

Strategic Review and Beyond: Rethinking Monetary Policy and Independence

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I survey monetary policy strategy, regulation, and central banks' mandates and independence. I do not think strongly negative interest rates, vastly expanded quantitative easing, or extensive forward guidance can or should stimulate in the next recession. I advocate a price-level target and that the Fed fix the spread between indexed and nominal debt. I argue for a large balance sheet of interest-paying reserves, achieved via a flat supply curve, though I argue that the Treasury should issue reserve-like debt as well to take up much of that role. Central banks should avoid the temptation toward ever-expanding roles including "macroprudential" policy, discretionary credit cycle management, asset price targeting, and using their regulatory power to advance social and political goals such as climate change and inequality. Only limited scope of action to areas of agreed technocratic competence will salvage central banks' and international institutions' useful independence. (JEL E52, E58, E61, G28)

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This is an exciting moment to think about central banks and monetary policy. The Fed and many other central banks are undergoing a formal strategy review. More broadly, the community that studies monetary policy has entered a period of fundamental rethinking. I'm grateful for this opportunity to put together my thoughts and to reflect together on the answers.

I'll start with the easy question, monetary policy. Then I'll move on to regulation, and finally we'll think about central bank mandates and independence. I will end up contradicting just about every tenet of current consensus opinion, well articulated, for example, by Bernanke (2020). Well, examine the logic and evidence and decide for yourself.

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A theme underlies my thoughts: We have learned a lot in the 12 years since the financial crisis. Some of these lessons are slowly percolating into policy. I mostly take these lessons to their logical conclusion.

In 2007, the question was wide open: What happens if interest rates hit zero and the Fed cannot lower interest rates? What happens if the Fed pays interest on reserves—deposits that banks hold at the Fed—and increased reserves by 3000 percent, from \$10 billion to \$3 trillion? Every mainstream school of thought—monetarist, old ILSM Keynesian, new-Keynesian—predicted massive deflation or inflation or great volatility in these events. Yet nothing of the sort happened. The long quiet slow recovery decisively disproved these ideas.¹ Yet the vestiges of these ideas still guide central banks' policy thinking and review. How we think going forward must incorporate the lessons of this clear experiment.

Twelve years of reflection about regulation in the wake of the crisis have taught us that we can stop financial panics forever, without turning the financial system into a sclerotic regulated utility, featuring lots of leverage, tight regulation, and inevitable rounds of crisis and bailout. I'll show you how. It's time to complete that agenda.

NEGATIVE RATES, QUANTITATIVE EASING, FORWARD GUIDANCE

The narrow question facing the Fed is simple. A recession will come. Interest rates will hit zero again. Now what? (As I write, the Covid-19 virus is spreading, and the economy is screeching to a halt. The event may have already happened by the time you read these words.)

Should the Fed prepare to set interest rates substantially below zero? You pay the bank to hold your money, and they pay you to take out a mortgage? Should the Fed prepare for even more massive Treasury bond purchases, increasing the supply of reserves by additional trillions? Should the Fed add purchases of mortgages, stocks, and corporate bonds, as the Bank of Japan and European Central Bank have done? Should it prepare for aggressive direct lending, or directly try to prop up asset prices? Should it prepare an arsenal of speeches, or announce new, and binding, inflation targets and interest rate rules, hoping to stimulate today by promises of or commitments to future actions?

In my opinion, no.

Substantially negative interest rates would require big structural changes to our banking and financial systems. Someone has to reprogram every computer to accept a minus sign! We have to get rid of cash and solve the consequent delicate balance of privacy versus law and tax enforcement in a fully cashless world. We have to change lots of accounting and tax payment conventions that allow people to pre-pay without penalty. It's a big and disruptive job.

Evidence and logic on asset purchases—quantitative easing (QE)—tell us that they had no prolonged effect. Long-term rates have been on a downward trend since the 1980s. In a graph,² you cannot see any sign of QE.

Remember what QE is. If the Fed just gave people money, that might make them spend. But the Fed exchanges money for bonds. And when money and bonds pay the same interest, they are perfect substitutes. More interest-bearing reserves and fewer bonds is only a slight readjustment of the maturity structure of government debt. If the Fed takes a \$20 bill and

gives you two \$5s and a \$10 in return, how does that make you spend more? It doesn't. If the Fed takes your red M&Ms and gives you green M&Ms in return, how does that help your diet? It doesn't.

Moreover, the Treasury was selling faster than the Fed was buying, to fund massive deficits.³ Overall people held more, not less, Treasury debt and more long-maturity Treasury debt. And we have seen vast changes in the maturity structure of the debt over history with no visible effect on interest rates.⁴ The notion that people have a fixed desire for specific maturities of government debt fits neither experience nor simple economic logic.

The economics literature concludes that QE was at best a signal—if the Fed is going to do something this wild, the Fed must think the problem is really bad and interest rates are likely to be low for a long time.⁵

Now, by the same token, if QE doesn't really change anything, it isn't doing any harm. But don't count on massive Fed purchases of Treasury securities to stop the next recession.

Buying mortgages, bonds, and stocks might have some effect on those prices. (At least for a while. Demand and supply curves for assets are flatter than you think, especially after a month or two.) But this kind of direct intervention in asset markets has enormous risks. Does the Fed really want to get involved with propping up the stock market? Or deciding which business should get cheap credit and which should not?

My judgment reflects a deeper issue that we should state and debate. In my view, negative interest rates and asset purchases are not hugely stimulative. So there are no great benefits to balance against the costs.

If you think a 2 percent negative overnight rate and another trillion dollars of Treasury purchases is all it would have taken for the agonizing 8-year recovery from the Great Recession to happen in 1 or 2 years, then the case is much stronger. But if these actions stimulate, then it was a crime for the Fed not to do far more.

