International Coordination of Central Bank Policy

Charles Engel

University of Wisconsin

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Objectives of this Discussion

Two objectives for this discussion:

Provide suggestions for research that can make the coordination versus non-coordination more relevant for policymakers.

And implications for policymakers based on what we do know from the literature.

I will invoke the keynote speaker's privilege:

- To cite empirical facts without documentation
- To cite theoretical models that don't exist

I begin with a look at the recent behavior of the US dollar, which has motivated the renewed interest in policy coordination.

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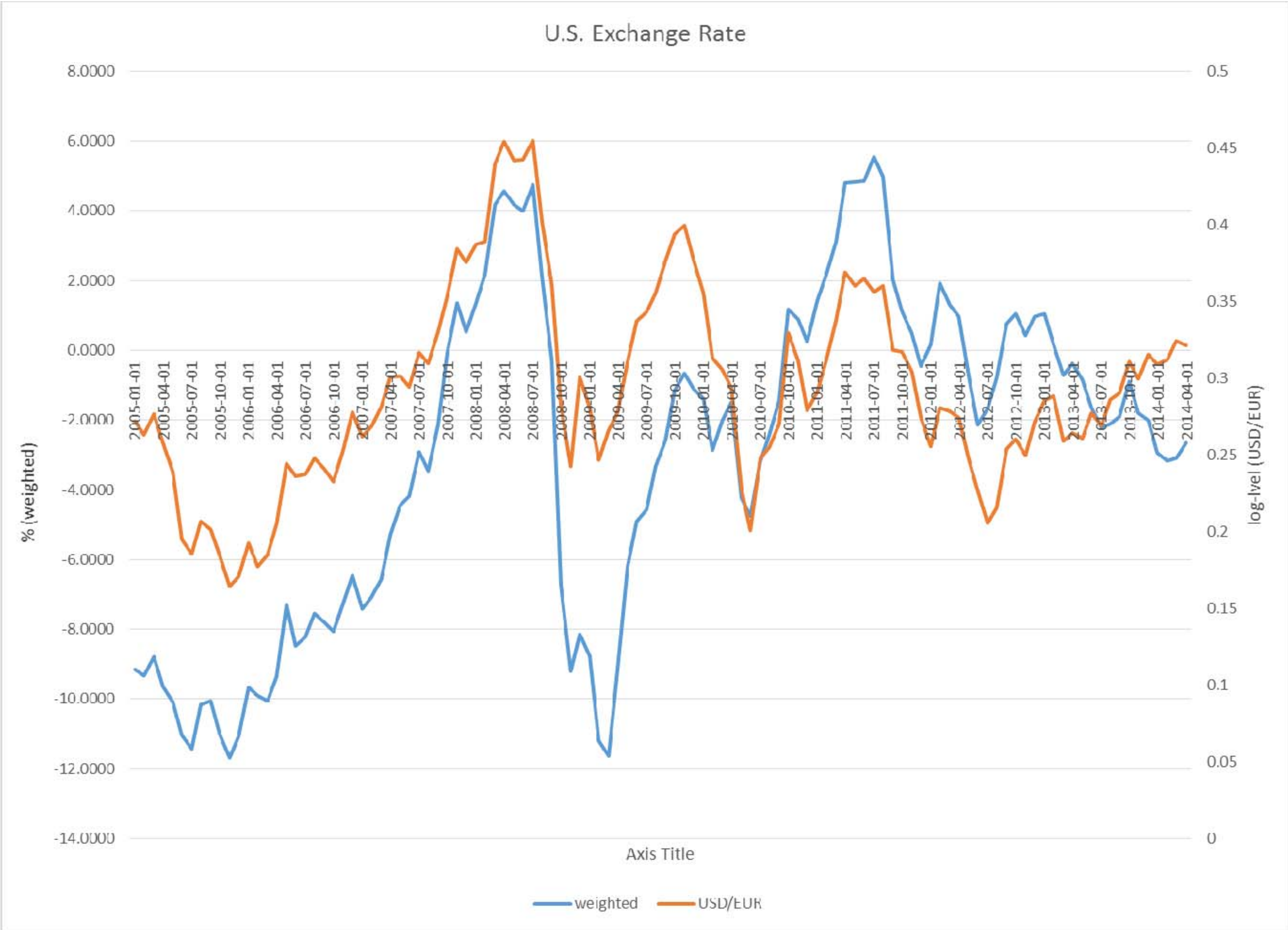
U.S. Exchange Rate
8.0000
6.0000
4.0000
2.0000
0.0000
-2.0000
-4.0000
-6.0000
-8.0000
-10.0000
-12.0000
-14.0000
% (weighted)
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
log-lvel (USD/EUR)
2005-01-01
2005-04-01
2005-07-01
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2007-01-01
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2013-04-01
2013-07-01
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Axis Title
weighted
USD/EUR

