



A report to the Federal Reserve Bank's Board of Governors

Fed Listens: Distributional Consequences of the Cycle and Monetary Policy

A conference at the Federal Reserve Bank of Minneapolis

Organized and hosted by the Opportunity & Inclusive Growth Institute

April 9-10, 2019

Overview

On April 9 and 10, 2019, the “Fed Listens: Distributional Consequences of the Cycle and Monetary Policy” conference was held at the Federal Reserve Bank of Minneapolis. It was one in a series of Federal Reserve Board of Governors outreach sessions to broadly review the strategy, tools, and communication practices the Board uses to pursue the monetary policy goals established by the Congress: maximum employment and price stability.

It served as the Spring Conference for the Opportunity & Inclusive Growth Institute, which is headquartered at the Minneapolis Fed.

Board Vice Chair Richard H. Clarida was the keynote speaker with his remarks titled: [*The Federal Reserve's Review of Its Monetary Policy Strategy, Tools, and Communication Practices.*](#)

The framing question for the research and policy panels was presented by Institute Director Abigail Wozniak, who asked: “What does the Fed need to know about how different households fare over the business cycle and under alternative monetary policy actions?”

Over its two days, the conference attracted about 100 researchers, economists, and community leaders. The conference was live-streamed on the Minneapolis Fed's website, and, to date, there have been more than 500 views of the various sessions. The Minneapolis Fed engaged its Twitter

feed to promote and report on the conference. [Bloomberg](#) reported on the conference. A Reuters reporter attended. The lead business columnist for the StarTribune, Minnesota's largest media outlet, moderated a community panel and then [wrote about the conference](#).

The conference included research panels with four formal 30-minute presentations by economists followed by 30-minute question-and-answer sessions involving audience participants. After each of the research panels, two other presenters then focused on related policy issues, also with a half-hour of audience questions.

The first day closed with a dinner speech by Vice Chair Clarida. The second day ended with a spirited panel discussion with a diverse group of community leaders.

What follows is a detailed report on each of the panels and the question-and-answer sessions that followed. Videos of all of the panels and sessions, along with the slide decks of presenters, when available, are available on the [conference web page](#).

Agenda

Day One, April 9

Research Panel 1

Context: Trends and Driving Forces in U.S. Inequality

- Fatih Guvenen, University of Minnesota
The Great Micro Moderation
- Greg Kaplan, University of Chicago
Monetary Policy, Markups and Labor Market Inequality
- Moritz Kuhn, University of Bonn
Wealth and Income Inequality in America, 1949-2016
- Isabel Cairo, Board of Governors of the Federal Reserve System
Market Power, Income Inequality, and Financial Instability
- Moderator, Abigail Wozniak, Director, Opportunity & Inclusive Growth Institute

Policy Panel 1

- Aparna Mathur, American Enterprise Institute
Addressing Old and New Challenges in the Labor Market
- Josh Bivens, Economic Policy Institute
The Progressive Benefits and Retreating Risks of High-Pressure Labor Markets
- Moderator, Mark Wright, Senior Vice President and Research Director, Minneapolis Fed

Dinner keynote address

- Introduction, Neel Kashkari, President, Federal Reserve Bank of Minneapolis
- Richard H. Clarida, Federal Reserve Board Vice Chair
The Federal Reserve's Review of Its Monetary Policy Strategy, Tools, and Communication Practices

Day Two, April 10

Research Panel 2

Heterogeneity: How Different Households Fare over the Business Cycle

- Alisdair McKay, Federal Reserve Bank of Minneapolis
Household Heterogeneity and Monetary Policy
- Martin Schneider, Stanford University
Monetary Policy and the Revaluation of Debt
- Hannes Schwandt, Northwestern University
Long-Term Impacts of Short-Term Fluctuations
- Marianne Bitler, University of California – Davis
Cyclicalities of Our Safety Net
- Moderator, Jonathan Heathcote, Minneapolis Fed

Policy Panel 2

- William Spriggs, Howard University
Questions I Hope the Federal Reserve Could Answer

- Susan Houseman, Upjohn Institute
Independent Contract and Informal Work
- Moderator, Alessandra Fogli, Minneapolis Fed

Perspectives from the Community

- Tawanna Black, Center for Economic Inclusion
- Myron Frans, Minnesota Management and Budget
- Michael Goze, American Indian Community Development Corporation
- Sean Kershaw, Wilder Foundation
- Gloria Perez, Jeremiah Program
- Moderator, Lee Schafer, StarTribune

Day One: April 9, 2019

Research Panel 1: Context: Trends and Driving Forces in U.S. Inequality

Fatih Guvenen addressed two closely linked topics, income inequality and income uncertainty, but focused on the latter. Income inequality has increased tremendously over the past 40 years. But what about income changes from year to year? Income volatility is a good proxy for this uncertainty about household income. The consensus is that volatility has been rising, a conclusion captured by James Heckman’s quotation: “The economy is more variable and less predictable than it was 30 years ago.” This is thus part of conventional wisdom.

But using data from the Social Security Administration between 1978 and 2013, looking at people aged 25-64, Guvenen said, “We arrive at a very different conclusion. Individual earnings volatility declined by about 1/3 since 1980, and firms’ employment volatility also declined by about 1/3.” He noted that the similar trends for individuals and firms seem strongly related, and one hypothesis is that both are correlated with macro volatility—that is, perhaps a great micro moderation is linked to the well-known great macro moderation.

Why such different results? While conventional studies are done well and based on the best publicly available data, these data have disadvantages, most notably in lack of representativeness because of a very large attrition rate that appears systematic, not random.

Results are remarkably robust across many breakdowns, for five-year growth rates, and for both positive and negative shocks. Volatility is down for all earnings groups, for each permanent income group, for almost all industries, and for both transitional and stable workers.

An important question remains: What is the relationship between volatility and inequality? If volatility is increasing, as traditionally thought, then rising inequality would follow naturally, perhaps. But *this* research finds that volatility is actually going *down*. Volatility equals inequality minus persistence. So if volatility is declining while inequality is going up, that means income shocks are becoming more persistent.

Greater persistence is potentially due to the fact that new entrants to the labor market are highly unequal. Income inequality among 25-year-old males tripled from 1970 to 2010. New cohorts look very different from old cohorts from the time they enter the market. When talking about volatility and inequality, much emphasis is on labor market issues, from trade unions to technology and structural change, but these graphs say something is different *before* entry into labor markets. Perhaps it's education or something else, but there is a need to look at workers before they enter labor markets

In conclusion, there is evidence of great micro moderation in the United States since 1980—earnings and firm employment growth variance are both down about one-third. This calls into question theories based on the idea that variance was rising. That decline is pervasive: It holds true across many subgroups in the economy. And it is potentially linked to the Great Moderation in the macroeconomy.

Greg Kaplan addressed monetary policy, markups, and labor market inequality. He noted that for most people, prosperity depends crucially on outcomes in the labor market, but

existing business cycle models have little to say about the causes of labor market inequality. His goal is to develop a framework to understand how labor income distribution is itself affected by aggregate shocks and policies. These are preliminary results.

His focus is on markups—the gap between purchase price and production cost—because it's through markups that monetary policy and other aggregate demand shocks affect the economy. So if we understand how markups affect the labor income distribution, we can understand the differential impact of monetary policy or aggregate demand shocks on people's earnings.