I don't think that's true, and I don't think the Fed does either. If that were true the Fed would have done more. If that were true, Japan and Europe, who did go negative and bought more assets than we did, would have grown like gangbusters. They did not. But face the logic: Either the Fed had a powerful tool but failed to use it, or it had a mostly symbolic tool that we should not count on to do much next time.⁶

Why did the Fed choose a finite *quantity* of QE, leaving us in an eternal debate about whether it did or did not lower interest rates? Why did the Fed not just say, "We want the 10-year Treasury rate to be 2 percent. (Or 1 percent. Or 0 percent). We will buy bonds until that price is achieved. Nay, we will buy any quantity of bonds at a 1 percent yield and set the darn price." I think the answer is obvious: The Fed was worried about just how many bonds it would have to buy, or that it could not change market rates even by buying all the bonds. Then the powerlessness of QE would have been revealed. Better to keep the smoke and mirrors going.

"Forward guidance" is the idea that even though the interest rate is stuck at zero today, the Fed can stimulate the economy by giving speeches about what it will do in the future. Once the recession ends, the Fed will keep interest rates low for a substantial period of time, or the Fed will allow inflation above target for a few years. This change in expectations is supposed to boost the economy today.

The difficulties of this argument are apparent.

First, pre-commitment. What Fed chair will ever go to Congress and say, “Yes, inflation is growing and the economy is healthy again. By all normal indications now is the time to raise interest rates. But we promised 5 years ago that we would keep rates low and allow inflation in order to stimulate back then, so now I have to keep that promise even though it would be better for the economy today to raise rates.” Ex ante, will anyone really expect this sort of behavior?

The Fed is considering changes to its inflation target that would institutionalize and attempt to pre-commit to this sort of response. But the Fed has never really pre-committed ex ante to do something it does not want to do ex post, or adopted any formal and binding rules.

Second, the case for forward guidance is based on economic models in which promises about actions further in the future have *greater* effects today. In any sensible model, expectations about events further in the future have *lesser* effects today, which dramatically lowers the power of forward guidance.⁷

Third, I think we all live in a bit of a bubble. We all read Fed speeches closely, as do bond traders. But the average businessperson and the average worker don’t really even know what the Fed is, let alone parse FOMC statements for hints about interest rates and inflation targets 5 years from now. The immense dispersion in survey expectations gives you some hint about just how different from ours most people’s expectations are.

This logic points to a deeper lesson. The Fed really has limited power to stimulate our way out of recessions.

A prolonged recession reflects something wrong in the economy. Effective policy should fix what’s wrong. Cappuccinos stimulate, but if you’re having a heart attack, a cappuccino is a terrible substitute for going to the emergency room. Lots of things were wrong in the U.S. economy in the Great Recession. Much of the literature sees financial frictions, limitations on credit supply. I see that recessions are a feature of *risk premiums*, willingness to take risk, not of overnight interest rates. I see a lot of regulation, social program, and tax disincentives that held back the supply side of the economy.

Really, of all the things holding back growth, were the central underlying causes an overnight interest rate of a quarter of a percent rather than negative 2 percent, that the Treasury sold too much 10-year debt and not enough short-term debt, and that central bankers had not made enough hearty speeches making promises about what they might do in 5 or 10 years time when they might normally start to raise rates?

The Fed’s main job is not to screw up—not to cause a recession, not to cause or worsen a financial panic. That the Fed did not repeat the mistakes of 1929-1933, and many since then, is praiseworthy.

But money is oil in the economic car, not gas. Once the car is full of oil, adding more oil does not help. Monetary and financial frictions are inequality constraints. Once an inequality constraint is slack, pouring more on the slack side does no good.

We face a similar situation as I write. The long-awaited slowdown seems to be happening as the economy slows down due to a spreading disease. The Fed has cut the overnight rate. But is demand side stimulus of any use? Should people look at low rates, borrow some money,

and go on a cruise? Will they? No. Neither low overnight rates, nor Treasury purchases, nor promises about interest rates after the virus has passed will raise output now. Supply, public health, and avoiding a cascade of failures in businesses that must stay shut down for a while so the economy can restart easily are the challenges for policy.

A counterargument I hear from many people at the Fed amounts to this: Sure, we know negative rates, QE, and forward guidance don't do much. But we have to be seen to do something in hard times. We have to keep up the appearance that we're in charge. It's a symbolic, political PR move.

I think there is a good deal of truth to this analysis of the Fed's actions, but questionable courage and wisdom. It would indeed have been politically difficult for the Fed to state the facts—this recession is going on far too long but there is nothing we can do about it. But I also think that being honest about central banks' limited ability to fix everything would be good for central banks, and for our politics and economic policy. Stimulus has limits. "Structural adjustment," fixing broken microeconomics, needs greater emphasis. And sooner or later they will pull aside the curtain. Having pretended to be so powerful will come back to haunt central banks.

INFLATION TARGET

What should the inflation target be? Right now the answer is 2 percent, which really grew out of habit rather than any particular analysis. More importantly, it is an eat-your-mistakes target: If inflation really comes out at 1 percent, the Fed keeps the target going forward at 2 percent, not 3 percent to correct the past shortfall.

Lots of alternative proposals abound, including nominal-GDP targets, average-inflation targets, price-level targets, and complex asymmetric targets (forgive inflation, but make up deflation).

I favor a symmetric price-level target. The consumer price index shall be 250 forever. If it falls, the Fed (and Treasury) are committed to getting it back up; if it rises, they are committed to bringing it back down.⁸

We do not shorten the yard by 2 percent each year to try to goose the economy. Should not the standard of value be as constant over time as every other measurement? A constant long-run price level would make the financial system more efficient in lots of little ways. For example, we pay capital gains taxes on inflation-induced gains. Sure, says the perfectionist, fix the stupid tax code. But it's easier to fix the inflation. It would lower long-term bond yields, by shielding from inflation risk, lowering both the government's and private borrowers' interest costs. Sure, says the perfectionist, fix TIPS (Treasury inflation-protected securities) so they are more popular and index contracts better. But nominal contracts are surprisingly popular, hence, evidently efficient.

A constant price-level target is simple and visible. Quick: If the Fed is following a one-sided 2 percent price-level or nominal-GDP target that makes up for past undershoots but not past overshoots, just what is inflation supposed to be this year?

