

We find ourselves in the foothills by the bay on another perfect day at the epicenter of the innovation economy.

The long drought is over. The flowers are in full bloom. And the construction boom is on full display—even we at Hoover cannot resist erecting a new edifice.

Students are gravitating to novel fields of study. Their ideas are funded as they walk to the edge of campus. The returns to exceptional skills are rewarded like never before.

Deep interconnectivity, low-cost computing power, novel analytic tools, and tremendous advances in artificial intelligence are driving massive changes in industry structure.

According to popular lore, the Valley finds itself in the middle of long epoch of prosperity. And we are assured this is a sustainable, durable equilibrium.

What could possibly go wrong?¹

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That is the central question central bankers should be asking.

The Fed was founded in response to a crisis. Financial and economic shocks tested the central bank with some frequency in the century that followed. And shocks test the resilience of the economy. Economic and financial shocks threaten to knock the Fed farthest from its statutory price stability and employment objectives.

Leading Fed officials are confidently predicting a benign external environment for the next several years: steady growth, stable inflation, and financial assets trading at fair values. Policymakers have all but proclaimed their monetary mission accomplished, their employment and inflation targets largely achieved. The dot forecasts from members of the FOMC are nearly on top of each other.

The last time I recall such uniformity of opinion—among central bankers, academics, and market proswas just over 10 years ago.

We gather at this year's Hoover Institution Monetary Policy Conference at an important time for the U.S. economy and the broad conduct of U.S. macroeconomic policies.

Many of the issues addressed over the last day mirror the agenda of the Federal Reserve in recent years. A few observations: We should not encourage policymakers to fiddle with the natural rate of employment (NAIRU) to rationalize the near-term conduct of monetary policy. We should not accept the Fed's newfound conviction that a very low neutral equilibrium real short-term interest rate (r^*) is a

¹ Tail risks run in both directions. A subject for another day is 'what could possibly go right'? The more material constraint on further economic expansion is on the productive side of the economy. If a pro-growth reform agenda were adopted across a range of macroeconomic policies, higher labor and capital supply into the real economy would cause economic growth to track substantially above Fed forecasts.

fixed feature of future monetary policy.² We should resist the pseudo-scientific precision being assigned to the Fed's preferred measure of inflation, and we should not consider it a good arbiter of the output gap or good proxy for financial stability.

Judgments on these issues are of tactical importance and keen academic interest. But, they should be considered in the context of the Fed's most difficult and consequential mission: to mitigate the probabilities of, and damage to, the economy that may arise from the next shock. The Fed's price stability and employment mandate demands nothing less.

The central bank and the academic community should engage in a fundamental rethinking of the Fed's strategy, tools, governance, and communications. A reform agenda could improve the modal outlook for the U.S. economy by clarifying the Fed's responsibilities, improving its decision-making, and bolstering its credibility. No less, a reformed central bank would prove useful to mitigate the risks of the next crisis, and prove essential to a forceful and efficacious response to the inevitable challenges on the horizon.

There is no holiday from history. Policymakers should not squander the grace period on a victory lap.

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My crystal ball is scarcely perfect. But neither is the Fed's.

The most important forecaster trait is humility. The most important forecasting measure is the confidence interval, not the point estimate. The most common forecasting error is groupthink. The best forecasting fix is assemble a humble, independent, diverse, intellectually rigorous, and cohesive group.

The Fed has a lot riding on its outlook, and its institutional inclinations give me pause. Policymakers should evaluate the tail risks of their forecasts with more care than the central tendency. And scrupulously judge their ability to respond in less likely, but more disruptive scenarios.

Maybe the scars of the last crisis burden me with unnecessary worry. Maybe the levers of macroeconomic policy are sufficiently improved such that business, economic, credit, and financial cycles are an artifact of history. Maybe the economy gets another decade of moderate growth and inflation.

We should not mistake the present situation for permanence.

We should not confuse the post-crisis period of benign, however modest, aggregate macroeconomic conditions with a sustainable, durable equilibrium.

We should not be comforted by the low implied measures of volatility across financial markets. We should query whether a sudden shift in expectations would make asset prices an amplifier of distress rather than a shock-absorber.

² Total factor productivity fell markedly in the past decade, reasons for which are uncertain, and were assuredly not foreseen. I see little reason for the Fed to assume that low productivity is a permanent feature of the forecast.

We should not encourage the financial markets to be the handmaiden of the central bank. We should allow asset prices to be an independent source of economic insight and discipline.

We must not allow a failure of imagination, a failure of preparation, or a lack of courage to keep monetary policymakers from pursuing a robust reform agenda equal to the risks ahead.

And we should not conflate a forward-looking policy of reform with a policy of *revanchism*, pining for the good old days when monetary policy was ostensibly perfected. The conduct of monetary policy has never been easy or simple. And the lessons learned in the last decade about money, credit, banking, finance, markets, and global interconnectedness should be incorporated into a 21st century monetary framework.

The challenges of the next several years are different from those that confronted the Fed in the late 1970s when Paul Volcker stood tall, and those that confronted the Fed in the darkest days of the financial crisis when Ben Bernanke stood strong. But, the challenges are no less consequential.

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What type of reforms could make a real difference? A few observations.

