Transcript of University of Chicago's College Fed Challenge Finals Presentation
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CHRIS: Hello and thank you for having us here today. I'm Chris.

ANDREW: I'm Andrew.

ESTEBAN: I'm Esteban.

RUILIN: I'm Ruilin.

ALENA: I'm Alena.

CHRIS: In today's meeting, we will discuss the evidence that although the economy has been strong with solid growth, and a historically tight labor market, it also faces mounting uncertainty and downside risks as a result of developments around the world. In light of these conditions, many economists have advocated for precautionary rate cuts as a means of smoothing over and sustaining the current expansion. However, we argued the Fed should instead adopt and adhere to a first difference forward looking monetary policy rule as a way of smoothing over this uncertainty while also being responsive to short term changes in growth and inflation conditions. Moreover, in light of the recent September repo rates spike, we argue that the Fed should implement a standing repo facility as a means of maintaining control over the FFR and the credibility of its policy.

ANDREW: To start, we'd like to give an economic overview of the past year. While, unemployment remains low and inflation continues to be at or near the Fed's target, there are mounting downside risks to GDP growth. This combination has made the Fed's future discretionary FFR changes unclear. So to start, the labor market in the United States remains historically tight. Headline unemployment has sat at or below 4 percent since March of 2018 and currently sits at 3.6 percent near a 50-year low and well below the 4.2 percent natural rate of unemployment estimated by the median FOMC member.

RUILIN: This trend also accounts for war for U4, U5 and U6 unemployment rate which considers varying degrees of underemployment and non-participation. Supplementary labor statistics such as job opening rates, job quiz rate and unemployment duration also add to this conclusion. In addition, expansionary economy has also lowered the underemployment rate for historically underemployed groups suggesting that we must consider this positive effect when we consider slowing the growth.

ALENA: Next, we'd like to walk through the current U.S. inflation situation. Since 2012, the Fed has only briefly been able to exceed its symmetric 2 percent target core PCE inflation, the Fed's preferred measure, or as it could account for the more volatile pricing and food and energy sectors set at 1.7 percent, below, but still within the Fed's target. This is collaborated by other measures of inflation. PCE inflation is at 1.3 percent and CPI inflation at 1.8 percent over the same period.

CHRIS: Next, we'll discuss the financial sector. Currently the sector is stable and resilient to shocks with the Fed's most recent comprehensive capital analysis and review finding that the 18 largest financial institutions were all well capitalized and exhibited strong capital planning practices. However, there are some early signs of excess risk. For instance, at the Shiller-PE ratio, basically adjusted price to earnings ratio for the S&P 500 currently sits elevated at over double its historical meeting and mean and is currently near its highest levels since the dot-com bubble burst. Moreover, total credit to nonfinancial corporations as a percentage of GDP is currently at an all-time high and has begun to plateau suggesting that the credit cycle may be at its peak and that corporations may be overleveraged.

ESTEBAN: Despite strong growth and reasonable inflation, annualized GDP growth has slowed. In the third quarter of 2019, GDP growth fell to 1.9 percent, down from 3.1 percent and in the first quarter and 2.9 percent in 2018. This decline supported by developments on both the demand and supply side indicate that in the near term GDP growth will slow. For example, the consumer sentiment index falls from 98.4 in July to 89.8 in August marking its sharpest decline since 2012 and far lower than the expected 97. The Institute for Supply and Management's purchasing managers index reported a contraction in the manufacturing sector for the past three months. The October Beige Book supports this decline in manufacturing as well as reporting growing weaknesses in the agricultural sector. Moreover, gross domestic investment as a percentage of GDP currently sits at 17.4 percent. This is well below its pre-recession levels of 18 to 20 percent indicating that gross domestic investment has still not fully recovered from the recession.

ALENA: In short, given a historically tight labor market and reasonable levels of inflation, it is clear that as of now the Fed has achieved its dual mandate of maximum employment and price stability. Normally, combined with a growing economy under such conditions, one would actually expect the Fed to raise the target FFR range. However, since August, the Fed has been lowering the FFR, creating an uncertainty surrounding what is precisely going into the Fed decision-making process. Chair Powell has communicated that these decisions are in part a response to a number of ongoing conditions around the globe that have increased uncertainty and dampened global growth outlooks.

RUILIN: A particular concern in the moment is the U.S. Trade Policy. Not only are tariffs themselves a drag on the economy, but uncertainty surrounding the future of the supply chain and the future of the trade policy is also impacting business investment confidence. In addition to U.S. trade war concerns with China, the president's willingness to turn to tariffs for a turn to political goals has also increased uncertainty surrounding the U.S. trade policy.

