The ECB's Monetary Policy Strategy Going Forward

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Session on "The ECB's Monetary Policy Strategy:
Lessons from the Financial Crisis, Debt Crisis & Double Recession"

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Let me first say that it's good to be back at "The ECB and Its Watchers" conference and to join Otmar Issing, and Petra Geraats on this panel with François Villeroy de Galhau as chair. Thanks to Volker Wieland and the whole team at the Goethe University Frankfurt for an excellent, well-organized conference. I was at the first "ECB and Its Watchers" conference in 1999. That conference and the whole series since then have had a very constructive influence on monetary policy.

It is good that the focus of this conference is on monetary policy *strategy*. The word strategy itself has some beneficial connotations. It conveys a more rule-like, systematic policy rather than one based on arbitrary discretion. A focus on policy strategy is very important in the ongoing European Central Bank policy review. Moreover, I like the emphasis of this session on *drawing lessons from the past*, including the global financial crisis and the not so distant events of the past few months.

Positive Aspects of the ECB Strategy

I'd like to begin by stressing some important positive aspects of the ECB policy strategy as it exists. Of course, there can be improvements, but I want to reinforce some things that have been mentioned by Petra and by Otmar. The ECB emphasis on transparency

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and clear communications has always been important. The essential goal of price stability that is just barely 2% was there from the start.

The endorsement of other kinds of economic policies, including structural policies, has been an important part of the message as has the emphasis on automatic fiscal stabilizers, a sound government budget, and open capital markets. Finally, as Mario Draghi emphasized back in 2016 when he said “We would all clearly benefit from…improving communication over our reaction functions,” there has been a focus on a strategy by which the instruments of policy react systemically to economic events.

Deviations from a Strategy

If you look at particular episodes, however, there's evidence from time to time of deviations from a strategy. I'll look at the periods from 2003 to 2006 and from 2014 to 2018. I am not referring to “Whatever it takes” comments, but to specific monetary policy actions rather than communications. The reasons for the deviations are not always clear, but a key reason has been international influences, and I want to stress that in this presentation.

Figure 1 shows estimates of deviations of policy from a rule in the Euro zone countries. You can see that during the 2003-2006 period there were large deviations in Ireland, Greece, and Spain, where the interest rate was too low relative to a rule for that country. This is the period leading up to the financial crisis. It's a problem that can exist whenever one has different circumstances in countries and the same overall rate. One mitigation is to have an interest rate which is a simple average of a policy rule recommendation across all the countries rather than in a small number of countries.

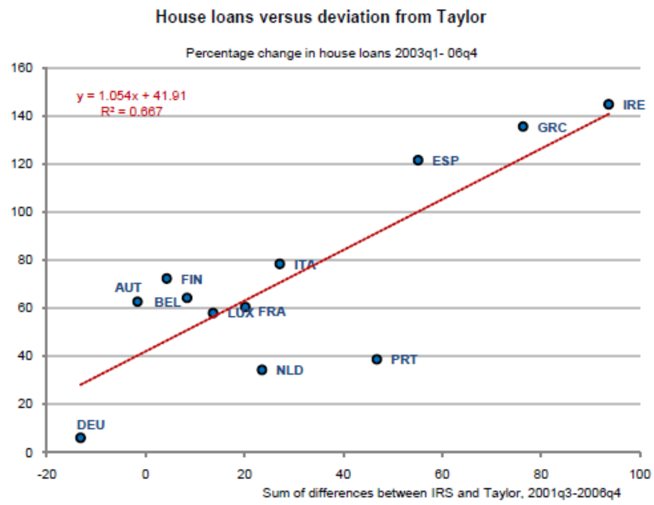


Figure 1

Source: Ahrend, Cournede, Price (2008)

Figure 2 is another illustration of a deviation from a strategy during the same period. Here the focus is on Germany and two countries in the Eurozone—Ireland and Spain. You can see in the top panel of Figure 2 that the rate was too low for these two countries. And the lower two panels show that this deviation led to excesses in housing prices and excesses in mortgage lending in Ireland and Spain because the interest rate was too low.