Others like a price-level or nominal-GDP target because those targets commit the Fed to promise a period of higher future inflation if there has been a period of below-target inflation,

as in forward guidance. As I explained above, I'm dubious of the idea that expected inflation in the distant future stimulates much today. But one can like the same proposal for different reasons.

Milton Friedman wrote⁹ that slight deflation and a zero nominal interest rate are optimal. Then money and bonds become perfect substitutes, and people do not economize on cash. At a zero nominal rate we know the economic car is full of oil. I favor the price-level target because it's simpler, clearer, and close enough, especially in these days of near-zero or negative real rates. Contracting costs are arguably minimized at zero inflation not a zero nominal rate. Interest-paying electronic money obeys the optimal quantity at any interest rate, and the small interest costs of physical cash are minor and perhaps a reasonable tax on all of cash's illegal uses.

Some people dislike deflation or zero inflation, on the notion that wages are sticky downward. I think the sticky wage story is overblown. Remember, even with no price inflation, each individual's wage can rise as they age and gain experience and as individual and aggregate productivity increases. Wages are certainly less sticky when people change jobs, and many people experience large income fluctuations due to hours, contractor status, piece rate, and bonus compensation. The increased number of actual individual wage cuts demanded by 2 percent versus 0 percent inflation is tiny.

Moreover, if sticky wages are the single salient economic problem that causes recessions, depressions, and unemployment, why is so much law, regulation, and policy devoted to making wages *stickier*, especially downward, and making labor markets less competitive, which adds to wage rigidity. Why are macroeconomists, and the Fed, silent on this great economic tragedy?

There is an apparent incoherence if not hypocrisy here, an unwillingness to consider the logical conclusions of one's assumptions. Macroeconomists habitually adduce a friction that causes enormous economic pain, but then they advise the Fed to cleverly exploit the friction to manage the economy. They never even *mention* "Let's get rid of that friction" or think about whether the friction is due to policy or directly remediable by policy. Now in many cases, frictions such as sticky wages and prices, enormous markups, and credit constraints are just simple parables, used to fit aggregate dynamics and generate views about desirable monetary policy, not serious descriptions of the microeconomy. OK, such simplified parables are important parts of good macroeconomic modeling. But if we don't trust the modeling assumption enough to say loudly that policy should make wages less sticky, then we are on shaky ground to object to permanent zero inflation on the grounds that wages are too sticky.¹⁰ (There is also an increasing amount of microeconomic investigation of issues such as sticky prices and wages, which finds nothing so simple as the uniform stickiness of aggregated models.)

Others like a higher inflation target to prompt higher nominal interest rates and give the Fed "headroom" to stimulate more in the next recession. That's like wearing shoes that are two sizes too small so it feels better when you take them off at the end of the day. The theory that the path of interest rates matters—that going up to 3 percent and then cutting to 0 percent is more stimulative than arriving at the same 0 percent from 1 percent—may sound intuitive, but I don't know of any model with such path-dependence. The idea that getting inflation up to 2 percent gives you a lower real rate when you cut nominal rates to 0 percent presumes inflation expectations are mechanical and backward looking.

What about Japan? That's the inevitable question when one favors low inflation and low nominal interest rates. Japan has had zero interest rates and steady deflation for three decades. But in most of that time, Japan's unemployment rate has been around 3 percent. That does not sound like deficient demand. Japan is not growing badly per demographically adjusted capita. It has not completed catch-up to U.S. productivity and per-capita GDP levels because of greater microeconomic distortions.¹¹ But after three decades, money is surely neutral and prices and wages adjust. Japan has a Friedman-optimal monetary policy—zero interest rates, slow deflation—and people use all the money they need.

THE LOWER BOUND

The question remains: What *should* the Fed do at the zero bound, or the effective lower bound of negative 1 percent or so? There are two parts to this question.

First, how will the Fed stop a deflation spiral next time interest rates hit zero? To answer that question, we need to know *why* the dreaded inflation spiral did not break out last time in the U.S., Europe, or Japan and just why the models that predicted spirals failed so catastrophically.

Here's my answer to that question: All the deflation-spiral models leave out a crucial detail. If deflation were to cut the price level in half, then nominal income would fall by half, and tax revenues would fall by half. Congress would have to sharply raise taxes or cut spending to pay off the debt.

Now ask yourself, what is the chance that in a sharp deflation, with a huge recession, that the U.S. Congress passes draconian tax increases or spending cuts, all to pay for an unexpected, undesired, and surely, it will be argued, undeserved windfall profit to fat-cat Wall Street bakers, billionaires, and the Chinese who hold our Treasury bonds? It's not happening. And that is exactly why deflation can't happen.¹²

This is the mechanism that needs strengthening in the event of zero interest rates and emerging deflation: a clearer set of monetary *and* fiscal arrangements. There is some hint of it in calls for fiscal stimulus at the zero bound, but if people expect borrowed money to be paid back, then that stimulus is ineffective. Running an unbacked fiscal expansion, persuading people that a fraction of the debt will be inflated away—but not all of it—is very tricky.¹³

In my view, the answer is an explicit price-level (or inflation, for this purpose) target that is as binding on Congress as on the Fed. This fiscal policy rule works much like John Taylor's monetary policy rule and links primary deficits to the price level.¹⁴ But that step represents a fundamental restructuring of fiscal as well as monetary policy, so let us return to what the Fed can and should do on its own.

The second question is what should the Fed do to exit the zero bound. Here the lesson of the recent past is crucial: Inflation is, in fact, stable when interest rates are fixed at or near zero. We do not see deflation or inflation spirals. This prediction is also a robust feature of models with forward-looking expectations. It follows that if the Fed were to announce ahead of time that it will slowly start raising interest rates, and stick to that plan, inflation will rise. This prediction is consistent with the U.S.'s slow and preannounced liftoff relative to Europe and Japan. This “neo-Fisherian” prediction can coexist with the more common experience and VAR evidence that a *surprise and transitory* interest rate rise lowers inflation.¹⁵ Though con-

sistent with theory and evidence, this prediction is still hard to swallow as it contradicts so many stories told and retold. I agree that policy should be based on well-tested models and not the latest clever idea in one's most recent paper. So I leave that observation as an indication of just how little we know confidently, scientifically, and in a consensus about how interest rates actually do affect inflation, but also as a serious possibility we should consider.