ESTEBAN: The president has also been notable in his vocal criticisms of the Fed and concerns about Fed independence have certainly elevated uncertainty. JP Morgan's Volfefe index indicates that in the five minutes after Trump has made a relevant tweet currency markets and treasury yields experienced increased volatility. Further developments including Brexit, increased protectionism around the world, protests in Hong Kong and tensions in Middle East have also increased economic uncertainty globally. The Fed's method of addressing this uncertainty has only increased uncertainty. Baker Bloom and Davis' index of monetary policy specific uncertainty reached its highest levels since 2003 this past August.

ANDREW: Now we'd like to discuss our policy decision. While unemployment remains low and the economy continues to expand there's an uncharacteristically high amount of uncertainty which continues to weigh down on growth. Therefore, we believe the best course of action for the Fed is to both directly address and mitigate uncertainty in the economy. Thus, we propose that the Fed should implement and adhere to a forward looking first difference Taylor rule, which would be both responsive to potential changes in output and inflation while providing stronger forward guidance.

RUILIN: So what exactly is the forward looking first difference rule? The first difference rule prescribes nominal value of the federal fund rate for a particular quarter by taking the previous quarter of federal fund rate inflation projections, a target inflation rate and the projected change in output gap. To prescribe the nominal value of federal fund rate for a particular quarter, the Fed would that take the previous quarter federal fund rate and add half of the gap between inflation projections and target inflation rate and half of the projected change in output gap, all expressing percentage points. When inflation and output are high, the terms become positive and the Fed increases its rate. When inflation output are low, the terms become negative and the Fed lowers its rate. Following this rule are suggested FFR would have aligned with the Fed needs cycle adjustment except for the most recent October rates cut. Furthermore, currently our rule suggests that the Fed should maintain its current target range for FFR for the next quarter.

ALENA: We would now like to walk through a couple of general benefits of implementing a monetary policy rule, namely decreased uncertainty and clearer communication before moving to the specific benefits of the first difference rule itself. As previously mentioned, monetary policy uncertainty is unusually elevated at the moment. However, in addition, monetary policy uncertainty accounts for one third of policy-related economic uncertainty suggesting that even outside of a high uncertainty environment addressing the source of uncertainty would be beneficial for the economy.

CHRIS: Research has shown the elevated monetary policy uncertainty leads to reduced investment in output levels. Indeed, a 2019 paper found that a one center deviation increase in monetary policy uncertainty was associated with a 10 percent decline in investment levels and that this decline persisted with investment being 7 percent lower four quarters ahead. Moreover, they found that this decline was independent of overall macroeconomic and policy uncertainty.

ESTEBAN: A policy rule would be especially beneficial due to the fact that much of the available literature indicates that Fed discretionary forward guidance has largely failed to make an impact. In particular, discretionary forward guidance is largely ineffective at spurring economic growth. Researchers suggest that this lack of efficacy is due to the fact that market participants interpret Fed policy announcements in different ways. Implementing a policy rule would of course avoid this confusion as any market participant would have clear and simple reasoning for Fed actions.

ANDREW: We would now like to focus on our decision of the first difference rule. This choice was made with three considerations in mind. First, the rule is responsive to changes in short term growth and inflation rate projections. Two of the primary concerns communicated repeatedly by Chair Powell. Also, researchers have found that compared to discretionary policy, a first difference rule performs stronger, while operating under the exact same expectations of inflation and growth.

CHRIS: Second, using a first difference rule would allow policymakers to avoid having to factor in a structural quantities such as the natural rate of interest. Such quantities can be prone to significant estimation errors, which would be costly in the context of a monetary policy rule. And stochastic simulations have shown that using a first difference rule is a robust and effective way of mitigating such errors.

RUILIN: Third under stochastic models looking first difference rule perform almost as well as model which taking more parameters while significantly outperforming level rules such as the Taylor's rule. In addition, it was found out that models with more barometers are lateral both against model uncertainty and are more prone to fluctuations in inflation, output ,and interest rate suggesting that the cause of better performance associated with a more complex model would outweigh the benefit. Therefore, our forward looking first difference rules strikes an optimal balance for the policy makers.

ESTEBAN: Of course, no rule should be set in stone and as such a system of review should be put in place to ensure that Fed rules are appropriate given current economic conditions. Thus, we propose adopting the framework put forward in Orphanides 2015 in which the discretionary role of the FOMC is now used to evaluate current rules and choose new rules which reflect the current state of knowledge while being robust to error. This review process would be transparent and would be based on regularly updated information regarding the Fed's near term projections and estimations of structural values.