Standard economic models assume that workers contribute to economic output through “marginal production” of existing goods; Kaplan adds a second activity, “overhead” work, which includes activities such as management, marketing, sales, and research and development.

The economic distinction is that production workers generate revenue by moving output along firms' demand curves, whereas overhead workers generate revenue by shifting firms' demand curves outward—enabling firms to sell more goods without having to lower their price. In practice, this might happen by entering a new market or introducing a new product.

When markups change—because of a change in policy, an aggregate demand shock, or a change in the nature of product market competition—firms' relative demand for the two types of workers also changes. So changes in markups redistribute income between overhead and production labor. Specifically, an increase in markups reduces the share of labor income to production workers and increases the share to overhead workers. Since an increase in markups is typically associated with economic downturns, this implies that in contractionary periods, production workers suffer more than overhead workers. Importantly, these observations apply equally to monetary and demand shocks.

One implication of the analysis is that to better gauge the impact of monetary policy changes or demand shocks on the overall economy, it's important to know what portion of the U.S.

labor market consists of production work versus overhead work. But doing so is challenging since the distinction is abstract, and most workers perform a mixture of the activities. Two methods have yielded promising preliminary results.

The next step is to add this new source of heterogeneity—production work or overhead work—to a full-scale macroeconomic model to gauge how monetary policy shocks affect consumption and income for different occupations. Preliminary results indicate that impacts differ substantially, with some gaining and others losing.

Two key takeaways:

The aggregate effect of monetary policy, big or small, depends on what workers are doing. If we think the economic structure is moving toward one in which more workers are engaged in overhead activity than in production work—and we have no evidence on that, pro or con—that will matter for the efficacy of monetary policy.

Secondly, regardless of the economic structure, policy shocks have very different effects on consumption and labor income for different occupations based on whether they're production- or overhead-intensive jobs. Some people gain and others lose in response to an aggregate shock.

Moritz Kuhn described the joint evolution of U.S. income and wealth distribution from 1949 to 2016. His research, based on a newly developed historical data set, finds enormous increases in both types of inequality, but with divergent trends.

From 1971 to 2007, the increase in income inequality was much stronger, with particularly damaging impacts on the middle class. This was softened to an extent by steady improvement in the housing market, since homes represent the primary asset of the middle class. During this time, wealth levels among percentiles of the household wealth distribution remained parallel.

From 2007 on, however, there was an unprecedented rise in wealth inequality, driven in large part by asset price changes and differences among households in asset portfolios. For the bottom 50 percent of households by wealth, wealth collapsed. But for the upper percentiles, and especially for the very top, wealth dropped but quickly recovered.

This divergence was driven by differences in portfolio holdings and asset price trends. Housing is a small portion of the asset portfolios of the top 10 percent of the income distribution; equities and bonds are their primary holdings. After the financial crisis, housing prices recovered slowly, but the stock market rebounded quickly. This meant that wealth stagnated for the bottom 90 percent, while it soared for the top 10 percent.

In a nutshell, Kuhn observed, U.S. wealth dynamics have constituted a race between the stock and housing markets.

Isabel Cairo elaborated on her research finding that increased market power in both product and labor markets can explain five secular trends over the past four decades: declining labor share, rising profit share, rising income and wealth inequalities, rising household sector leverage, and financial instability. She began by reviewing research on increased market power and then described her business cycle model linking structural changes in product and labor markets and rising income and wealth inequality.

Using a business cycle model, Cairo sees if the rise in market power seen in the data can generate the five secular trends. While stressing that results are preliminary, the answer is yes. From 1980 to 2010, the model generates decline in market share, increase in profit share, rise in income share of the top 5 percent earners, growth of wealth for those earners, rise of credit-to-GDP ratio, and increased probability of financial crisis.

The model can go a long way to explaining what the data show regarding association between the rise of market power and unemployment, labor share, credit-to-GDP ratio, inequality, probability of financial crisis, and market capitalization-to-GDP ratio.

Market power has increased in both product and labor markets; her research indicates that greater power in *product* markets has far more explanatory strength. Bargaining power in labor markets is important primarily through its impact on unemployment.

Cairo also derives policy implications, using the same model augmented with a hypothetical redistribution policy of taxing dividend income and Social Security spending. Gradual tax rate increase, from 0 percent to 30 percent, might have prevented 60 percent to 80 percent of the rise in income inequality, credit growth, and probability of financial crisis, while labor share decline remains. “This suggests that carefully designed redistribution policies can be quite effective macroprudential policy tools.”

Q&A

Wozniak asked Kaplan and Cairo: We build these mathematical models to enable us to make informed guesses about policy decisions. Could you provide an example of a policy decision that would be made differently in light of your model? And what are the similarities and differences between your models; where would you use one versus the other for decision-making?

Kaplan: I don’t see success in quantitative macro modeling as, “I’m going to show you a model, I’m going to simulate something, and I’m going to predict the future better or convince you to do something differently.” We can think of it more generally.

It’s easy to come up with economic mechanisms to explain phenomena. For monetary policy, there are lots of different transmission mechanisms, lots of potential ways they might affect different people. I see the role of these models as helping us to figure out, for a given policy decision, which of those forces at any given point in time might be most quantitatively relevant.

But what we learn comes not just from the models; it comes from the data within the context of these models. I hope that by having theories that allow us to gauge the strength of different mechanisms that policymakers thinking about how to weigh the relative strength of different forces, some of the insights from our work will help them think about what they should pay more attention to.

Cairo: Models give a framework to think about reality and to be rigorous about the effect I'm trying to capture—also to quantify the mechanisms I think are relevant. But from working on policy at the Fed, I also learn we can *never* rely on a unique model because there is no model that is comprehensive, that includes everything going on in reality. We should all be aware that all models have simplifications and limitations. The best approach: If you have a policy question, find the best model to approach it and be careful about implications, or use many different models and put together their findings with a *whole* lot of judgment.

Wozniak asked Guvenen and Kuhn: What general misconceptions about the distribution of wealth does your work address, and what policy implications might come out of the research?

Guvenen: Well, as I said, for the past 20 years, there's been a strong consensus that income uncertainty was rising. Many of the stark transitions since the 1970s—rising income inequality, labor productivity stagnation, falling labor share—and one of the ingredients of the explanation for these was rising income uncertainty. So we have to rethink a lot of our explanations. If volatility and uncertainty have not increased, how do we explain the patterns? Perhaps we need to re-examine hypotheses that we discarded earlier.

We can't say there is less income risk. Volatility is one aspect of income risk, but another is skewness of income shocks. When you fall, how far do you fall? It's possible to have an identical overall dispersion, but skewed such that incomes fall more during negative shocks than they rise during positive shocks.

Kuhn: The most surprising finding is the power of asset pricing in shifting income distribution. That speaks more to fiscal policy and regulation. Think about asset pricing, so housing policy and stock market regulation. When thinking about the distributional effect of policy, one should think about who holds different assets and the intergenerational consequences. Asset prices also have the power to *reduce* wealth inequality. Wealth inequality contracted substantially in the 1970s when stock markets declined. We don't want

to duplicate that, but we might look at other policies, such as those affecting housing markets.