But I do not think it vital that the Fed *should* take this step and deliberately raise inflation. It is also true in forward-looking and, hence, stable models that, if the economy needs a negative real interest rate at a zero nominal rate, inflation will eventually take care of that on its own, as Japan's deflation took care of a needed positive real interest rate all on its own.

INTEREST RATES

How should the Fed set interest rates, or move inflation back to target? Should the Fed keep (or return to, John Taylor might argue) the Taylor rule, raising rates when the GDP gap and inflation rise? If we want a price-level target, should the Fed just raise rates when the price level is above target and vice versa? Should it follow a first-difference rule, raising or lowering the rate in response to events rather than a rule describing the level of rates? Should rates move gradually or instantly?¹⁶

Let me advance an out-of-the box alternative. On first principles, the idea of the Fed setting the interest rate is a poor policy design. To set an interest rate, on top of an inflation target, the Fed must somehow divine the appropriate real interest rate. (Interest rate = real interest rate plus expected inflation.) But nobody sitting in a desk in Washington could possibly figure out the right price of a 2 × 4, let alone the right real interest rate.

Here is an alternative. Since the Fed wants to target inflation, why not target inflation? Target the spread between indexed and non-indexed debt, which represents expected inflation. If the Fed wants, say, 2 percent inflation, then make the following offer to markets: Bring in a 1-year indexed Treasury bill and get back 1.02 1-year non-indexed Treasury bills and vice versa.¹⁷

Targeting this *spread*, the Fed can directly target the inflation rate or price level and get out of the business of divining the true natural rate of interest. Interest rates themselves will vary, potentially a lot, reflecting market forces, as stock, bond, and foreign exchange rates vary.

The natural worry is stability: We know that in the long run higher inflation must come with a higher indexed vs. nonindexed spread. But which is the chicken and which is the egg? If the Fed targets the spread, does inflation converge to the target or does inflation spiral away? This is exactly the same question as whether inflation is stable when rates are stuck at zero or at a peg. The zero bound era answered that question in favor of stability, as do all our forward-looking models. This is also a policy the Fed can experiment with gingerly in addition to normal interest rate targeting.

THE GOLD STANDARD

Many commenters write longingly of a return to the gold standard. The gold standard simply will not work for a modern economy. The gold standard period had sharp inflations

and deflations around a long-run steady price level, as the value of gold varied relative to other goods and services, culminating in the deflation of the Great Depression, which led to the abandonment of the gold standard. That problem would be much worse today. In the 19th century, gold coins were still widely held and used for transactions. That fact linked the value of gold to the value of everything else, at least eventually. But the relative price of gold can wander away from other prices today. Targeting the price of gold would have no more stabilizing effect on overall inflation than targeting the price of tungsten.

But gold standard advocates' hearts are in the right place. My proposals embody much of the spirit and logic of the gold standard, applied to a modern economy. The gold standard promises a long-run steady price *level*. So does my price-level target. The gold standard is at heart a fiscal rule. If the dollar devalues and people demand gold, the government must raise taxes or cut spending enough to get the gold. My expected CPI target and fiscal rule embody those ideas. The promise to trade indexed for non-indexed debt acts like the promise to trade dollars for gold. My CPI target is better, as it eliminates inflation and deflation (as in the 1930s) when both gold and the dollar gain or lose value relative to goods and services.

BALANCE SHEET

How big should the Fed's balance sheet be, and how should the Fed run the balance sheet?

The Fed is essentially a huge money market fund invested in U.S. Treasury and agency securities. The "size of the balance sheet" means the size of reserves, banks' accounts at the Fed, plus currency, and the corresponding size of the assets that the Fed holds to back those accounts.

The Fed should have a large balance sheet, with reserves that pay full interest. Don't deliberately drive the car with less than full oil. Don't try to speed up or slow the car down by adding or draining oil. Full interest on reserves, and giving banks as much reserves as they want, allows the monetary system all the "liquidity" it needs.

For decades, this regime was widely recognized as providing the "optimal quantity of money," along with efficiency and stability of the financial system. The debate was whether adopting it might unleash unstable inflation or multiple-equilibrium volatility. Once more, the past 12 years—the past 30 in Japan—settle that debate. We can be awash in interest-paying reserves with no inflation. Let's do it.

The Fed is still hesitant, limiting the quantity of reserves as well as paying full price, and limiting who can get reserves. Perhaps some ghost of the quantity theory keeps the Fed up at night. The result is last summer's gyrations in money markets and the unseemly apparent subsidy to big banks who can get higher interest rates than anyone else.

No, if you want to target interest rates, target interest rates. Offer a flat supply. Any qualified financial institution can bring in some Treasury securities and earn 1.99 percent on reserves. Or they can borrow against Treasury collateral at 2.01 percent. Done. The Fed was founded in 1914 to furnish an elastic currency. Provide 21st century electronic money elastically.

This step is made harder by the fact that the Fed is a bank and legally designed to serve banks. It would be much easier for this and many reasons if the Treasury offered the same security: The Treasury should offer fixed-value, floating-rate, electronically transferable

(instantaneous, date 0 settlement) Treasury debt.¹⁸ If the Treasury offered the same security directly, then the Fed could keep a much smaller balance sheet, and we wouldn't have to get in to the thicket of whether the Fed should allow money market funds, narrow banks, fintech innovators, government agencies, large corporations, and you and me to have reserves accounts.

It's as if the Treasury had only minted \$10,000 coins, so the Fed had to buy those and issue nickels, dimes, and quarters. Well, let the Treasury issue the kind of debt people want in the first place.

Also, if it wants a small balance sheet, the Fed should fix the resolution liquidity and other regulations that are inflating demand for reserves, and the Fed should provide date 0 reserves for Treasury securities via widely available stigma-free purchase or repo. Then Treasury securities would be exactly as liquid as reserves.