ANDREW: We'd now like to turn our attention to the recent spike in repo rates. On September 17th the overnight repurchase agreement or repo rate spiked at 10 percent, well above its average of 2 percent, and this spike actually caused the FFR to rise a 2.3 percent above its target range. In response, the Fed has been adding much needed liquidity into the repo markets by buying short term treasuries and mortgages. And recently on November 5th, they purchased $100 billion to inject into the repo markets. Some of the short term causes of the spike include a deadline to submit corporate taxes caused the cash crunch, and the fact that the treasury auctioned $78 billion worth of debt. Longer-term causes include increased capital requirements and a decrease in Fed liquidity from recently ended balance sheet reductions.

CHRIS: In light of these conditions, we argue that the Fed should establish a standing repo facility as a means of lending out cash in exchange for holding treasury securities as collateral. Without such a system in place, a future spike in the repo rate like what we saw in September could cause – could create an arbitrage situation with a federal funds market, which would then cause the federal funds rate to escape its target range calling into question the Fed's credibility when it comes to effecting interest rate policy. With such a system in place, there would be a soft upper bound on the repo rate, meaning that future fluctuations would be less severe, strengthening control over the federal funds rate and thus the Fed's credibility of its policy.

ALENA: In short, giving a growing economy with a historically tight labor market and reasonable levels of inflation that also faces increasing uncertainty and risk, the Fed's future policy path has become increasingly unclear. We propose that the Fed directly address this uncertainty by implementing a forward looking first difference rule, which would also respond to the Fed's primary concerns of short term inflation and growth conditions. In addition, in response to the recent repo rates spike, we propose that the Fed establish a standing repo facility which would enable the Fed to better control the FFR and retain its credibility by also placing some controls over the repo rate. These two policies in tandem would provide clarity and communication about the Fed's future policy trajectory, enabling the Fed to better smooth over uncertain growth cycles. We thank you for your time and welcome any questions that you may have.

ANTULIO BOMFIM: Thank you. We'll start by posing a few broader questions to you and then we'll follow, we'll have a few follow up questions just to dig a little deeper into some of the issues that you brought up. As you know, the Federal Reserve has been conducting a review of its monetary policy strategy, tools, and communications practices. And as part of this review, there have been a number of events throughout the country called Fed Listens events which have included getting input and views from community leaders, their perspectives on how monetary policy decisions affect their constituencies. So with that in mind, comes your first question. Could you discuss how, if at all, the FOMC's monetary policy decisions over the past decade may have affected the distribution of income or wealth in the United States?

ALENA: Well. So to start off, one of the things that has, as we noted in our presentation is that unemployment is historically low for groups that have been often traditionally left out of the labor market. And that the Fed has increasingly been taking this into its decision making process when considering whether, how to, whether to change or how to change the FFR. In addition there have, a recent paper has demonstrated that inflation for the lowest income quintile is higher than the standard measures of inflation. And so the Fed's decision to not overstimulate the economy has also been beneficial in that aspect.

ESTEBAN: Furthermore, I think it's important to add that the Fed has taken criticism in the past for its quantitative easing practices and the idea that quantitative easing benefits wealthy individuals more just due to the fact that Feds are buying asset classes owned by wealthy individuals. And there's this idea that that has increased wealth inequality America.

RUILIN: And lastly, monetary policy reflects the Fed long-term goals and midterm outlooks and back to amend it or maximize employment and keeping, maintaining price stability. And these dual mandate has definitely impacted the distribution of wealth over the country.

THOMAS LUBICK: So, you've already touched upon the performance of the labor market in your presentation and you've pointed out that it has been very strong during the recovery. So in fact the unemployment rate is now at a 50 year low. But how would you explain the behavior of inflation in light of the labor market performance over the last several years and especially how it relates to the FOMC's inflation objective?

ANDREW: Yeah, so I can take this one. So as you said, the labor market is historically low, but the Fed has been having a hard time controlling inflation among its symmetric 2 percent target. So this is one of – actually the reasons why we're concerned about uncertainty is that it's, the Fed has been having a hard time recently trying to control that inflation around the 2 percent target.

ALENA: In addition, some economists have pointed to a possible flattening of the Phillips Curve. We believe that however, the Phillips Curve is still important in monetary policy making decisions as a paper recently demonstrated that there have been times historically when the Phillips Curve has flattened slightly before recovering and becoming steeper again. In addition, there have been a number of factors and changes within the economy that we think may have contributed to deflationary pressures; including e-commerce, the gig economy and population aging.

THOMAS LUBICK: So can I just follow up with a brief question? So you mentioned the Fed has a hard time controlling inflation. So arguably inflation is too much controlled because it has stayed below these metric 2 percent inflation target for a good while. So what might be a problem with this outcome so far?