Kashkari asked Kuhn:

Many Americans don't own homes, and their most valuable asset is their job. By keeping interest rates low, we are ultimately trying to boost wages and the value of their asset. How about looking at labor as an asset? And what's the counterfactual: If we had tightened policy, how would that have improved conditions for the less advantaged?

Kuhn: I completely agree. Human capital is the most important asset on the household balance sheet, although we don't put it there. So it's important to think about how we can affect that value, through job stability and so on. Also, it's not clear how to talk about welfare. Some assets are less liquid than others. When financial constraints are important, changes in wealth inequality are important. Wealth and income can also affect ability to accumulate human capital.

Mathur asked and commented:

We need to look at inequality measures more carefully. They may not include some important parts of income, and some data don't include what people at the bottom of the income distribution receive; income from transfer programs is often not included in survey data. So there remain fundamental questions about what really is going on with inequality. Consumption inequality shows different trends. Should we look at why consider why income inequality is a problem before we try to understand what is going on with the data?

Kaplan: Fatih and I wrote a paper published last year that tried to address a handful of the questions you've raised, particularly the focus on top income shares and the importance of stagnation at the bottom, not just growth at the top. We all take these issues very seriously. I agree that sometimes the headline figures overwhelm what's going on within. For instance, trends for the top 1 percent vary widely depending on how you measure income and data sources used. And, yes, learning what's going on at the bottom is equally important.

In our discussions about inequality, we should keep in mind *why* we're focused on inequality. It's a complex phenomenon. And we should remember the distinction between inequality and poverty, which is often forgotten.

Güvenen: A lot of debate on inequality is focused on the top 1 percent. Distribution is a very complex object, and different parts move in opposite directions. In the late 1990s, the top 1 percent share rose, but the gap between the bottom end and median collapsed. Focusing on the top 1 percent misses the fact that wages were growing fast at the bottom. Also, stagnation of median wages, for males especially, deserves more attention.

Question from Clarida for Güvenen:

For your Social Security database, is there a top coding issue? How did you deal with that?

Güvenen said top coding is not an issue for the SSA for the United States after 1970. It's whatever is reported in the W2 boxes.

Clarida for Kaplan:

Cyclicalities of labor share is important. The pickup in labor's share peaks in recession, but began before. In your monetary model, what implications did that have for price inflation?

Kaplan: My understanding of the data is that labor share peaks and profit share bottoms at recession peaks. So it might be a leading indicator of recession. And it comes down slowly. In terms of prices in my model, it's kind of orthogonal. Inflation is determined by a monetary policy rule.

Comment from Heathcote:

An interesting recent paper on people at the top of the income distribution shows that a lot of them own and run their own business. They find that when the owner dies, profits and value collapse. So what is the value of the business—capital or human capital?

Kaplan: That's an excellent paper and important question to investigate.

Question from the audience: The main mechanism in these models linking policy to inequality is markups, and when I think of markups, I think of competition. Are markups the

main mechanism at work here in the link between policy and inequality? Are we baking too much into the cake in the sense of attributing a role here for competition? Does that stifle thinking about other factors, such as asset prices?

Cairo: Yes, in my model it *is* kind of a black box. That may be a downside of the paper. Where does change in markup come from? Is it competition? Some research suggests this. But we still need to learn more.

Kaplan: I focused on markups because that's the best we can offer as a broad explanation. When it comes to income inequality, though, my model has capacity to suggest other mechanisms.

Question to Kaplan from Fabrizio Perri of the Minneapolis Fed: I really like your last picture in which you show the effect of an expansionary monetary policy. The standard idea is that if you lower rates, an expansionary policy, everybody is better off. Your chart says, "Not everyone is better off. Some people are actually worse off." I like it, but I didn't fully understand it. Could you explain why?

Kaplan: That different people gain or lose from monetary policy is already in the literature, but it has more to do with asset gains and losses, effects through wealth and consumption distribution. I'm trying to say there may be another channel. The key force is that at the end of the day, the way that people are affected by monetary policy is through the labor market.

So, in my model, some people's occupations are going to be positively exposed to a change in markups and other will be negatively exposed. In a typical new Keynesian model, an expansionary policy increases labor demand. Prices go up and costs don't change, or the other way around, costs go down but prices don't change.

Say it's an expansionary shock, so markups fall. That means we're going to be moving down the demand curve, we're going to be expanding production in order to meet the additional demand, so we're going to hire more workers to make those goods.

But at the same time, your markup has fallen. And not just markups, but profits, so you're making lower profits. So you might want to scale back your expansion activities, maybe not

release the next product or iPhone model or enter a new demographic market. So you hire fewer graphic designers, fewer managers; there are some types of occupations that are going to move in a downward direction. Everyone might gain, but we shift the distribution around them. But that's the idea. There are shifts going on in *types* of occupations.

Policy Panel 1

Aparna Mathur spoke of challenges in the current labor market, noting that in the aggregate, labor markets have improved markedly since the Great Recession, with low unemployment, rising participation, less slack, and some wage growth.

But this aggregate picture hides significant heterogeneity in who is and is not benefiting. Blacks and Hispanic/Latinos have much higher unemployment rates than whites and Asians. The very young and those 20-24 years old also experience higher unemployment. Unemployment rates are much higher for the disabled as well.

On the other hand, older workers are doing far better, accounting for a high share of total employment gains since 2000. Workers aged 55 and older are remaining in jobs at higher rates, and longer, than expected.

But, eventually, their labor force participation rates will decline. The challenge will be sustaining participation by others and making growth inclusive. Challenges include worker-job mismatch (skills, geography, and racial discrimination), boosting women's labor force participation, assimilating those formerly incarcerated, and addressing barriers like residential segregation, lack of education and social networks, and opioid abuse.

Declining male labor force participation is a particular concern, with research finding that unemployed middle-skill workers without college degrees rarely take jobs beyond or below their skill level and drop out of the labor market. The ongoing decline in middle-skill job opportunities goes a long way in explaining the decades-long drop in participation rates among prime-age males. Younger families have been hit hard by the Great Recession and are rebounding only slowly. Geographic segregation and declining mobility have hurt.

Automation is another challenge for jobs and wages, and skill-biased technological change has benefited some but hurt others.

Policy can play a powerful role in facing these challenges, promoting inclusive growth and maximizing opportunities, including measures to address skills, training, segregation, mismatches, education, and incarceration. Apprenticeship programs, retaining and retraining older and middle-skill workers, improving job matching, subsidized child care, and paid leave can also play a role. Boosting income for low-wage workers through safety net programs is also critical.

Josh Bivens spoke about “high-pressure” or tight labor markets, the idea that higher economic growth improves job markets, particularly for low- and middle-wage workers. He began by describing how unsuccessful efforts to stabilize the macroeconomy had played a significant role in the rise of inequality. Post-tax income has grown most for the top 1 percent, productivity has grown six times faster than wages since 1979, and efforts to fight unemployment have been insufficient since the late 1970s.