BANK REGULATION¹⁹

Interest rates and monetary policy are actually a small fraction of what the Fed does. The Fed is primarily the gargantuan financial regulator. How should the Fed approach this task?

We have learned a lot in 12 years here, too. The central problem of the financial crisis was not how banks invested their money. Even portfolios of subprime mortgages are a lot less risky than the assets of run-of-the-mill stock mutual funds, whose losses cause little pain to the system overall, or the income streams of non-financial corporations.

The central problem was that financial institutions *got* their money far too much by short-term borrowing and far too little by issuing equity or retaining earnings to build up equity capital. When every day you have to find new lenders to pay off the previous day's borrowing, you're open to a run, which is what we had, pure and simple. A bank that funds its risky investments by equity simply cannot fail or suffer a run. Bankruptcy happens if you can't pay debt. No debt, no bankruptcy.

We have learned that more capital is not *socially* costly. Especially when we count getting rid of private sector financial crises forever, more capital and less short-term debt is a great benefit to society. There will still be plenty of money to fund mortgages and business loans, and it won't cost more. More capital is *privately* costly to banks, as they lose the value of debt subsidies and bailout guarantees. That's why they fight so hard to lower capital requirements. But we who pay the debt subsidies should value more capital.

We can now live in a financial system that never has a private-sector crisis again. Banks get money for risky investments by issuing equity and long-term debt. Many investments, like mortgages, are sold into pools held in mutual funds at fluctuating values. Institutions that want to offer deposits can do it, backed 100 percent by Treasury securities or reserves. (We're still open to sovereign default, which would be catastrophic, but that's another lecture entirely.)

Financial regulation could be very simple. My favorite version would be a simple tax on short-term debt, along with a sliding scale of regulations based entirely on liabilities—the ratio of the face value of debt to the market value of equities. We would no longer need clairvoyant regulators to see “bubbles” building and prick them, or courageous bailer-outers to save the system in crisis. There would be fewer statues to heroic Fed chairs, perhaps, but a much better financial system for the rest of us.

Modern technology allows this system. We could make transactions by swiping a card that sells an S&P500 index. *Liquidity* no longer requires *fixed-value* run-prone securities. And the vast expansion of government debt means we can fully back \$20 trillion of deposit accounts. We no longer need banks to “create money” from mortgages. Though this idea stems from the “Chicago plan” of the 1930s, one can argue it was infeasible then. No longer.

It took a long time to figure this out. But I think now the economic point is pretty much acknowledged by people who study these issues. They say only “It’s not politically feasible.” Big banks, who profit from the many subsidies to debt, and enjoy the protection from competition that extensive regulation gives them, don’t like it. Central banks don’t want to hear it either, so nobody will invite you back if you offer this impolite simple truth. They would rather continue the path of expanding their regulatory power. And with the financial crisis now in the rearview mirror and bank regulation a sure topic to put anyone to sleep except those with money or power at stake, nobody is really paying attention. What good does it do a Fed governor to stir up a hornet’s nest of trouble with big banks and his or her regulatory staff?

But we needn’t give up. We don’t have to focus at all on today’s big banks. *Just allow an on-ramp.* Answer the question: What does a new financial firm need to do, so that it needs no regulation? The answer is, finance it by equity and long-term debt and no short-term run-prone debt. In the tens of thousands of pages of financial regulation, that on-ramp is missing. Allow the on-ramp, allow equity-financed lightly regulated innovated competitors, add a little tax on short-term debt, and the problem will solve itself.

Technology will eventually also force change. Narrow banks, fully backed private currencies like Libra, and fintech lenders will grow like weeds in the cracks, or rather like Ubers in the taxi system. But the process would be a lot smoother and faster if the Fed would allow that on-ramp and not just continue protecting big banks from competition and blocking narrow banks.²⁰

MANDATES

What is a central bank’s job, scope, or mandate? The Fed was founded as lender of last resort and to provide an elastic currency. That mandate expanded to “price stability,” which somehow evolved to a 2 percent inflation target²¹ and “maximum employment,” along with a lot of bank regulation. “Financial stability” is a new mandate, involving detailed direction of the financial system.

There is a strong push for “macroprudential” policy, that central banks should direct and manage the “credit cycle,” deploying a wide variety of discretionary tools to directly regulate lending in the booms, prick asset price “bubbles,” and then by regulation open the spigots and prop up prices in recession.²²

In international affairs, the IMF used to urge countries to keep trade and capital open. In a crisis, the IMF required a commitment to micro deregulation, cutting subsidies, and getting the fiscal house in order before offering a bridge loan. This is like borrowing from your grumpy uncle: Get a job, stop drinking and gambling, here is some money to tide you over, but I’ll be watching.

In 2012, the IMF moved to an “institutional view,” advocating that central banks “manage” capital flows and exchange rates, along with extensive macroprudential direction.²³ The IMF’s new “integrated policy framework” promises an even more ambitious “integrated” approach to “monetary policy, macroprudential policy, exchange rate interventions, and capital flow measures,” tailored to disparate “country circumstances.”²⁴

It is all very tempting. Central bankers like to feel important. Interest rates are either stuck at zero or don’t seem to do a heck of a lot. Well, take on broad new powers to run things and do good as you see it.

But like discretionary monetary policy, central banks have never been able to time credit and asset price cycles, or micromanage dozens of interacting policy levers to offset poorly understood (and country-specific) “frictions” and “imperfections.” How do you tell a boom from a bubble in real time? How and why will central banks get it right this time after so many abject failures—2007 being the most recent and screaming example? How will they avoid repeating the endless problems of managed exchange rates and extensive capital controls that finally blew up in the 1970s? Central bankers are only human, just like the rest of us—and just as prey to the fallacy that we’re the smart ones and everyone else is behavioral. In the crisis, as monetary policy committees were begging banks to lend, regulators were telling banks to cut back lest the crisis get worse. Through the 12th year of the subsequent expansion, the U.S. has been if anything loosening capital and credit standards, despite great increases in credit. So much for macroprudence.

Rather than try to stop anyone from ever borrowing too much or losing money ex post, we should make the financial system robust so that people can make and lose money without burning down the house. That’s the equity-financed banking approach.