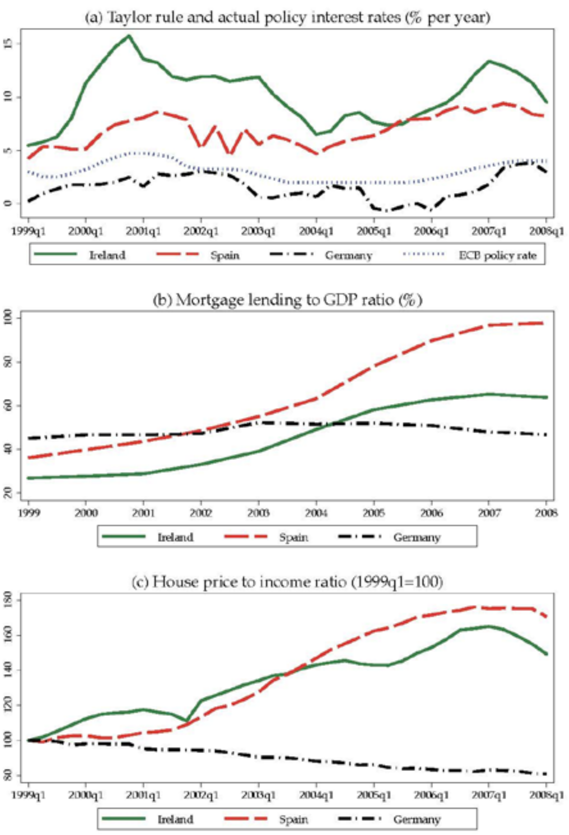


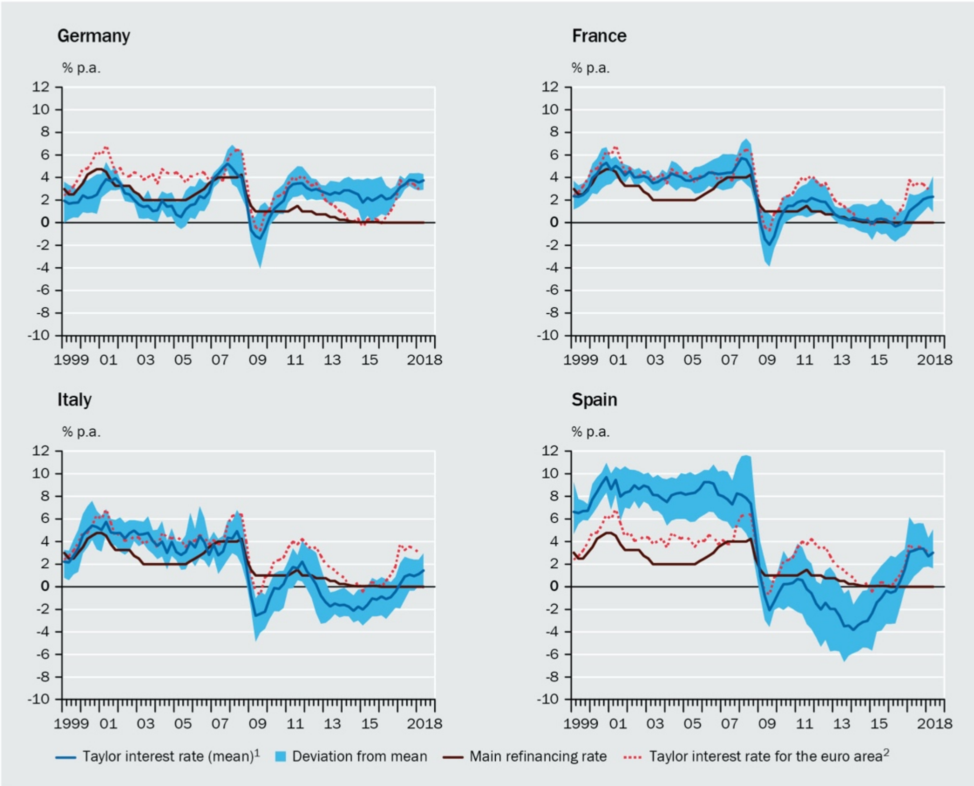
Figure 2

Source: Jordà, Òscar, Moritz Schularick, Alan Taylor (2015)

Now consider Figure 3. It comes from the German Council of Economic Advisors, and I thank Volker Wieland for his work on this. It tells basically the same story, but now looking at France, Italy as well as Spain compared to Germany. You can see the rate was too low France, Italy and Spain in the period leading up to the crisis.