With this as context, he described the “progressive” benefits of high-pressure labor markets: faster wage growth for low- and middle-wage workers, erosion of racial gaps in employment-to-population ratios and hours worked, and potential declines in poverty. Moreover, the risks of high-pressure labor markets, particularly inflation, are retreating: There’s less “tinder” for a wage-price spiral. Productivity and wage growth, and labor bargaining power, for example, are lower than they were in the late 1960s, while the unemployment rate is higher. Also, the Fed has capacity to cope with slowing demand, and high-income households have very high savings rates.

This scenario of declining risk and rising benefit of tight labor markets—an absence of strong Phillips curve dynamics—suggests that policymakers should pursue tighter labor markets. Doing so would improve wage growth and promote more inclusive growth. Another potential upside: Wage growth would encourage firms to invest in capital, a development that could spur stagnant productivity growth.

Q&A

Question from Wright for Mathur: You were saying that labor markets are very tight and there's not much that we can do other than addressing structural barriers to increase employment. Josh, you were saying that there's still a big role for macroeconomic policy. Is that a fair characterization of your views? And if addressing structural barriers is too difficult, could macroeconomic policy do better in a cost-benefit sense?

Mathur: I was trying to emphasize that even in a tight labor market, there's a lot of heterogeneity. You can still have very high unemployment rates for blacks, the disabled, or the formerly incarcerated. The Fed can have an accommodative policy, but that would need to be supplemented by policies that are more targeted at antipoverty policies that can actually help the lowest-wage workers.

Bivens: My policy wish list goes well beyond tight labor markets. I don't think we can even diagnose the real problems until we generate inflation at or above the Fed's target. How much of the increase in inequality is due to a skills gap? I don't think we can know the answer until we are unambiguously at full employment.

Question from Wright: Fatih told us that changes in earnings seem to have become more permanent. Are the structural barriers you address driving some of that? Do you think macroeconomic policies played a role in that increase?

Bivens: Not well-informed on volatility, but Fatih showed that earnings volatility for 25-year-olds has increased. While Fatih said it might be due to what happens before workers join the labor market, Josh felt it could instead be that the labor market today is much different than it was previously.

Mathur: Recent research shows that income volatility is definitely very high for *very* low-wage workers, and it would be interesting to look at volatility for different segments of the labor market to understand what is driving general trends. My sense is that there's still a lot of income volatility, especially at the lower end of the distribution.

Question for Bivens: You showed data on how changes in the unemployment rate affect different demographic groups. Does that occur when the unemployment rate rises or when it falls? The monetary implications are very different.

Bivens: The obvious check for different time periods is pre- versus post-2007, and all those effects get weaker if you include the post-2007 period. Much research focuses on monetary shocks, but I'm not sure that's the primary way the Fed affects the labor market. I think it's more whether we need to worry about inflation once we're deep into recovery. How much is the Fed willing to tolerate coming right up to the target and not making a preemptive response?

Question: How do you distinguish between very tight and loose labor markets?

Bivens: I think we're underestimating the wage-depressing effect of very low unemployment because of downward wage rigidity, so I think both apply; I think it's symmetric.

Question from Clarida: What is the value of apprenticeship programs in transition from school to job? Other countries seem to do that differently. Why doesn't more of that happen here?

Mathur: We just seem not to have that culture. In Europe, it's far more common. People make those decisions at much younger ages. But in the U.S., we still want people to get four-year degrees, though employers may be more interested in other skills. But I don't know why it hasn't been more prevalent, though it's bipartisan and clearly a growing gap in the market.

Bivens: I think part of it is that employers have been able to push job training off onto workers. The one place we do have apprenticeship programs in the United States is unionized sectors. That's where I think positive wage growth can be positive sum. Employers sometimes need to be convinced apprenticeship programs are a good idea.

Question for Bivens: Your chart on NAIRU versus unemployment rate—one of the big changes that happened at that time was the monetarist revolution, the rise of the natural rate hypothesis. Are those two linked?

Question for Mathur: On manufacturing, relative pay has gone down a lot. How does that play into your analysis?

Bivens: Yes, I think part of the 1979 shift was policymakers looking at the wage-price spiral of the 1970s and saying we're not going to let that happen again, and they decided to be really vigilant about fighting inflation to the detriment of fighting excessive unemployment. I think that attitude has changed in today's Fed.

Mathur: On the manufacturing side, I think it's a skills issue. For high-skill jobs, I think there is a lot of variation but, on average, if still employing low-skilled workers, average wages have still gone down.

Question from the audience: Back to the apprenticeship issue, transition from school to work, we've done a lot with community colleges, but they vary a lot in what they see as their mission. Another weakness in the United States is employer associations. Some bear down on training, but not all. So it's a routinely raised issue, but there are institutional issues to be addressed, and it's hard to do so at the federal level.

Mathur observed that even for employers who want apprentices, there are many coordination issues.

Kashkari observed that in terms of labor, as for other production inputs, businesses want what they want cheap. If they can't get it cheap, they think it's a shortage. Tight labor markets are critical. You are seeing businesses going the extra mile to train workers. I don't see any national policy that can drive this kind of behavior other than a very tight labor market.

But you both said we are in a tight labor market. I'm convinced that we're in a *tighter* labor market than we were a year ago, but not that it's actually tight.

When we think about the changing balance of power between firms and workers over the past 30 years, I think about how Uber has fracked the labor market. It has tapped untapped pockets of labor availability and by doing so has capped the price of labor in the driving space. In a sense, that makes me ask, are we really in a tight labor market?

Mathur: Uber and other gig job companies filled a gap and tightened slack. But it's supplementary work, not full-time. It's unpredictable, without stability. As the economy recovers and these workers get into full-time jobs, a lot of these jobs will go down, which is

why we haven't seen a great boom in these jobs. But we really don't know what defines a tight labor market.

Bivens: We have defined a healthy nominal wage target as the Fed's 2 percent price inflation target plus what you think is trend potential productivity growth. If you think that's 1.5 percent, then we should be seeing nominal wage growth of 3.5 percent. We're still beneath that. I also think we have a lot of room to run wages above 3.5 percent to claw back some of the decline in the labor share that we saw earlier. I would say we could afford a tight labor market for a long time before risking growth in inflation.

Question from Susan Houseman: What is a "tight" labor market? We're using very traditional metrics, and we might need other metrics given the nature of employment in today's economy. One thing we have measured reasonably well is the platform economy—it's small, but it has grown tremendously. But much is not well-measured.

You mentioned that job openings in manufacturing have grown, but employment has not. Is it a reflection of a skills gap? I'm not sure the data support that. It's also consistent with low wage growth. Some manufacturers I've talked with say it's still the case that lots of traditional assembly line jobs, some still are dirty and dangerous jobs, and those wages have not gone up.

Mathur: I agree. There is mismatch, and it's definitely not *just* a skills gap, but that does play a role.

Dinner keynote address

- *Richard H. Clarida, Federal Reserve Board Vice Chair*
The Federal Reserve's Review of Its Monetary Policy Strategy,
Tools, and Communication Practices

In his [remarks](#), Clarida outlined the purpose of the Fed's review of its monetary policy strategy and the reasons for the ongoing "Fed Listens" series of events across the System. He said: "With the U.S. economy operating at or close to our maximum-employment and price-stability goals, now is an especially opportune time to conduct this review. ... The review of our current

framework will be wide ranging, and we will not prejudge where it will take us, but events of the past decade highlight three broad questions.”