CHRIS: Well, one issue is that if the Fed can't reach and then eventually maybe exceed the 2 percent target then that implies that maybe the Fed's policy isn't effective at creating upwards inflationary pressure. And the issue with that is that there are questions about whether or not the Fed might be able to avoid a potential deflationary spiral. For example, if like inflation got too low, would the Fed, be able to, you know, ease conditions enough so that inflation would increase to a healthy level.

RUILIN: In addition, just as Alena just mentioned, there are new factors in our economy that is different from the past, such as the advancement of technology and economy which has exerted downward pressure on inflation. These are the factors are important to be considered when we measured inflation. But furthermore, since the 2 percent target range has been clearly communicated to the public, it's this target, inflation target is important for anchoring inflation expectation, which will also enhance the fast credibility of maximizing employment.

TOM KLITGAARD: But you've had pretty low productivity growth and wage inflation. Is it going up or is it flat? Which recent wage inflation is it accelerating?

ALENA: I'm sorry, could you repeat the question?

TOM KLITGAARD: Wages, are they responding to the tight market?

CHRIS: I believe the Atlanta Feds recent wage growth tracker found that they are responding a little bit to tight labor market.

TOM KLITGAARD: So I'm just wondering if you think that the fact that wages, so you're saying that wages are not growing and therefore we shouldn't expect inflation to pick up.

ALENA: I'm sorry, I think –

TOM KLITGAARD: I'm sorry. Am I confusing you? That's not my purpose here.

ALENA: So I think what we're saying is that we have not seen as much inflation as wages as we would expect. And we do have, there are some thoughts from Fuyuki Fujiwara about why population aging might contribute to that and namely that older workers may like reenter the economy at like lower paying jobs that would create a deflationary pressure on the overall labor situation, sorry, inflation situation.

ANTULIO BOMFIM: Your recommendation was the adoption of a particular policy rule first difference policy. Two clarifying questions. One, and I may remember this wrong, did you have the output gap on the right hand side of your rule?

RUILIN: The changes in the output gap.

ANTULIO BOMFIM: The change in the output gap? So I'm trying to understand because you mentioned that one of the advantages of a, a first difference will always, you don't have to worry about an observables. Could you help me understand this point please?

CHRIS: The first difference rule is a measure of a very short run change, a short run adjustment that you would make to the FFR. And so it's based off of the basically like the difference in I guess what you want for the next period versus the current FFR you have. And basically because of the way that's calculated you're taking the change in, you take the change in the growth projections four quarters ahead versus your growth projections for the next quarter.

And basically what happens is that in that really short period of time the potential GDP growth rate, that is the kind of theoretical quantity in question here would effectively be differenced out because there wouldn't be so significant of a change within that period of time.

ESTEBAN: Adding onto that. If there were a significant change in the potential output gap, then that's where our system review would come to place where we could modify our rule in order to account for that.

TOM KLITGAARD: But isn't potential growth a non-observable variable?

ALENA: Yeah. So these, so these variables such as the neutral rate of interest and potential GDP are both these kinds of like unobservable theoretical quantities that you're talking about that are subject to large model error, which is why we don't want to have them directly influencing the rule. However studies that have looked at estimating these quantities, although they have variation within the studies, they tend to move more or less together when it comes to whether or not these rules, whether or not these quantities become systematically lower or higher. And that would be what would actually affect the first difference rule or in our review process. So even though there's uncertainty, maybe about the specific level of the neutral rate of interest, the general understanding of these estimations move together when considering whether or not this neutral rate of interest has become higher or lower.

ANTULIO BOMFIM: Just on rules but not on this, not necessarily on this particular one. You mentioned that one of the benefits would be a reduction in, I think you said the monetary policy uncertainty. But do you see any costs, any downsides of adopting a rule before setting monetary policy?

ANDREW: One concern that we potentially had is that the, if the Fed were to adopt a monetary policy rule would be the only central bank to have one, or only major central bank to have one. And since the Fed affects a lot of other countries monetary policy, we think there might be maybe a disconnect between this action and what the other countries have. But we also think that other countries also have very different policies already. Some countries have negative interest rates, so this effect is minimal but something that we have been considering.

ALENA: Just to add onto that one of the considerations that we did have was what would happen if this rule got us towards the zero lower bound and you begin approaching that, that would be presumably something that would not, because of the weights on our rule and the way our rule works, it does not have significantly drastic changes typically. So any approach of the zero lower bound would be foreseen and would also be one of the things that would prompt the review process.