↘ CHART 55

Taylor rules for selected euro area countries



1 – The calculation is based on all combinations of four inflation measures (HICP, core HICP, GDP and consumption deflator) and four output gaps (AMECO, IMF, HP filter and segmented linear trend). Following Hofmann and Bogdanova (2012) and Taylor (1993), the respective long-term trend growth is used for the real equilibrium interest rate. This is estimated based on the respective output gaps (AMECO, IMF, HP filter and segmented linear trend). The segmented linear trend consists of a break-point during the financial crisis for each country which follows from a break-point unit root test based on Perron (1989). Following Hofmann and Bogdanova (2012), respective implicit inflation targets for the used inflation measures are calculated: The average deviation of each inflation measure from the HICP for the period between the first quarter 1999 and the second quarter 2018 is added to the 2 % inflation target of the ECB. 2 – Taylor rule equation: $i = r^* + \pi + 0.5(\pi - \pi^*) + 0.5(y)$. i is the implied Taylor rule interest rate for the money market; it is a function of the real equilibrium interest rate, r^*, of the current inflation rate, π, in deviation from the central bank target, π^*, and of the output gap, y.

Sources: ECB, European Commission, IMF, own calculations

Figure 3

Now, why did this happen? There's debate about that, of course, but Figure 4 illustrates a key reason why I think it happened. Central banks tend to look at each other. The exchange rate is a big reason for that, because there is an aversion to letting the exchange rate move a lot. Figure 4 shows the relationship between what the Fed was doing, as illustrated by the red line, and what the ECB was doing, as illustrated by the blue line. Rates were a lower on average than they might have been in Europe because rates were lower on average than in the US. The exchange rate, I believe, was a reason for this deviation, and is one of the issues to worry about going forward.

Interactions Between Central Banks
Actual Deviations from Eurozone Policy Rule and
Deviations Based on the Federal Funds Rate

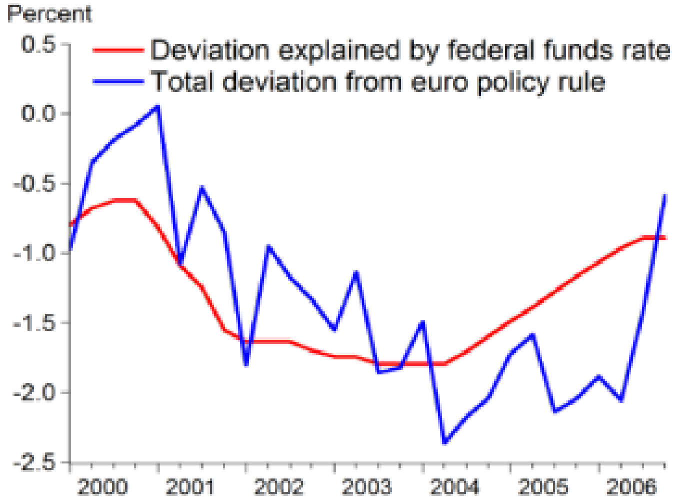


Figure 4
Source: Taylor (2007)

Figure 5 illustrates, using more recent data, the connection between the exchange rate and monetary policy. The red line shows reserve balances at the ECB, and the blue line is the dollar-euro exchange rate. The two lines are quite related. The period where there's a depreciation of the euro is associated with a big increase in reserve balances. This was the period when Mario Draghi mentioned a concern about the value of the euro, and the ECB brought that reserve balance action into play. In sum, a key reason that policy deviated from a strategy, or rule for the country, is international exchange rate consideration. That certainly seems to be the case in the period leading up to the global financial crisis.