Strategy

The familiar refrain from the last crisis was that 'a plan beats no plan.' True, but a strategy beats a plan every time. A durable strategy can be understood and relied upon. It should be operative through the business and financial cycle. It would scarcely require Fed speakers to rush to update their guidance to market participants between blackout periods.

A reformed Fed strategy should make the medium-term time horizon its north star. The Fed would not be beguiled by the caprice of day-traders and variance of lagging data. The Fed's reaction function should be less sensitive to normal financial market ups-and-downs.

A reformed strategy should account for the possibility of demand and supply-side changes to the economy. And it should show greater respect for the micro-foundations of macroeconomics.

To inform future inflation and output, it should take special note of contemporaneous, real-time data and pay careful attention to forward-looking trends.

International spillovers in monetary policy include intellectual spillovers. The G-20 relies upon the leadership of the U.S. to deliver strong economic growth as the anchor of the global economy. Foreign central banks and finance ministers also rely upon a steady and well-understood Fed strategy. Absent reform of the Fed's framework, foreign central bank policy choices risk limbo. And the lack of reform by the Fed makes it more likely that the next foreign financial shock finds its way to our shores.

Tools

The Fed's comfort with its conduct of monetary policy seems based, in part, on the Dodd-Frank inspired changes in the regulatory area. The argument goes that monetary policy's mission can be focused on the modal outlook because micro- and macro-prudential policies will manage tail risks.

Would it were so.

Micro-prudential regulatory changes in the post-crisis era are likely inadequate to deal with the next financial shock. And the macro-prudential tool kit is under-developed to deal with systemic risks. Until those areas of regulation and supervision are made more robust, monetary policy bears the substantial burden.

I am confused by the Fed's 'normalization' strategy in monetary policy. Its preferred sequencing of rate increases and balance sheet reductions differ markedly from what was agreed when we conceived QE in the 'war room' amid the crisis. There might be good reason. But, the transmission mechanisms of rate changes and balance sheet adjustments are markedly different than projected. So too are the distributional effects. This merits a more robust public explanation.

According to the Fed's recent commentary, the balance sheet taper could well come by year-end. The Fed would be prudent to engage in substantive discussions with the Treasury Department, so that the flow of issuance is well-coordinated and duration of outstanding securities understood. The absence of clarity around important questions at this late date does no favors for the Fed, the rest of government, or the broader economy.

Governance

The Fed's existing model of governance is ripe for reform. The Fed should straighten itself from its defensive crouch. And it should resist the reflexive response that any proposed changes in governance are a threat to the institution's independence.

My time at the Fed and subsequent experience reviewing the Bank of England's institutional structure confirm the wisdom Peter Conti-Brown's recent exhortation: "Having the right institutional design...isn't a side show to the real questions of monetary policy and financial regulation. Governance may in fact be the whole show."

Changes are in order to how the Fed organizes itself, conducts its business, deliberates policy choices, and makes its monetary policy decisions. In short, deliberations should be more robust, and decisions less constrained. The existing governance structure reinforces a groupthink of the guild. It places the Fed at considerable institutional risk when the next crisis strikes. And it makes the next crisis more likely to be more harmful to the economy.

Communications

The Fed has comes a long way from Montagu Norman's famed aphorism "never explain, never excuse." Nothing compares with the zeal of the converted: the Fed of modern times is always communicating.

Communications has become so important to Fed policymakers that they now find themselves communicating about communicating, lest they be misunderstood.

Leading Fed policymakers believe that the so-called 'taper tantrum' of 2013 was a communications failure that caused financial instability, and so they must toil to ensure that the error is not repeated. The spike in volatility of the long-bond, however unanticipated, was a useful reminder to investors that complacency is a killer. If that's the magnitude of the tail risk event that consumes the central bank, we indeed have much about which to worry. Some emerging market economies were pushed to put their houses in order. And bond investors were made a bit less complacent.

In the monthly window between FOMC meetings, there are dozens of statements, minutes, speeches, interviews, forecasts, predictions, and reporting informed by policymakers. Great attention is paid by policymakers to the latest payroll data and inflation prints, and their immediate effect on the next decision. There is, however, little knowledge to be learned from the latest Fed forecast, little insight to be gleaned from the last piece of government data.

I worry that Fed policymakers find themselves score-settling with one another while Fed-watchers find themselves score-counting hawks and doves. All the while, the big questions for the economy go unanswered. And the big risks over the horizon go unaddressed.

Walter Bagehot captured the essence of this dynamic when he said: "Two hosts of eager disputants on this subject ask of every [discussant] the one question – are you with or us against us? And they care for little else."

There is much else about which we should care.

Conclusion

Those in the bright white lab coats in the life sciences lab on the other side of Stanford's campus should be the starry-eyed true believers. The t-shirt wearing coders in the Palo Alto garages should be the eternal optimists. And those in the venture community can play the role of evangelists. And I wish them nothing but fame and fortune.

But, central bankers should be different. Their 15 minutes of fame should end with the crisis. And they should use the interregnum to take stock, deepen their knowledge base, bolster their capabilities, and work to reform the institution before the next siren sounds.

When the next shock strikes, the Fed is unlikely to have conventional or unconventional armaments in sufficient supply. So the Fed's credibility will be at premium. Its credibility would be significantly enhanced by first reforming its own policies and practices.

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