The three questions:

- Can the Federal Reserve best meet its statutory objectives with its existing monetary policy strategy, or should it consider strategies that aim to reverse past misses of the inflation objective?
- Are the existing monetary policy tools adequate to achieve and maintain maximum employment and price stability, or should the toolkit be expanded? And, if so, how?
- How can the FOMC's communication of its policy framework and implementation be improved?

He went on: “Our communication practices have evolved considerably since 1994, when the Federal Reserve released the first statement after an FOMC meeting. Over the past decade or so, the FOMC has enhanced its communication practices to promote public understanding of its policy goals, strategy, and actions, as well as to foster democratic accountability.”

In his remarks, he concluded: “My colleagues and I do not want to preempt or to predict our ultimate finding. What I can say is that any refinements or more material changes to our framework that we might make will be aimed solely at enhancing our ability to achieve and sustain our dual-mandate objectives in the world we live in today.”

In the question-and-answer session afterward, Clarida said the point of the “Fed Listens” series is for the Fed to hear a “different perspective on what full employment means” from people of differing backgrounds.

Day Two: April 10, 2019

Research Panel 2: Heterogeneity: How Different Households Fare over the Business Cycle

Alisdair McKay discussed research on differences in monetary policy effectiveness over time. Current research—and central bank operations—generally assumes that interest rate actions taken in the past have little if any influence on the power of current or future policy actions. For example, a rate cut last year won't affect the effectiveness of a policy move now in motivating firms and households to spend, or refrain from spending, and all interest rate cuts stimulate by a constant amount.

But McKay's research suggests that when durable goods such as cars, appliances, or houses are taken into account, this isn't the case. Data show clearly that these purchases are “lumpy”—meaning they happen periodically, not frequently. Households buy cars every three years, for instance, not every quarter. And a model with such “lumpy durables” overturns conventional understanding of how monetary policy moves affect the economy, showing that the history of rates matters, current rates matter more to households and firms than future rates, and demand is less sensitive to stimulus during recessions.

Put otherwise, monetary stimulus doesn't *create* demand, it *accelerates* demand, shifting it from the future to the present. Moreover, stimulation in the present reduces the power of future stimulation. This limits the power of “forward guidance”—the policy of influencing demand by guiding expectations on the future path of interest rates.

This further suggests that “policy space”—the economic environment in which the central bank currently operates—is profoundly influenced by durables. The textbook model suggests that a real rate cut to 2.5 percent for four quarters would raise output by 8 percent, but a lumpy durables model in normal economic times would show just a 6 percent rise, reduced to 3.7 percent if it were preceded by a year of stimulus, and down further to 1.6 percent if in a recession. Empirical support for this theoretical result comes from the Cash-for-Cars initiative: There was an initial purchasing boom, but it quickly died off, ultimately showing no cumulative net effect.

This points to a particular risk-management approach. Perhaps central banks should hold off on rate cuts if they think something bad might soon happen. More broadly, the effects of monetary policy depend on the circumstances of households: *When* might they be ready to buy durables?

One takeaway: “There are reasons for a central bank facing an effective lower bound (on interest rates) to keep its powder dry.” That is, preserve some stimulus for a later date when interest rates are close to zero. Another: “The effects of policy depend on the circumstances of households,” providing a good reason to monitor distributions of income, assets, and the like.

Martin Schneider described research on the interaction of monetary policy and revaluation of debt. Motivation comes from the fact that most nominal debt contracts are valued in dollars, the “unit of account.” So when inflation lowers the real value of a dollar, it alters the nominal value of such financial promises. The wealth effects are good for borrowers and bad for lenders because inflation lowers the real value of debt. So, by affecting inflation, monetary policy redistributes household wealth.

Schneider’s research looks at two types of debt revaluation inflation shocks: (1) surprise inflation, or an unanticipated increase in price level, and (2) surprising news about *future* inflation (such as the Fed announcing a higher inflation target). The first creates the same percentage drop in debt, regardless of debt duration. The second has a smaller impact on short-term debt than long-term because short-duration contracts are unaffected by inflation in the far future.

He discussed thought experiments with the two types of revaluation shocks: surprise inflation (same real value percentage drop for all debt durations) and surprising *news* about *future* inflation (smaller percentage drops in short duration promises).

Computing gains and losses on household positions finds that for surprise inflation, losses are always larger than gains because households are net lenders, and for surprising news about future inflation, results are smaller but parallel, except that “recently the gains have increased above the

losses. So ultimately, inflation helps households, who experience higher gains than losses ... because they lend long-term and borrow short.”

To understand distributive effects, they analyze which groups gain and which lose in response to inflation shocks. Looking at net gains for 2013, and considering only surprising news about future inflation, they find redistribution from older rich households to young and middle-aged middle-class households. Why? The latter hold sizable mortgage debt, and future inflation lowers its value.

The final step estimated macroeconomic effects from people’s responses to an unanticipated increase in the inflation target. They use a model calibrated to match income and portfolios in 2013 data by age and net worth to calculate effects on aggregate consumption and output, and on welfare.

Results show that after the surprise announcement, output falls sharply at first and then recovers. Consumption falls less dramatically and gradually recovers. They also find significant differences in economic welfare by age and wealth, with the young and middle-aged middle class benefiting significantly, but the older rich losing out. “These are large differences: bad for rich people, especially the old ones, and good for the middle class.”

Summing up, Schneider observed that looking at monetary policy as a revaluation shock finds large gains for government, losses for foreigners, and large heterogeneous effects for households. Net borrowers win, especially middle-aged middle class, while net lenders lose, especially rich retirees. There are moderate but persistent changes in aggregates because the gains and losses don’t cancel each another.

Hannes Schwandt spoke about the long-term impacts of short-term business cycle fluctuations—that is, how booms and recessions affect people’s well-being over their entire lifetimes. In a nutshell, his research shows that short-term fluctuations can have very strong, persistent impacts on health, employment, and earnings, depending on business conditions when young adults enter the labor market.

He noted that existing literature has concentrated on college graduates and for no longer than 10 to 15 years past labor market entry. The contribution of his research is harnessing the power of a large cross-sectional database to broaden analysis to less-advantaged labor market entrants, to analyze health and mortality as well as economic well-being, and to look at impacts in middle age and beyond.

He began by sharing key findings:

1. Less-advantaged workers suffer larger earnings and employment losses than college graduates
2. There are increasing impacts on mortality after age 35
3. Negative wage effects reappear in midlife, along with adverse family formation and fertility outcomes

He quickly reviewed the calculated impact of a 1 percentage point increase in the unemployment rate when entering the labor market. That downturn would immediately cause a roughly 4 percent drop in earnings, fading out only gradually over time. The initial decline was somewhat greater for men than women, for nonwhites than whites, and for the least educated. Those with college degrees or higher suffered just a 2 percent drop in earnings, with relatively quick recovery. The same unemployment rate jump would also increase mortality rates for those 35 and older.

Extending the age base for the data to allow longer-term analysis limits the cohorts but finds very similar initial negative impact from downturns. That fades after 10-15 years, but then reappears as a persistent 1 percent income loss, upending the assumption of fade-out from prior research mostly based on college graduates. “We look more broadly and find that it is persistent and robustly negative for other groups.”