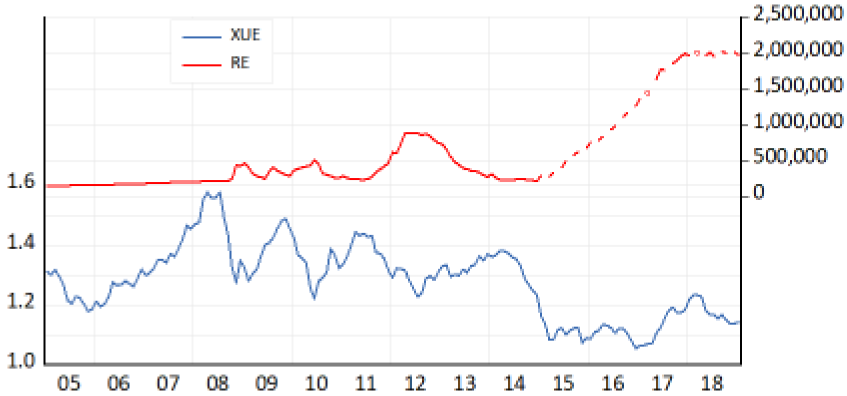


Figure 5

Source: Taylor (2019), Updated

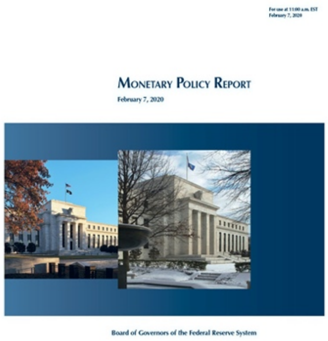
Evidence of Strategy in the United States

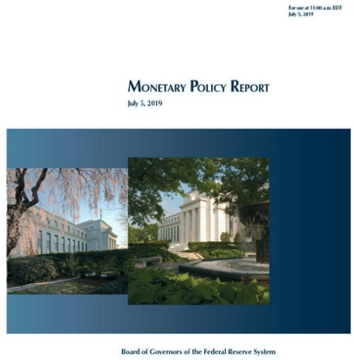
But in 2017-2019 things began to change. There were several papers, including by Bernanke, Kiley, and Roberts on different strategies for policy rules using the FRB/US model, by Mertens and Williams using a New Keynesian model and by Sims and Wu using other models. These examples suggest that research on policy was moving in a rule-based direction, which was positive in my view.

Moreover, a whole new section on monetary policy rules or strategies appeared in the Fed's semi-annual *Monetary Policy Report*. Figure 6 gives a quick review. You can see that different policy rules were listed. The effort was to compare the Fed's strategy with specific rules that have been mentioned, such as the Taylor rule, a Balanced-approach rule, or a Price-level rule. The comparison of the actual strategy at the Fed with these rules was important. Fed chairs Janet Yellen and Jerome Powell began to refer to this comparison in what was a very constructive development.

Rules Are In

Monetary Policy Report, Fed
(Feb 2020, July 2019) →





A. Monetary policy rules

Taylor (1993) rule	$R_t^{T93} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t)$
Balanced-approach rule	$R_t^{BA} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + 2(u_t^{LR} - u_t)$
Taylor (1993) rule, adjusted	$R_t^{T93adj} = maximum\ \{R_t^{T93} - Z_t, 0\}$
Price-level rule	$R_t^{PL} = maximum\ \{r_t^{LR} + \pi_t + (u_t^{LR} - u_t) + 0.5(PLgap_t), 0\}$
First-difference rule	$R_t^{FD} = R_{t-1} + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t) - (u_{t-4}^{LR} - u_{t-4})$

Figure 6

More Deviations

I must use the past tense above because the most recent 2020 Monetary Policy Report of the Fed doesn't have such a section. It's gone. I think that reflects a big change, and it illustrates why it's important to have the kind of review that the ECB is going through. I am sympathetic with what Otmar and Petra mentioned that the ECB should proceed with its own review. Figure 7 shows the dot plot that the Fed has put out. You can see they have the interest rate near zero, between 25 basis points and zero, for several years.