Major Swings in Exchange Rates

- Both lines show a major appreciation of the dollar in 2008-2009 during the Global Financial Crisis – “safe haven”
- The appreciation of the dollar against the euro in 2011-2012 is usually attributed to the European Sovereign Debt Crisis
  - The subsequent dollar depreciation is in part attributable to the easing of the debt crisis
- The general depreciation of the dollar from mid-2009 through 2011 is generally attributed to Federal Reserve monetary policy
  - This is the period in which the Fed supposedly followed a “beggar-thy-neighbor” policy
- The subsequent appreciation of the dollar has been attributed to expectations of a reversal of expansionary Fed policy and “safe haven” during European debt crisis.

Major Swings in Exchange Rates

The major determinants of exchange rates seem to be:

- Monetary policy
- Changing expectations of monetary policy
- What I would call “liquidity” effects – more on this on next slide

The major determinants are not:

- Productivity Shocks
- Cost-Push Shocks

Major Swings in Exchange Rates

I mean "**liquidity**" to refer to how easy it is to use assets as collateral

Why is the dollar a "**safe haven**"?

- Not because of currency risk, or other asset price risk
- Because there is a need for liquid US dollar assets when other assets cannot be used as collateral (as in 2008-2009)

Why is there a "**search for yield**" at some times but not others?

- Don't investors always want yield?
- Does this just mean they want to take on risk?
- I think it means that during some times the need for liquid assets is smaller.

The “Demand” for Cooperation

What lies behind the recent interest in cooperation?

1. A concern about “**beggar-thy-neighbor**” monetary policies.
   These policies change exchange rates and create negative spillovers

2. Concerns about **excessive capital flows**
   - Outflows when there is a “safe haven” demand, or in normal times when tightened monetary policy makes credit tight in advanced countries and there is a need for liquid assets.
   - Inflows when there is a “search for yield”.

Outline of the Rest of the Discussion

The academic literature can be more relevant for policymakers

- Shocks
- Distortions
- Incentives of policymakers
- What does cooperation mean?
- What is the scope for cooperation?

Policymakers can learn from the academic literature some simple lessons

A modest proposal for policy coordination

Shocks

The literature (with exceptions) focuses on **productivity shocks** and **"cost-push" shocks** when looking at the gains from coordination.

These don't deliver anything like a concern about competitive devaluations or volatile capital flows.

For example, take productivity shocks. When a country has a positive productivity shock, optimal policy calls for a monetary stimulus!

- Monetary policy is typically procyclical. A productivity increase requires a monetary expansion.
- Non-cooperative solution differs from cooperative in that the country experiencing the shock and following expansionary policy does not allow as large a depreciation as would be optimal under cooperation. The opposite of beggar-thy-neighbor.

Shocks

Cost-push or mark-up shocks have a more realistic feel to them – they lead to a supply-side recession.

But policymakers seem concerned with shocks that are

- More like demand side shocks
- The shock itself is distortionary, so that even under flexible prices the outcome would not be efficient
- In particular, we should have models in which expansionary policy is called for when output turns down and inflation falls below target, and contractionary policy is required when output growth is too high and inflationary.

Shocks

What are the demand shocks that drive business cycles?

Standard shocks in the literature that may be interesting to explore further:

Investment shocks
Preference shocks
Monetary policy shocks

Coenen, G; G. Lombardo; F. Smets; R. Straub. 2010. “International Transmission and Monetary Policy Cooperation.” *International Dimensions of Monetary Policy* (Gali, Gertler, eds.)

But maybe we should be looking at more unconventional shocks. It is hard to find evidence that these drive business cycles.

Shocks

News –

Corsetti, G.; L. Dedola; S. Leduc. 2011a. “Demand Imbalances, Exchange-Rate Misalignments, and Monetary Policy.” Unpublished.

Possibly with private news –

Bacchetta, P.; E. van Wincoop. 2006. “Can Information Heterogeneity Explain the Exchange Rate Determination Puzzle?” *American Economic Review*.

Bacchetta, P.; E. van Wincoop. 2013. “On the Unstable Relationship between Exchange Rates and Macroeconomic Fundamentals.” *Journal of International Economics*.