Schwandt reviewed his empirical approach and provided more details on each finding, with earnings and household income impact broken down by different levels of education showing far stronger effects for the less educated; showing that negative results are buffered but not

eliminated by welfare receipts through Medicaid and food stamps; with mortality effects broken down by cause of death, indicating that disease-related deaths are most affected rather than external causes though providing some support for the Case and Deaton “deaths of despair” hypothesis; and, finally, detailing longer-term impacts showing that in midlife, recession graduates earn less, work more, are more often divorced, have fewer children, and receive less welfare support.

The main takeaways about consequences of adverse labor market entry: Negative earnings effects are stronger for less-advantaged groups, and that’s only partly offset by welfare benefits; there are significant mortality impacts after age 35; and there is broad deterioration of labor market and family outcomes in midlife. In sum, “temporary economic fluctuations have the potential to persistently affect both the economic and life trajectories of labor market entrants.”

Marianne Bitler discussed via Skype her research with colleagues on the cyclicity of the social safety net. Their motivation is to better understand the effect of the radical transformation in the safety net for low-income families with children. Welfare reform led to historic lows in cash welfare caseloads, while SNAP has expanded and become more generous. The biggest expansion is the EITC, such that about 20 percent of tax filers now receive the credit, conditioned on work. In-work aid has largely replaced out-of-work aid.

Given this, how does EITC perform as a safety net? What has happened to the other welfare programs (TANF, food stamps, and unemployment insurance)? What has happened to poverty? The Great Recession provides a good setting to answer these questions.

Previewing results, Bitler said they found that EITC is providing countercyclical protection for married couples with children and is weakly procyclical for single filers with children. “So rather than providing more protection for single families, it’s actually providing a little bit of protection for married couple families.” When compared to food stamps, TANF, and UI, the EITC is the least responsive to business cycles.

A chart displayed the degree to which each program reduces the poverty rate, clearly showing that (in a static sense) EITC is the most important antipoverty program for children, reducing poverty rates by over 6 percentage points, SNAP is important (a nearly 3 percentage point reduction), while TANF's reach is minimal, even for extreme poverty.

Their research also looked at whether EITC provides protection in times of need. Examining a 1996 to 2008 sample, they found that a 1 percentage point increase in the unemployment rate led to a 6.1 percent increase in caseloads per population for married couples with children and an insignificant 1 percent decrease for singles with children.

The next step was comparing the countercyclical impact of EITC to that of other safety net programs. They find that EITC has a much smaller response to downturns than do AFDC/TANF, food stamps, and UI. And, finally, they look at EITC's countercyclical protective effect on poverty and find that it reduces the cyclicity of poverty for married couples, not singles, with children.

Finally, they also investigated whether safety net programs provide less, more, or equal countercyclical protection in the Great Recession than in earlier downturns. They found that AFDC/TANF was no longer countercyclical, food stamps and UI were equally or more countercyclical during the Great Recession, and safety net programs taken together had a slightly smaller overall countercyclical effect.

Summing up, Bitler said, their research on EITC's safety net protection concludes that it does provide an automatic stabilizer for married couples with children, but not for single parents with children, that it is less cyclical than other safety net programs such as UI, TANF, and SNAP, and that TANF is not providing the countercyclical consumption smoothing that AFDC used to provide—not surprising since it is no longer an entitlement.

Q&A

Question from Heathcote: Both of your papers seem to challenge conventional wisdom about monetary policy. **For McKay:** Most of our theory on policy is that it operates on a lag, so that perhaps we have to get ahead of the curve to avoid trouble. Your model seems to say perhaps we should hold off. So when policymakers see signs of trouble ahead, what is the optimal time to start providing stimulus?

For Schneider: Conventional wisdom is that the Fed's blunt instruments can't do very much about distributional issues. You say that changes in the inflation rate can have a very large distributional effect. So your model poses a quandary. A little more inflation might redistribute from the old rich to the poor and middle class. On the other hand, that could be a bit contractionary because they have different propensities to spend.

McKay: Empirical responses to monetary policy often show hump-shaped dynamics results. Our model doesn't generate those. We don't understand what's going on. I think imperfect attention might help explain it. Relating to the question of, do you want to get ahead of the game, while the response is quick in this model, responses happen more slowly in richer models.

Schneider: Study of nominal positions shows that any movement in interest rates will have redistribution effects that should be taken into account. For business cycle responses, it's interesting to combine interest rate movements with other policy responses. There will always be a large government position that will be affected. I showed an example with no government transfers, but the model could also investigate responses when there are transfers if inflation increases government assets. It's relatively easy to create a large coalition that favors inflation because it's relatively cheap to offset the downside for the older through transfers because they can be funded by government debt, which is cheaper.

Heathcote: For Schwandt: What are the channels that operate from recessionary labor market through to bad outcomes? Do negative labor effects transmit to poor health outcomes later? Or is it that you make poor decisions or pick up bad habits when unemployed initially—start smoking, don't marry—so it scars you even if the economic path later picks up?

For Bitler: We have found that you don't find a big spike in inequality during recessions but not after adding in taxes and transfers, even in the Great Recession. Did you find the same?

Schwandt: What are the pathways? That's next on our research agenda. It could be persistent economic outcomes. The 1 percent drop is significant. Another point, marriage rates aren't actually lower for those entering labor markets in a recession. In fact, recession graduates have much higher marriage rates, perhaps due to lower opportunity costs. But many of those marriages dissolve later on. One takeaway: It's great that social safety net programs are responsive, but is this long-term economic decline on the policy radar? We may need a buffer for the long term, to broaden the time horizon for those who are vulnerable later in life.

Bitler: We have looked at the ratio of private income to poverty thresholds—how that responded to the unemployment rate, and we added in all parts of the safety net. At every poverty level, private outcome was much more cyclical than after-tax-and-transfer income. So our findings are similar to yours. When you sum up all cash and near-cash flows, it was countercyclical even during the Great Recession. A note of caution: Medicaid is not something you can consume whenever. If you need to buy food or housing, it doesn't help. Medical care is different than the others.

Question from Wozniak: A common thread is the disparity in experiences among different groups over business cycles: Recession graduates versus non-Recession graduates, in-work versus out-of-work, borrowing versus lending, us today versus us tomorrow. Because these groups are different, we have potential efficiency to gain by targeting interventions toward those who are experiencing downturn more severely. What kind of tweaks would you like to see in policy in the next downturn, be they monetary policy or elsewhere in the policy arena?

Bitler: I think it's good to move toward benefits for children who don't have parents who work. That is, don't condition benefits on having no parents working.

Schneider: During the Great Recession, people were in trouble with debt. The focus of policy has recently been on helping lenders, as in bank bailouts. But there can be an argument for more transfers to borrowers, and our paper shows that inflation can do that. It's a blunt tool for redistribution to borrowers and off-setting shocks.

Schwandt: One step is simply to inform the public of findings like these. Both those who are vulnerable and those who interact with them might respond differently if the blame is not on the individual but on poor economic times.

McKay: If there's a role for intertemporal shifting of demand through monetary policy, that's very different than the textbook model. The policy question becomes, When is the right time to use it?