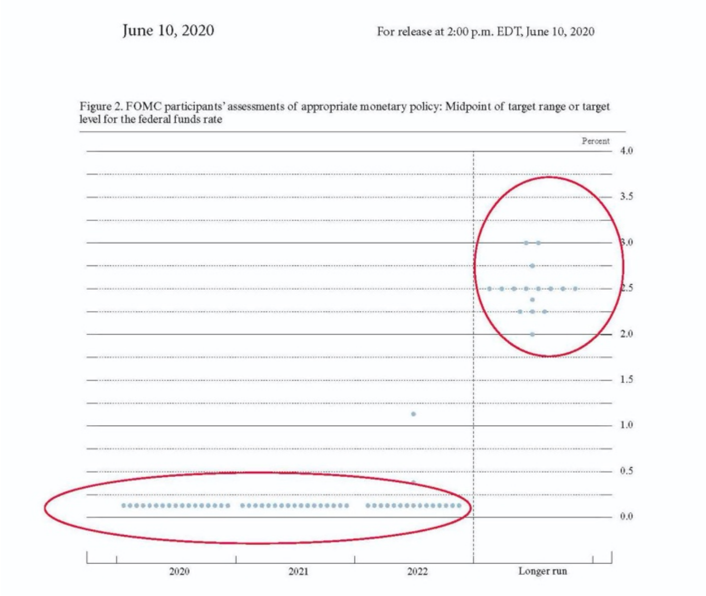


Figure 7

Even when the Fed is back to normal, the rate will be quite low compared to the 4% where it was before the global financial crisis. That lower number partly reflects the reduction in the equilibrium real interest rate, which I did research on with Volker as Otmar mentioned. This is a big issue to address, but it's not such a big issue right now because the Fed is well below this number.

If you go through the other parts of Fed policy, you see the balance sheet has increased dramatically since the global financial crisis. It started to come down last year, but then reversed dramatically this year. There are some good things to say about that reversal: Markets needed to stay open, and the Fed responded with the help of asset purchases. But it's still going on. The question is how long that should continue. Is now the time to adjust to come back to some strategy? I think it is.

Money growth has also increased in the United States. The ECB has emphasized money and credit, but the data is quite amazing in the United States, because of the huge increase in money growth—both M1 and M2—which did not occur with the asset purchases during the global financial crisis. It’s an incredible burst, that needs to be examined. I think that we need to be concerned with how that's going to be reversed, if it's going to be reversed, and to what extent this is part of the policy impact that we've had.

At the Jackson Hole conference last summer, Fed Chair Powell gave a speech (2020) and coined the term, “flexible average inflation targeting.” It's had a huge amount of attention in the press and academic circles. In his speech, Powell referred to some of the research work done at the Fed. I recommend the ECB staff look at this research. The conclusion was that, "Following periods when inflation has been running below 2%, appropriate monetary policy will likely aim to achieve inflation moderately above 2% for some time."

The “some time” is vague. There has always been an averaging in practice because no one would look at the monthly inflation rate as a good measure of performance. It's always been an average over time, but we're not quite clear how long the new average will be. I think more clarity about that would be helpful. I note that in the speech Powell emphasized the fact that the Fed is not tying itself to a particular mathematical formula that defines the average. While it does not have to be a precise mathematics, I think it would be preferable if this average inflation notion has some specificity about it.

There is also an emphasis that the decisions about appropriate monetary policy in the United States will reflect a broad array of considerations, and will not be dictated by any formula. If you don't like formulas, this is fine, but some details are needed.

The ECB Policy Strategy Review

I think you can see concerns about this vagueness today in Petra's talk, in Otmar's talk, and in Christine Lagarde's talk earlier this morning. They note that formal techniques have been used to evaluate policy. I don't think the ECB should be forgetting that going forward. The ECB needs to think about the specificity of its strategy, and the ECB policy makers need to make the decision themselves. I also note that in this story the international effects are significant. In a recent book (Taylor (2019)), I show that there's a big connection between Central Bank decisions, and that it is related to the exchange rate.

My conclusion is, as the economy recovers, the ECB needs to think about strategy, and to return to a monetary policy strategy that works. It looks like the recovery will be V-shaped, at least in the United States where I am now. Also non-store retail sales have been increasing very rapidly, telemedicine is exploding. Video-conferencing, the kind of thing we're doing right now is growing rapidly. Zoom Video Communications has seen an incredible expansion of profits for its founders, as well as a benefit for all. This term at Stanford I am giving a course completely online for 350 students who are all over the world in India, in China, in Europe. It's a phenomenal thing that's happening. I don't think we're ever going back to normal; there's going to be remnants of that when we get back to normal.

What I see is that policy strategy has worked, and that deviations from strategies have not worked; there are many examples of this. Thus the emphasis here should, as much as possible, be a more rules-based policy. There have been big elements of that at the Fed, as I mentioned, and the ECB and other countries, but this recent event has taken central banks away from that. There's very little discussion about how and when there will be a return to normal.