The current trend is even more ambitious. Now, the International Monetary Fund, the Bank for International Settlements,²⁵ and the Financial Stability Board are advocating and the Bank of England²⁶ is starting to implement climate and inequality²⁷ policies. Central banks should demand extensive disclosures of “climate risk” and contributions to “sustainable investing.” Those lending to, say, fracking companies will have an army of regulators descend on them. The European Central Bank is buying “green” bonds. Fed Chair Jay Powell has so far been a courageous resister to the climate side of this movement,²⁸ but we’ll see how long that lone voice of resistance can hold out.

The IMF is now advocating, along with climate, a full range of policies including increased “social spending,” progressive taxation, income redistribution, and social-justice policies far beyond anything traditionally monetary or financial.

Requirements for “sustainable accounting” (see Finley, 2020), “disclosure” of environmental, social, and corporate governance (ESG) blessings, “stakeholder capitalism,” divestiture, and de-financing more disfavored industries are already being advanced.

There is a reasonable risk that climate change may be, in 50 or 100 years, a big economic problem. But the risk that unforeseen changes—risk—in *climate* threatens the financial system with another run is essentially zero on the 5-year-or-so timeline of honest risk assessment. (Except maybe risks induced by the same regulators!) Repeating the contrary assertion over

and over in speeches does not make it so. That, say, coal company stock investors may lose money when regulators shut down their businesses is not a systemic risk, unless we debase “systemic” to mean anyone ever losing money on anything. Bringing inequality into the financial mandate by claiming that inequality causes systemic runs, as the IMF is doing, is a similar flight of fancy. And once you cook the books to advance climate and inequality, the books are cooked for everything else, too.

As I write, the chance of a systemic crisis induced by a pandemic is a strong possibility. That none of this scenario-building and stress-testing even considered pandemic risk, in the wake of SARS, MERS, Ebola, and HIV, exposes just how much groupthink and virtue-signaling and how little quantifiable prescience any of this effort has—and how utterly this whole project for a regulatory elite to foresee risk has failed. The possibility of advanced country sovereign default is similarly absent from these exercises, though it has happened many times before and would be a calamity to our system built on the sanctity of such debt and its ability to bail others out in crisis.

My objection has nothing to do with the importance or not of climate and inequality or the worthiness or not of these (regulate, de-fund, redistribute) policy approaches to climate and inequality. The main problem is that these are, obviously, highly partisan and deeply political actions on which people disagree rather strongly, at least outside of the bubbles in which international central bankers and NGO staff seem to operate.

Maybe climate change and inequality are the existential problems our economies must address. Perhaps green new deal controls, highly progressive taxation, universal basic incomes, and wealth taxes, rather than a carbon tax and a focus on opportunity—my favorites—are necessary means to fight them. But should *central banks* and their supporting alphabet soup institutions coerce financial institutions and governments to these causes, especially by such transparently dishonest means?

INDEPENDENCE

That question leads me to my final thought: How independent should central banks be? And the obvious answer: If they are going to wade this far into politics, they will quickly lose that independence and we all will lose the benefits of independent central banks.

We coo that the Fed should be independent and free from political interference. But why should the Fed be independent and not, say, the Consumer Financial Protection Bureau? Or the Justice Department? Or the Environmental Protection Agency? Or even the president? What’s different about the Fed?

All agencies live in a balance. We in the U.S. believe in democracy, in accountability, in facing the voters every so often. We do not believe in perpetual rule by independent technocrats—and for good reasons.

On the other hand, we distrust political meddling. The mantra of independent central banking really came of age in 1972, when President Nixon got his Fed to stoke inflation and then clamped it down with disastrous wage and price controls in order to get reelected. We don’t want that to happen again.

Independence is a useful device for our government to pre-commit ex ante to not meddle ex post, as Ulysses had himself tied to the mast. Our system of government is full of such pre-commitments, from the basics of property rights to the Constitution.

But here's the deal: *An agency in a democracy gains independence only if it accepts and respects sharply limited scope of action.*

The more political an agency's actions, and the more power it exercises to enrich or destroy individual businesses and people, the more it must trade the annoyance of political interference for the reality of political accountability. The IRS, the EPA, the border patrol, tariffs, and the green new deal are all terrible candidates for independence. Judges have great independence—but may only rule on cases before them.

Central bank example A is helicopter money. For a decade now, and three in Japan, central banks have been trying unsuccessfully to raise inflation. Yet central banks are legally forbidden from the one step that most clearly would raise inflation: drop money from helicopters. Why not? Well, in our economy, that means write checks to voters. But in our democracy, only the Treasury and Congress can write checks to voters. And then face those voters over whether it was a good idea.

The Fed may not lend directly to businesses, but only to banks. The Fed may not buy private securities, such as stocks and bonds. Boy, could the Fed stimulate more in bad times with bigger tools. But all of these are obviously political tools.

Now, monetary policy is somewhat political. Changing interest rates and inflation moves money from savers to borrowers, stimulates some industries at the expense of others, and helps some candidates get elected and hurts others. And as a result, the Fed is not totally independent, either in its structure or in its traditions. Presidents appoint board members, subject to confirmation, and the Fed must report to Congress. Congress can rewrite the Fed's founding legislation any time.

More importantly, as elsewhere in our fraying democracy, independence is sustained by a set of norms of behavior: The Fed does not take actions it could legally take, at least outside of extreme crises, and in return politicians do not interfere or demand actions, no matter how desirable politicians may feel those to be.

Independence has a second prerequisite: *technocratic competence*. The Fed keeps its independence so long as the public is convinced the Fed is competent, that there is some science, rule, and order to its policy decisions and not just gut decisions, likely to be influenced by political preferences. A lot of our political moment comes down to the fact that a vast swath of the electorate has lost faith that elites have any idea what they're doing. Listen to that.

So, before we complain about President Trump's tweets or congressional hectoring, how are the Fed, other central banks, the BIS, FSB, IMF, and so forth doing on their part of the deal?

Independence in setting interest rates in the interest of national inflation and unemployment is a settled question, despite its political implications.