Question from the audience for McKay: How symmetric are lumpy durables in terms of tightening? Is it why it's easier for the Fed to put on the brakes than to stimulate? And, secondly, what's role of depreciation in thinking about durables? **For Bitler:** What about the interaction between UI and EITC? Some cyclical loss for EITC is picked up by UI.

McKay: Yes, there's evidence that policy is more effective in expansions than in recessions. In a model, what would dictate the effectiveness of policy is how many people are near the adjustment threshold, which is probably close to how many people we see making adjustments at a point in time. If there's a boom when many people are making adjustments, that would indicate that there are many people on the margin and that changes in incentives would have a big effect. And, yes, I do think it would have symmetric implications.

The depreciation rate is in some sense what defines a durable good. The power of monetary policy is related to this quality of durability. The sensitivity of durables to interest rates depends on the depreciation rate.

Bitler: We did look at UI and the others; once you include them all, yes, they're countercyclical. For the more-skilled labor, it's more countercyclical. The lower-skilled perhaps aren't getting high UI benefits. Also, EITC money doesn't come until next year. It's not very responsive to bad times because it doesn't take effect until next year.

Question from audience for McKay: I understand how your model works for short-term rates. But forward guidance affects through impact on long rates. How would your model work for, like investments?

McKay: Our perspective is that most household and firm decision problems are about lumpy durables and, for these, the short rates matter most. As for long rates, we're questioning their importance.

Question from Perri: Your work shows that big shocks from recessions are only partly insured by safety net programs. Programs have ambiguous impact theoretically on labor supply. Did you look at effects of these programs not only on insurance but also behavior for labor markets?

Schwandt: We haven't looked at this, the moral hazard impact, but I doubt that it's large.

Bitler: I haven't looked at this directly. Research by others shows the old AFDC program had strong work disincentive effects. The food stamp program and others don't have such strong disincentives. EITC is different in that people tend to cycle in and out of the program; that might influence the disincentive effect.

Question from David Wilcox, former Federal Reserve economist: For Bitler: Your focus said EITC was not very effective countercyclically. Is that inherent to the design of the program? Could it be redesigned to make it more effective in downturns? Is there a role for boosting participation by eligible people?

Bitler: Yes, it's an intrinsic part of EITC. It's not going to be effective countercyclically for those at the bottom. This is exacerbated by state add-ons. California's is different and provides more of a subsidy, providing more income to the lowest earners. Can take-up be improved? Take up is actually quite high for EITC, though lower for those who receive less. Recent research hasn't come up with promising avenues for improving take-up.

Question from Spriggs: For Bitler: Would increasing the size of program benefits during downturns improve countercyclicality of EITC?

Bitler: We haven't looked at that.

Question from Kuhn: For Schwandt: You noted that states differ in persistence of unemployment rates. Would you expect those differences in state economic environments would have broad negative effects of their own?

Schwandt: We focus on distributional questions for this presentation but in terms of identifying causal effects, that's an interesting question. But there's less of a policy lesson if all you can say is, "you live in a bad state." Other broad changes, like technological change, can also have persistent impact on vulnerable groups long into the future.

Question from Doireann Fitzgerald of the Minneapolis Fed: For Schwandt: Did you look at responsiveness of education enrollment and cross-state mobility to unemployment shocks?

Schwandt: Research generally has found much less responsiveness than we would assume from an economics perspective. We see timing responses on education and migration, but magnitude is very small, perhaps because people don't know whether shocks are temporary or permanent.

Question from Ben Knelman: For Bitler: Were there significant differences depending on number of children in households?

Bitler: There are small differences on that score, but not as stark as being single or other measures of being low-earning.

Policy Panel 2

William Spriggs reflected on previous presentations, noting that, "Many of these have deep racial components that run through them." He then turned to "a deeper question" he hoped the Fed would respond to: "How does the Fed actually view the relationship between inequality and growth? The IMF thinks that inequality hurts growth. The OECD similarly thinks it hurts growth. What does the Federal Reserve think?" He continued that "If inequality hurts growth then we do have to worry what policies at the Fed exacerbate inequality." Another key point: inequality leads to capture of public policy by the elite.

Spriggs highlighted several issues that need greater attention: (1) correlation between wage-productivity gap and the rise of household debt, (2) rising share of finance in GDP, and (3) rising compensation in financial sector relative to non-financial.

He noted that workers have always been told that productivity had to increase before wages can increase, but that assumes that we are redistributing among workers. He also noted that workers are no longer paid sufficiently, so "to buy what we make, we borrow." And he reiterated that a rising share of GDP is devoted to the financial sector, to about 8 percent in the 2000s from less than 4 percent in the 1960s.

He argued that there is a correlation of financial sector compensation and the wage gap, and that the Fed has a role in this because has a voice and some authority over compensation and concentration of the banking sector. Labor unions, he said, find that when they begin to negotiate contracts, “there’s nothing left to bargain over. It’s always been allocated to others.” Money, he said, should not go to finance but to real productivity and wage growth.

Is price stability an issue? A previous paper showed that inflation alters where debt impact hits, and price stability has come at a real cost for workers. Labor markets have performed worse with price stability, he said. The mean unemployment rate is higher during and after the Great Recession than in the 1960s and 70s.

He further noted that America’s “economic majority,” who holds the money (income), doesn’t reflect its demographic makeup, and said “There has been voter suppression in the U.S. because of this.”

Bigger questions need to be confronted, he said. Yes, monetary policy has distributional effects and maximum employment can alleviate some inequality, but the other bigger issues need attention. The negative impact of inequality on growth. The increasing concentration and compensation of banking that leaves less for unions to bargain over. “The Fed needs to say to bankers, you just move money ... The compensation packages you ask for are not justified.”

In closing he returned to his central question: “Does inequality hurt growth, and if so, what is the Fed going to do about it?”

Susan Houseman spoke about informal work and independent contracting, and specifically on shortcomings in current research that measures its importance.

She noted that there has been debate over the apparent weakening of the relationship between inflation and employment. There may be structural problems not captured by standard measures of labor market conditions.

Perhaps the employment relationship is changing as alternative work arrangements become prevalent, a phenomenon widely reported and backed by some research. This may be of concern because such arrangements are not covered by social insurance programs or labor laws, and they're ineligible for benefits. They also reduce labor's bargaining power. Research suggests they grow in recessions.

But the recent Current Population Survey (CPS) found "NO evidence of increase in any alternative work arrangements," and perhaps an actual decline.

Houseman then discussed potential shortcomings of surveys, specifically the possibility that independent contractor work is not being reported or is being miscoded, leading to missing reports. She then provided details from two recent studies, the Fed's Survey of Household Economic Decisionmaking (SHED) and a new nightly Gallup survey module.

The SHED survey, 2016-2017, shows a very high prevalence of informal work: 28 percent reported "any informal work" in last month, 18 percent said it was to earn money, and 11 percent that it was important to their total annual income.

Who does this work and why? It's concentrated in vulnerable groups: youth, minorities, less-educated, low-income, in precarious or nonstandard employment, or unemployed. It's associated with those earning less, working informally to earn money, and important to total income. Informal workers are more likely to be under financial stress. Full-time employed are least likely to do informal work. Unemployed or self-employed are most likely to say informal work is important to their annual income.