Bad news should lead, in an efficient economy to a contraction, and good news to an expansion. Policymakers only want to lean against the wind when there is overreaction to the news.

Uncertainty shocks

Basu, S.; B. Bundick. 2012. “Uncertainty Shocks in a Model of Effective Demand.” NBER working paper.

Leduc, S.; Z. Liu. 2012. “Uncertainty Shocks are Aggregate Demand Shocks.” Unpublished.

Carriere-Swallow, Y.; L. Cespedes. 2013 “The Impact of Uncertainty Shocks in Emerging Economies.” *Journal of International Economics.*

There has been little work exploring these in the international context, and none that explore the role of policy coordination.

Does monetary policy itself cause uncertainty? Can cooperation reduce uncertainty?

Financial market shocks:

Dedola, L.; G. Lombardo. 2012. “Financial Frictions, Financial Integration and International Propagation of Shocks.” *Economic Policy*.

Kolasa, M.; G. Lombardo. 2014. “Financial Frictions and Optimal Monetary Policy in an Open Economy.” *International Journal of Central Banking*.

To my knowledge, the question of cooperation vs. non-cooperation has not been addressed in the context of these unconventional shocks.

Distortions

The literature has focused on models in which the main distortions are **price stickiness** and **monopolies**.

There are other important distortions that matter for the question of coordination versus non-cooperation. Our understanding of those is weak.

Distortions

Pricing-to-Market

My personal favorite. PTM could arise either from local-currency price stickiness, or incomplete pass-through:

Devereux, M.B.; C. Engel. 2004. “Monetary Policy in the Open Economy Revisited: Exchange Rate Flexibility and Price Setting Behavior.” *Review of Economic Studies*.

Corsetti, G.; P. Pesenti. 2005. “International Dimensions of Optimal Monetary Policy.” *Journal of Monetary Economics*.

Engel, C. 2011, “Currency Misalignments and Optimal Monetary Policy: A Reexamination.” *American Economic Review*.

Rodriguez-Lopez, J.A. 2011. “Prices and Exchange Rates: A Theory of Disconnect.” *Review of Economic Studies*.

Distortions

Pricing to market implies **monetary policy should be concerned about the exchange rate**, beyond its concerns about price stability and the output gap.

If exchange rates are being driven by monetary shocks, news, and liquidity shocks, why should real exchange rates advantage firms in one country over another?

Pricing to market is inefficient from a global standpoint. But what are the incentives of policymakers in the decentralized case? Does self-oriented monetary policy take care of this distortion?

In Devereux-Engel, optimal policies were identical under cooperation and non-cooperation, but that was a very special model. In that model, there were no spillovers from monetary policy.

Asset-market incompleteness

Benigno, P. 2009. “Price Stability with Imperfect Financial Integration.” *Journal of Money, Credit and Banking*.

Corsetti, G; L. Dedola; S. Leduc. 2011b. “Optimal Monetary Policy in Open Economies.” *Handbook of Monetary Economics*.

Corsetti, G; L. Dedola’ S. Leduc. 2011a. Op. cit.

Bhattarai, S.; J.W. Lee; W.Y. Park. 2013. “Optimal Monetary Policy in a Currency Union with Interest Rate Spreads.” Unpublished.

Benigno, P.; F. Romei. 2014. “Debt Deleveraging and the Exchange Rate.” *Journal of International Economics*.

Distortions

Under cooperative policy, a goal of monetary policy is to enhance **international risk sharing**.

To what extent does non-cooperative monetary policy differ under asset market incompletes versus completeness?

Benigno, 2006, examines the gains from cooperation versus self-oriented inflation targeting.

Does market completeness, or more generally richer asset markets that enhance opportunities for risk sharing, reduce the benefits of cooperation?

Distortions

Financial market distortions – credit constraints, balance sheet constraints, banking distortions, inability to commit to debt repayment (default).

Currency denomination of debt.

How do these influence the incentives to cooperate? For example, would a mutual monetary expansion that lowers interest rates help ease credit constraints?

Distortions

In particular, is reducing current account imbalances desirable, because it helps avoid excessive external debt? Is there a gain from cooperation?

Policymakers often talk about the negative effects of foreign policy on their current account balance. Is **"overborrowing"** a concern of monetary policy? Would coordination be beneficial?

Distortions

Zero-lower bound.

Does the zero lower bound influence the incentives for policymakers to cooperate?

Fujiwara, I.; N. Sudo; Y. Teranishi. 2009. “The Zero Lower Bound and Monetary Policy in a Global Economy: A Simple Analytical Investigation." *International Journal of Central Banking*.