When you look around the world, not just at the Fed and the ECB, there is a connection between central banks which is frequently forgotten. Much of it has to do with exchange rates. It may be inadvertent, though I gave examples of Mario Draghi referring to it. To some extent it can be driving policy. And it also may drive a connection between these reforms at different central banks. The Fed’s reform, the ECB’s reform, other central bank reforms. There is a connection.

In sum, I like the idea that a *strategy* review is being undertaken. My observations here are based lessons learned from the global financial crisis and what I think led to it.

Policy reactions we've seen so far in this current coronavirus COVID-19 crisis are also relevant. While there are lessons to learn all over the place, I think that the main lesson is to stick with the strategy that works, and do not throw out things that are working as one tries to get to a better system.

References

Ahrend, Rudiger, Boris Cournède and Robert Price (2008), "Monetary Policy, Market Excesses and Financial Turmoil", OECD Economics Department Working Papers, No. 597, March 2008

Bernanke, Ben S., Michael T. Kiley, and John M. Roberts. (2019), "Monetary Policy Strategies for a Low-Rate Environment," Finance and Economics Discussion Series 2019-009, Board of Governors of the Federal Reserve System,

Mertens, Thomas and John Williams (2019), Tying Down the Anchor: Monetary Policy Rules and the Lower Bound on Interest Rates," presented at the conference, Strategies for Monetary Policy, Hoover Institution, Stanford University, May 3Federal Reserve Board (2019), Monetary Policy Report, February, Washington, DC

Jordà, Òscar, Moritz Schularick, Alan M. Taylor (2015) "Betting the House" *Journal of International Economics*, Vol. 96(S1), pp. 2-18.

Powell, Jerome (2020) "New Economic Challenges and the Fed's Monetary Policy Review," presented at "Navigating the Decade Ahead: Implications for Monetary Policy," an economic policy symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming

Sims, Eric and Jing Cynthia Wu (2019), "Evaluating Central Banks' Tool Kit: Past, Present, and Future," Conference on Monetary Policy Strategy, Tools & Communication Practices, Federal Reserve Bank of Chicago

Taylor, John B. (2007), *Getting Off Track: How Government Actions and Interventions Caused, Prolonged, and Worsened the Financial Crisis*, Hoover Institution Press

Taylor, John B. (2019), *Reform of the International Monetary System: Why and How*, MIT Press, Cambridge

Sources for the Figures

Figure 1
Ahrend, Rudiger, Boris Cournède and Robert Price (2008), "Monetary Policy, Market Excesses and Financial Turmoil", OECD Economics Department Working Papers, No. 597, March 2008
http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?doclanguage=en&cote=eco/wkp(2008)5
p.18 Fig 8

Figure 2
Jordà, Òscar, Moritz Schularick, Alan M. Taylor (2015) "Betting the House" *Journal of International Economics*, Vol. 96(S1), pp. 2-18.
https://www.sciencedirect.com/science/article/abs/pii/S0022199614001561

Figure 3
Council of Economics Experts, Germany (2018), *Setting the Right Course for Economic Policy*, Annual Report 2018/19, Released on 07 November 2018.
https://www.sachverstaendigenrat-wirtschaft.de/fileadmin/dateiablage/gutachten/jg201819/Chapter_4.pdf p. 202
Sources: ECB, European Commission, IMF, own calculations

Figure 4
Taylor, John B. (2007), *Getting Off Track: How Government Actions and Interventions Caused, Prolonged, and Worsened the Financial Crisis*, Hoover Institution Press
https://www.amazon.com/Getting-Off-Track-Interventions-Institution/dp/0817949712

Figure 5
Taylor, John B. (2019), *Reform of the International Monetary System: Why and How*, MIT Press, Cambridge
https://mitpress.mit.edu/books/reform-international-monetary-system

Figure 6
Board of Governors of the Federal Reserve Board System, Monetary Policy Report, July 5, 2019, p. 38
https://www.federalreserve.gov/monetarypolicy/files/20190705_mprfullreport.pdf

Figure 7
Board of Governors of the Federal Reserve Board System, Monetary Policy Report, June 12, 2020, p. 56
https://www.federalreserve.gov/monetarypolicy/files/20200612_mprfullreport.pdf