Though other central banks are buying stocks and corporate and green bonds, our Fed has tasted mortgage-backed securities and wisely stepped back from the buffet. I sense in this, and the Fed's reluctance to pursue a larger balance sheet, a well-placed fear that Congress would see Fed assets as a kitty for unwise spending. The Fed is limiting its scope of action to

preserve its independence. (This fear is one more reason for the Treasury to provide its own version of reserves.)

But if the Fed takes on macroprudential policy, decreeing that San Francisco real estate is in a bubble or the “credit cycle” is too hot, and uses regulatory power to curtail lending, a lot of homebuyers and builders will be hopping mad and call their congresspeople. If the Fed routinely starts managing stock and bond prices—in both directions—it will not stay independent long.

And if central banks force financial institutions to implement green new deal climate and inequality policies, the result must be, and will be, an end to central bank independence. The minute anyone in the Trump administration reads the IMF’s new policy guidance, expect a storm of protest and a huge reduction in the IMF’s ability to act as a politically neutral technocratic institution. These are not only intensely partisan political issues, they are issues where central banks and associated NGOs have no special technocratic competence.

There is a larger trend in our government of institutions overstepping norms—presidents ruling by executive order, agencies issuing regulations beyond statutory authority, judges passing nationwide injunctions on policy issues they don’t agree with—and it is tearing the country and those institutions apart. Please, Fed, central banks, and NGO cheerleaders, do not follow down this path.

Independence is a great thing. But central banks must buy it by resisting the external call and the internal temptation to ever expand into these politically charged waters. The more often a central bank says, “That is a huge problem, but it’s not our job to fix it,” the more it can preserve its independence to actually fix things it knows how to fix.

I have a lot of political opinions, too, but I do not want the central bank wading in to enforce my political preferences. My proposals go in the other direction. If the Fed’s monetary policy had a simple price-level target, the Fed could be as politically independent as the Bureau of Weights and Measures.²⁹ It would also be about as frequently in the headlines.

Regulation is much more political than monetary policy. Regulation has more ability to transfer money directly to and from specific parties. If we are going to keep the large discretionary regulatory apparatus going, it is worth considering whether the regulatory role should be less independent than the monetary policy role. Bank regulation seems a natural candidate for as much accountability, at the cost of more interference, as the IRS, EPA, or other regulatory agencies.

The unpleasant tradeoff between unaccountable technocrats moving billions from one citizen or business to another, versus politicians doing the same but getting kicked out of office when they do too much, is one more reason to escape detailed regulation in favor of equity-financed banking and narrow deposit taking.

CONCLUSION

With this, I close. We have covered a lot of territory, in the Fed’s review and beyond. Should, and can, the Fed stimulate with strongly negative rates, immense QE asset purchases, and an arsenal of forward guidance speeches? I think not. What sort of target should it follow?

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A price-level target. The Fed should get out of the business of setting the level of nominal rates and target the price level directly. Price-level control will be much more effective with fiscal policy coordination. The Fed should offer a flat supply curve of interest-paying reserves, open basically to anyone, though the Treasury should take up much of that role directly.

Going forward, the Fed and its international counterparts should disavow the temptation toward ever-expanding mandates and economic and financial dirigisme that would take them to “macroprudential” policy, discretionary credit cycle management, asset price targeting, and exploiting regulatory power to embrace social and political goals... today on climate change and inequality, perhaps tomorrow on immigration, trade restriction, China-isolation, or whatever the smart set at Davos wants to see. Only limited scope of action to areas of agreed technocratic competence will salvage the Fed’s, other central banks’, and international institutions’ useful independence.

POSTSCRIPT

Naturally, this lecture summarizes a lot of my recent writing on these issues. The underlying citations noted here explain in detail and provide answers to many what-abouts and what-ifs that I do not cover in this short lecture. If you have any objections, these are good places to start. ■

NOTES

- ¹ Cochrane (2018a) is devoted to this point.
- ² Cochrane (2018a, Figure 1).
- ³ Greenwood, Hanson, Rudolph, and Summers (2015).
- ⁴ Cochrane (1998).
- ⁵ Greenlaw, Harris, Hamilton, and West (2018) and Hamilton (2018).
- ⁶ Discussion after the Homer Jones lecture centered on the possibility that stimulus is nonlinear—the first \$3 trillion had a great stimulus effect, but after that no more. There are a lot of speculative nonlinearities and stories that, but for us, the world would have ended. The theme here is that policy should stick to relatively tried-and-true documented principles.
- ⁷ Cochrane (2017).
- ⁸ The CPI has many flaws. I do not mean here to endorse the CPI versus another measure, or to disparage improvements on the CPI. Choose the best price index, and then let it be constant.
- ⁹ Friedman (1969).
- ¹⁰ Admittedly, the same literature that likes forward guidance also says prices and wages should be made more sticky, because in those models the recession gets worse as prices and wages are made less sticky, all the way to the limit of an infinite recession—and then at the flexible price limit point, the economy has no recession. Limits that are not the same as limit points are another easily fixed pathology of such models, in my view. See Cochrane (2017) for this literature and the response.
- ¹¹ See Anderson (2016).
- ¹² This is a central point of Cochrane (2017 and 2018a).
- ¹³ Jacobson, Leeper, and Preston (2019) have a beautiful description of the carefully structured unbacked fiscal expansion that stopped 1933 deflation.
- ¹⁴ Cochrane (2019) describes the idea in more detail. Basically, let the real primary surplus follow $s_t = s(p_t, x_t)$, where p_t is the price level, x_t represents other variables like unemployment, and $s(p_t, x_t)$ is a rising function of p_t . Now even in the case of real debt b_t , the government debt valuation equation $b_t = E_t \sum_{j=0}^{\infty} M_{t,t+j} s(p_t, x_t)$ implies a unique price level, where $M_{t,t+j}$ represents the stochastic discount factor.
- ¹⁵ Schmitt-Grohé and Uribe (2014) and Uribe (2018) advocate higher interest rates to escape the lower bound. Cochrane (2018a) analyzes the issue extensively. Cochrane (2020) gives a model in which unexpected interest rate rises lower inflation, but expected interest rate rises raise inflation.
- ¹⁶ The last two questions concern the role of lagged interest rates, ρ in $i_t = \rho i_{t-1} + \phi_\pi \pi_t + \phi_y y_t + v_t$. Should the Fed follow $\rho = 0$, a pure level rule, $\rho = 1$, a difference rule, or $\rho \in (0, 1)$, a slow-adjustment rule? Many of these options are set out in Federal Reserve Board (2019). Cochrane, Taylor, and Wieland (2020) summarize the rules and analyze many of the rules in the context of a variety of models.
- ¹⁷ Targeting the interest rate spread is the same as targeting the spread between CPI spit and futures. Sumner (1995) gives an extensive analysis of this proposal, including literature review.
- ¹⁸ Cochrane (2015) explains this proposal in detail.
- ¹⁹ This section summarizes Cochrane (2014). It owes a great debt to Admati and Hellwig (2013). See also Miles, Yang, and Marcheggiano (2012).
- ²⁰ See Cochrane (2018b) and Konig (2019).
- ²¹ Gillman (2018) argues that the law requires a price-level target.
- ²² See, for example, the review in “Moving Forward with Macroprudential Frameworks,” Chapter IV of Bank for International Settlements (2018).