Cook, D.; M.B. Devereux. 2013. “Exchange Rate Flexibility under the Zero Lower Bound: The Need for Forward Guidance.” Unpublished.

Distortions

“Dutch disease” type distortions.

Many emerging markets worry that currency depreciations of major currencies hurt their emerging manufacturing industries at the expense of natural resource exports.

In the presence of some sort of infant industry/learning by doing and fixed costs of entry, there may be a distortion that should concern monetary policymakers.

Distortions

What about the case when poor outcomes in a country – recession, inflation, financial crisis – are the result of **poor policymaking**?

For example, to the extent that cooperative policy tries to insure countries against negative shocks, how willing should other countries be to help out when the negative outcomes are the result of bad policy?

Modeling Policymaking

This last question raises the issue of how we model monetary policymaking.

Our approach in the New Keynesian literature has been to assume policymakers have the ability to commit to a monetary policy, and their objective is to maximize welfare of households.

One consideration is that this may simply be giving central banks too much credit. It may be important to study optimal policymaking when there are **limits to the policymaker's omniscience**.

What are the implications for coordination? What if policymakers disagree on the model? Can coordination improve their model?

Modeling Policymaking

In the international trade literature, policymakers are usually described as having competing objectives: To some extent they wish to maximize household welfare, but they may also have other objectives. **Political economy considerations** come into play.

To the extent that politics matter, might policy cooperation lead to free riding? That is, if the burden of bad outcomes are shared with other countries, the incentives to pursue good policy (from the standpoint of household welfare) may be reduced.

Modeling Policymaking

Where does the **ability to commit** come from?

Might the ability to commit be enhanced under policy cooperation?

Chari et. al. argue that under cooperation, it is possible to commit not to inflate ex post in response to idiosyncratic shocks, even when policymakers lack a commitment technology otherwise:

Chari, V.V.; A. Dovis; P. Kehoe. 2013. "Credibility and Monetary Unions." Unpublished.

Another argument is that countries that lack credibility can inherit credibility by cooperating with policymakers that have the ability to commit.

Modeling Policymaking

But could the effects on the **ability to commit be reduced by cooperation**?

For example, inflation targeting central banks have a clearly stated objective, and the market can assess whether the policymaker is sticking to its commitment.

When policy is influenced by the concerns of a large number of countries, the objectives of monetary policy may become less clear for the public.

In general, we need a clearer understanding of what gives a central bank credibility.

What Does Cooperation Mean?

In the academic literature, cooperation means policy is determined by a "global" monetary policymaker. Non-cooperation is when policymakers set policy in a non-cooperative game.

At a technical level, this does not really fully characterize the difference. One must also specify strategies or policy instruments, open loop versus closed loop.

But also, realistically, when policymakers get together in Geneva or Paris and "cooperate", they are not necessarily reaching the same outcome as a global policymaker.

It may be better to think of these meetings as a forum for **bargaining**, and the process can be better modeled in a non-cooperative bargaining framework.

What Does Cooperation Mean?

Two related concerns when "cooperation" occurs through bargaining:

1. Are some countries treated poorly because they have less bargaining power?

2. What if the countries cannot even agree on what is best from a global standpoint?

The Scope for Cooperation

Which policymakers can cooperate? What policies can they cooperate on?

Monetary policymakers potentially can cooperate because of their independence from political pressure.

- However, they may lose some of that independence if they are perceived to be giving too much attention to concerns of other countries

I do not believe **fiscal policy cooperation** is feasible. Finance ministers may make statements, but I don't believe them to be binding or to have any effect on actual fiscal policy.

(My skepticism explains why I have not mentioned the large recent literature on cooperative fiscal policy.)

The Scope for Cooperation

Macropudential Policies:

There is a clear case for coordination of macroprudential policies to reduce "leakages":

Jeanne, Olivier. 2014 "Macroprudential Policies in a Global Perspective." NBER working paper.

Engel, C. 2012. "Macroprudential Policy under High Capital Mobility: An Academic Perspective." Unpublished.

Banks have an incentive (and empirical evidence confirms) to shift activity from more heavily regulated to less heavily regulated countries.

The Scope for Cooperation

Basel III introduces a "reciprocity" rule that comes into play when some countries impose capital requirements higher than the Basel III minimum. In essence, the bank must hold a weighted average of the capital required by the countries it does business in. Does not eliminate the incentive to move exposure to less regulated countries.

