take a long time to come up with concrete country-specific proposals and the political consensus required to adopt specific proposals. The longer we delay, the more likely it is that we will fall into the next crisis without the tools that we need.

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