ESTEBAN: Furthermore, I think we have to think about, because we are shifting to a new policy paradigm, communicating our rule clearly to the public and making sure it's well understood before its actually implemented.

ANTULIO BOMFIM: You mentioned the effective zero bound, your effective lower bound. So suppose we do find ourselves in a situation where, whether it's through the rule that you're proposing or any other way that we find ourselves with a very weak economy with the federal funds rate already nearly zero. So we wanted to ask you about negative nominal interest rates, the costs and benefits. If you're facing a situation like this and you're sitting at the FOMC, how do you view the costs and benefits of negative nominal interest rates please?

ALENA: Well, to start off so far Fed policy has of course been to not to take these negative nominal interest rates. So I think before any consideration of specifically going negative, we also need to take in consideration of various unconventional monetary policy tools. Then of course when it comes to negative nominal interest rates as there are countries around the world that have begun implementing negative rates or have implemented rates there has been, there is an increasing body of research is beginning to appear on this and that would certainly be something that we would want to consult in the event of possible considerations of a negative nominal interest rate.

CHRIS: I just want to add that it's also unclear whether or not the Fed can legally implement a negative interest rate.

TOM KLITGAARD: Why?

CHRIS: Just questions over you know, like the, the way I guess in legislation, the Federal Reserve is kind of established and declared, if that makes sense.

THOMAS LUBICK: So let me come back to an earlier point. So you mentioned the possibility of a deflationary spiral when inflation expectations remain below the target. So wouldn't one option be to fight against this, to lower the interest rates aggressively?

CHRIS: Yes, but there is some research out there to suggest that, especially in a rules based framework it's not always good to necessarily overreact to very short, potentially short term and transitory I guess conditions in say the growth outlook or inflation conditions. By changing the way you weight those things when it comes to making policy decisions because in the longer run when those things eventually smooth over, which we believe you know, low inflation is going to eventually kind of pick up because of kind of the nature of I guess the current inflationary pressures as a result of ecommerce and everything like that. We believe that, you know, the research has shown that it is better and more optimal for an economy under at least simulation to kind of stay the course when it comes to making their monetary policy decisions.

ALENA: Just to add to that, our rule, because it takes an inflation term into account, does directly address the question of whether the Fed would change interest rates in response to inflation and it and our rule does commit the Fed to if inflation is low. Taking that into account when setting their rate, which would presumably help enable and anchor inflation expectations.

ANTULIO BOMFIM: You mentioned, just switching gears a little bit, you mentioned financial stability as a concern, could you elaborate a little bit on the relationship between monetary policy and financial stability?

ESTEBAN: Sure. I can take this. So one of the concerns that when looking at monetary policy, you might have, is pushing the interest rate too low, could force market participants in a search for yield in which they take on increasingly riskier and riskier asset classes in order to find higher yields.

TOM KLITGAARD: Is there evidence that that's going on now?

ESTEBAN: So from the research that we have looked at it seems that due to this low interest rate environment in the past that may have influenced the growing riskiness of the asset classes, especially during the recession.

TOM KLITGAARD: But I mean, do you see the financial system being vulnerable now to having low interest rates?

CHRIS: So the Fed under its I guess responsibilities from Basel three, one of the things they do is they do stress tests and capital review for you know, different financial institutions above a certain size basically. And what they found is that at least when it comes to those like systemically important banks, those really large bank, they found that those banks are all like well capitalized and they're all resilient to shocks. And that under very adverse scenarios while they are of course going to take losses, those losses aren't so severe as to be, you know, a significant kind of I guess fatal blow to the economy or anything of that kind of severity.

ANDREW: Another thing the Fed has to be wary of is increased capital requirements. Pushing people towards shadow banking has been like a concern recently. So that's another way that it's been affecting market participants.

ANTULIO BOMFIM: So if I am a monetary policy maker and I see search for yield behavior going on, why is that important from a monetary policy perspective?

CHRIS: Could you repeat the question?

ANTULIO BOMFIM: So you mentioned the search for yield, that being one of the considerations for monetary policy makers when rates are very low. Just trying to understand why searching for yield is something that a monetary policy, searching for yield behavior, is something that should concern a monetary policy maker.

CHRIS: Well, it's the kind of thing that is going to have an impact on financial stability. And as we went over in our presentation, there are some early signs that for example, corporations might be over leveraged or that equity prices are inflated. And furthermore, you can see that home prices, like according to their index, are also at an all-time high. So you see like elevated asset prices around the economy. And so you might be entering a situation in which the financial sector, at least on paper, looks a little bit less stable than it probably has for the past few years or so.

ANTULIO BOMFIM: Thank you very much.

[Applause]