²³ For example, IMF (2018) writes

CFMs ...are designed to limit capital flows. These can include administrative and price-based restrictions on capital flows, for instance bans, limits, taxes, and reserve requirements.

See also IMF (2013). The BIS (2019) Annual Report Chapter II chimes in enthusiastically as well. The IMF and BIS reports make clear that they are following emerging common practice at central banks around the world, rather than leading a new agenda. Whether jumping in front of a bandwagon is wise is a good question to ask. If the ambitious but maddeningly vague dirigisme of these reports drives you batty, I recommend re-reading Lucas (1979).

²⁴ Georgieva (2020a).

²⁵ See, for example, Bolton et al. (2020), whose abstract states central banks should step up to

coordinating actions among many players including governments, the private sector, civil society and the international community. ... Those include climate mitigation policies such as carbon pricing, the integration of sustainability into financial practices and accounting frameworks ...

In his foreword, BIS general Manager Augustín Carstens starts reasonably by also advocating carbon taxes—though this has nothing to do with central banks under usual readings of their mandates. But, since carbon taxation “requires consensus building” and is “difficult to implement,” central banks should plow forward to

raising stakeholders’ awareness and facilitating coordination among them. Central banks can coordinate their own actions with a broad set of measures to be implemented by other players (governments, the private sector, civil society and the international community)

...there are many practical actions central banks can undertake (and, in some cases, are already undertaking). They include... environmental, social and governance (ESG) criteria in their pension funds; helping to develop and assess the proper taxonomy to define the carbon footprint of assets more precisely (eg “green” versus “brown” assets); working closely with the financial sector on disclosure of carbon-intensive exposure...; ...examining the adequate room to invest surplus FX reserves into green bonds.

In a separate preface, François Villeroy de Galhau, Governor of the Banque de France, advocates that “more holistic perspectives become essential to coordinate central banks’, regulators’, and supervisors’ actions with those of other players, starting with government.”

²⁶ Carney (2019) is a good place to start. The first step is “disclosure.” The FSB instigated a “task force on climate-related financial disclosures” (TCFD):

four-fifths of the top 1,100 Group of Twenty companies now disclose climate-related financial risks as some TCFD recommendations advise.

The next step is to make disclosure mandatory, as the United Kingdom and European Union have already signaled.

The third step is regulation and de-financing unpopular industries:

Banks ...are taking steps to assess exposure to transition risks in anticipation of climate action. This includes exposure to carbon-intensive sectors, consumer loans for diesel vehicles, and mortgages for rental properties, given new energy efficiency requirements.

The approach is clear: Nice bank you’ve got there. It would be a shame if something should happen to it.

The Bank of England is ...setting out our expectations with respect to the following:

Governance: Firms will be expected to embed the consideration of climate risks fully into governance frameworks, including at the board level...

Risk management: Firms must consider climate change in accordance with their board-approved risk appetite...

Appropriate disclosure of climate risks: Firms must develop and maintain methods to evaluate and disclose these risks.

The Bank of England will be the first regulator to stress-test its financial system under various climate pathways...This stress test will.. make the heart of the global financial system more responsive to changes to both the climate and to government climate policies.

The Bank of England will develop the approach in consultation with ...other informed stakeholders, including experts from the Network of Central Banks and Supervisors for Greening the Financial System....

(Yes, the quotations are selective, so you can see what’s going on in the otherwise sleep-inducing verbiage. Read the originals if you’re unhappy about that.)

²⁷ For example, IMF Managing Director Kristalina Georgieva (2020b) writes

Progressive taxation is a key component of effective fiscal policy... Gender budgeting is another valuable fiscal tool in the fight to reduce inequality.... The ability to scale up social spending is also essential... Active labor market policies... job search assistance, training programs, and in some instances, wage insurance.... Geographically-targeted policies and investments can complement existing social transfers.... During the implementation of the IMF-supported program, Egypt more than doubled its coverage of cash transfers,... we are working to implement our social spending strategy by weaving it into the fabric of our work...

The IMF (2019) "Strategy for Engagement on Social Spending" goes into details.

... concerns about rising inequality and the need to support vulnerable groups,... a global commitment to continue support for inclusive growth, as expressed in the 2030 Sustainable Development Goals (SDGs).... Social spending is viewed as a key policy lever for addressing these issues.

The Fund has concomitantly increased its work on social spending. ... The growing emphasis on inclusive growth is also reflected in operational activities, including the use of social spending "floors" in IMF-supported programs. There has been enhanced engagement on inequality issues in surveillance, as well as increased technical assistance to expand fiscal space for social spending.

On climate, see Georgieva (2019).

²⁸ *Wall Street Journal* (2019).

²⁹ Technically, the Weights and Measures Division is part of the National Institute of Standards and Technologies, a division of the Department of Commerce, whose head is a political appointee. Independence is as much earned as formal.

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