There are two problems – **two types of spillovers** – that arise with lack of cooperation:

1. When banks and financial institutions are global, a bank failure in a less-heavily regulated country will have negative consequences even in the country with tougher regulations.

2. Countries with tougher regulations are penalized as banks move their activities to less tightly regulated countries.

The Scope for Cooperation

Banking policies –

Bailouts

Deposit insurance

Banking union

These are questions that have been discussed at length, and I have nothing new to add.

Policymakers

I believe a lot of what motivates recent interest in policy coordination in policy circles is simply that policymakers in some **countries dislike spillovers**.

For example, countries do not like when the US dollar depreciates because it makes their exports less competitive in the US.

But cooperation does not mean that spillovers will disappear. The literature does tell us that optimal cooperative policy involves spillovers.

In fact, the gains from cooperation may be small. It is possible that “self-oriented” policies effectively balance out spillovers.

Policymakers

Obstfeld, M.; K. Rogoff. 2002. “Global Implications of Self-Oriented National Monetary Rules.” *Quarterly Journal of Economics*

Benigno, G.; P. Benigno. 2002. “Price Stability in Open Economies.” *Review of Economic Studies*.

Benigno, G.; P. Benigno. 2006. “Designing Targeting Rules for International Monetary Policy Coordination.” *Journal of Monetary Economics*.

Policymakers

Indeed, what is the problem with "**competitive depreciation**"?

Suppose US and Europe both are operating below full employment and have low inflation. Suppose further that this recession is caused by a shortfall in aggregate demand. The only problem, in other words, is insufficient demand.

Expansionary monetary policy in the US depreciates the dollar, has negative spillovers on Europe.

But Europe can simply expand. Easier monetary policy in Europe has the desirable effect of expanding the economy, and incidentally reverses the currency movement.

There is no terms of trade externality in this case. Just because US expansion worsens Europe's trade balance, *ceteris paribus*, does not mean there is an externality. **Spillovers ≠ externalities**

Policymakers

Policymakers

The previous example is perhaps simplistic. Countries may have other policy objectives that conflict with the goal of full employment/low inflation. For example, they may have a goal of eliminating trade imbalances.

This is the classic case for cooperation. Countries may follow excessively expansionary policies in a non-cooperative setting because they are each also trying to improve their trade balance.

If there are legitimate concerns that trade balance deficits may lead to financial instability, there is a case for gains from cooperation.

Policymakers

Four questions/observations:

1. What is the economic justification for concerns about trade deficits? The traditional concern about trade deficits is probably driven by a mercantilist view of economics. Is the new view – that deficits lead to "overborrowing" – simply a justification for new mercantilism? Is their evidence that current account imbalances lead to financial problems?
2. Sometimes discussion mistakes problems of government debt crises with problems arising from trade imbalances.
3. In recent years the Brazilian finance minister and the Indian central bank governor have criticized expansionary US monetary policy for leading to excessive capital outflows from the US into their countries. So now the problem is the US current account deficit is not large enough?
4. Are we really now in a world of excessive expansion?

Policymakers

I have heard many Fed officials say that **international concerns never are discussed at FOMC** meetings – except as they impinge on domestic concerns.

That is how our models work too! Each country is concerned about consumption and leisure of its own residents. We don't have models where the US has the welfare of Europeans in its objective function.

But the Fed may not fully appreciate how international variables affect domestic concerns.

In part this is the fault of the literature. Can we write down simple versions of the policymaker's loss function – under non-cooperation as well as cooperation – that spell out how the policymaker should be concerned about international variables? In other words, what matters besides inflation and the output gap for domestic welfare?

Policymakers

There is a caveat to the tenor of the previous slide:

In principle there are gains from cooperation. World welfare can improve with cooperation.

But any particular plan that improves world welfare **may not be a Pareto improvement**. Countries will not participate in a cooperative process that leaves them worse off.

However, if some countries cooperate on policy, but not all, the cooperators may gain at the expense of those that don’t join the process.

A Modest Proposal

My opinion is that policy “cooperation” will not be successful if the aim is to specify particular changes in policy.

Perhaps progress can be made toward more precise agreement on policy objectives, and the tradeoffs among them.

In essence, I am suggesting something like **an agreement on “self-oriented” targeting rules** that support an efficient world outcome (as in Benigno and Benigno, 2006), even if there is no agreement to stick to these targeting rules.

Conclusion

Another important type of cooperation is between policymakers and researchers.

The ECB regularly provides a forum for that interaction, and that is a great service.

Thank you.