The Gallup module adds 14 questions on informal work to a nightly survey of respondents aged 18-80. The overall objective is to improve surveys on informal work by uncovering miscoding of employment status and capturing all forms of work for pay, including informal work.

The Gallup module revealed significant miscoding. A high percentage who responded they had an employer, for example, *also* stated they were independent contractors. CPS question wording

might suffer similar problems. And consistent with SHED, the Gallup module showed high rates of secondary job holding: 20 percent of respondents report multiple work activities, suggesting that people are patching things together “to make ends meet.” There’s a strong association between secondary jobs and precarious main jobs. Standard surveys are likely missing some of this.

“Development of consistent, high quality time series on contract and informal work would help the Fed and other policymakers to better understand the degree of slack in labor market,” she concluded. “From a policy perspective, these people are outside the basic social safety net of traditional work arrangements and we also think there’s evidence this may be countercyclical.”

Q&A

Question from Fogli: Some demographic segments are clearly more vulnerable to downturns. We also heard from Bill that these are the same people who have lost bargaining power in labor markets and from Susan that they are more likely to seek informal work. You could respond by targeting safety net policies at these people, or by making them less vulnerable by opening opportunities, education and mobility. The latter is an investment, the other is an expenditure. What approaches do you think would be most effective?

Spriggs: Labor economists focus on human capital gaps but that’s not helpful in explaining racial or gender disparities. Skills and investment do not explain gaps for racial minorities. When labor markets are tight, educated blacks finally experience unemployment rates equal to far less-educated whites. The unemployment rate for white high school dropouts, that is the black unemployment rate. So removing the education gap will not eliminate the black-white unemployment gap. The only way to affect the black rate is to have a tight labor market, because that’s the only thing that really improved black employment. One can hope the Fed will pursue maximum employment.

And then back up and ask, why do I care about inequality? The Fed has to seriously consider what the IMF and OECD have concluded: that inequality hurts growth. I’ve suggested the source

has to do with financial concentration, an undue GDP share to financial activities, equivalent to the shrinking labor share.

Think of income distribution as a fluid dynamics problem. If you press the middle class down, the income has to go to the ends. Except for the top 40 percent of college graduates, income for everyone else has been falling. We need to ask a different question: Does inequality hurt growth?

Houseman: What policies do we recommend for minorities? (Recent efforts in a large Michigan hospital have shown that hiring behavior by employers of minorities and women can be improved with excellent results.)

With regard to alternative work arrangements, we first need a better handle on how prevalent they are. There has been interest in doing so among academics and policymakers. If this sort of work expands we may want to rethink the social contract.

We also need to know more about the trajectories of people who enter alternative work. It could be very temporary.

Questions from Kashkari: For Spriggs: You've said before we need to look at fourth quadrant. Just thinking about monetary policy, what could Fed do differently to get better average employment outcomes?

Spriggs: I'm encouraged by Fed language. "Maximum employment" is better than an employment target. That gets focus on employment to population ratio. is encouraging. Paying attention to the black unemployment rate is important.

These last couple of months we saw the black labor market falter. I think the Fed should take that as bad sign. May be that the Fed overplayed its hand. Auto sales spiked and are coming down. It may mean we're moving far away from maximum employment

For Houseman: How would AirBnB be included, or selling a car by eBay be captured in surveys?

Houseman: There's been debate about those kinds of questions and income. Our surveys cover activities within the last week, so those activities might not be covered. Do we only want labor income?

Question from Wozniak: Measurement questions for both. **For Houseman:** How can we get at time trends in informal work arrangements? **For Spriggs:** As we've heard, there are many dimensions of inequality. Which would you like to see measured?

Houseman: The American Time Use Survey, initiated in the 1990s, might be used to get at time trends. And it has twice the CPS rate of multiple job holding.

Spriggs: The distributional national accounts would be very useful. I suspect that human capital is a component. But I would concentrate on share of income at top because of its distortionary effects on consumption. Over half of the housing and education expenditures are that top 10 percent. That shapes the price because it shapes the market. We can see linkages to housing construction being lower than we'd expect in a tight labor market. We see it in car sales and auto debt being high despite low unemployment. All of this says that when we concentrate on inequality we see these sicknesses showing up. I would concentrate on the share going to the top. I suspect that a lot is rent-seeking and why labor share has declined. I don't think it's just going to capital, to robots.

Question from the audience: You've stated the OECD and IMF premise of inequality hurting growth, but Fed would say best we can do is promote high growth and that will alleviate inequality. Seems like circular reasoning. What is the utility of either premise, let alone both taken together?

Spriggs: My interpretation of rise in inequality is correlation between financialization of economy which the Fed could address. If it's rent-seeking and people taking money off the top, that's a problem the Fed can address. If the growth in inequality is due to other forces then the Fed doesn't have the tools. The best it can do is not exacerbate inequality. This conference was helpful in understanding whether slack labor markets exacerbate inequality? In debating unemployment versus inflation, that's another brick to put on the scale of why you want maximum employment.

Question from the audience: For Spriggs: I think a natural condition of capitalism is some degree of inequality. What's the right level of inequality? And wouldn't it be better to then talk about having an unhealthy level of inequality? **For Houseman:** Also, what about entrepreneurs? The number of new business starts have trended down since 1980.

Spriggs: I think there's a tipping point for inequality. Once you reach that tipping point it's very hard to imagine how you undo inequality. How do you grow a strong middle class? I think new firm formation is an indicator of a strong middle class. If people are doing well, they're customers for new firms, an incentive for firm formation.

Houseman: I was focused on unincorporated self-employed, not those starting new businesses. A forthcoming study shows a substantial growth in self-employment but virtually all unincorporated self-employed, not the other.

Lunch Panel: Perspectives from the Community

This panel of Minnesota foundation, government, and community leaders placed a sobering and reality-based punctuation mark on the conference's research and theoretical conversations.

Gloria Perez, whose organization works with single mothers in poverty, focused on the notion that "inequality hurts economic growth." And that triggered a series of reactions to the two days of research presentations.

Myron Frans, commissioner of Minnesota Management and Budget, praised the Minneapolis Fed for examining long-term economic structural issues, but raised the point that access to affordable housing and health care is critical to increase employment for those struggling to find jobs and thrive.

He worried if inequality is simply "baked into" the economic system, and said he came away from the conference thinking of new ways for the state to design employment programs.

Moderator Lee Schafer asked the panel who they saw as being left behind in this seemingly booming economy. Michael Goze answered, "The children," and others nodded agreement. Goze noted that so much research leaves American Indians behind. While data around the economic

situations of whites, blacks and Hispanics is prevalent, there is little research done on the economic status of Native Americans. But he knows this: the so-called economic “shock” of the Great Recession didn’t really affect many American Indians because people in deep poverty were simply too poor to notice.

Sean Kershaw spoke of the impending retirement crisis and wondered how the economy will handle the lack of savings of many Baby Boomers.

Tawanna Black focused on the research that discussed the failure of the various welfare safety nets, especially for people of color. And she spoke to the troubling data around intergenerational wealth transfer and wondered how to “move children down a pathway ... to do better than their parents.”

What was clear was that members of this panel were hoping the Federal Reserve was indeed listening and could develop research that can be translated into action that affects the constituents of their struggling communities.