Discussion of "Like a Good Neighbor: Monetary Policy, Financial Stability, and the Distribution of Risk"

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1. This Paper

This paper develops an elegant model on a relevant issue. The issue is a specific market failure—the lack of inflation-indexed debt—which, combined with real output uncertainty, precludes optimal risk sharing among consumers hit by idiosyncratic shocks. The paper starts with a benchmark two-period consumption and risk-sharing model under complete markets for a closed economy where agents are hit by idiosyncratic output shocks. By trading state-contingent Arrow-Debreu assets, idiosyncratic risk is completely traded away and the economy attains the first-best Pareto-optimal general equilibrium. This model follows closely the world asset trading model due to Lucas (1982) (nicely presented in chapter 5 of Obstfeld and Rogoff 1996), where two countries hit by idiosyncratic output shocks engage in first-best international exchange of state-contingent Arrow-Debreu assets.

Then the paper shows that when debt contracts are not specified in real (or inflation-indexed) terms but only in nominal terms (as observed in most financial markets), risk sharing is incomplete and the first-best equilibrium cannot be attained. Does inflation or nominal income targeting pursued by a monetary authority restore the first-best equilibrium when only nominal debt is available? Not when the central bank monetary authority targets inflation (or the price level). However, when the central bank targets nominal income, engineering real-time inflation perfectly and negatively correlated with real output, the first-best equilibrium is reestablished.

Table 1. Simple Correlations between Quarterly GDP Deviations and Quarterly CPI Inflation Deviations from Trends in the United States, 1970:Q1–2012:Q1

Period	Correlation	Episode
1970:Q1–2012:Q1	0.31	Full Sample Period
2002:Q1–2008:Q3	0.54	Boom
2008:Q4–2012:Q1	0.77	Bust and Slow Recovery
1973:Q4–1974:Q4	−0.98	First Oil Price Shock
1979:Q1–1980:Q1	−0.89	Iranian Revolution
1990:Q1–1991:Q1	−0.55	Persian Gulf War
2002:Q1–2003:Q1	−0.98	Iraq War

Source: Author's calculations.
Notes: Correlations are reported for deviations of U.S. quarterly GDP deviations from an estimated Hodrik-Prescott trend and deviations of U.S. quarterly CPI inflation deviations from an estimated Hodrick-Prescott trend. All reported correlations are significantly different from zero.

2. Key Model Assumptions

While analytically sound, the model's empirical and policy relevance is limited by three key assumptions that are questionable.

First, the model's only source of uncertainty is real output uncertainty. This is rather extreme—agents and central banks face many different sources and types of uncertainty. Standard monetary policy models identify output and inflation uncertainty by associating them with aggregate demand and supply shocks, respectively. Demand shocks tend to be more frequent than supply shocks in mature economies, like the United States. For example, unconditional simple correlations between quarterly U.S. output and inflation deviations from trends (table 1) suggest that demand shocks (positive correlations) dominated during the full 1970–2012 period and during significant sub-periods, including the recent 2002:Q1–2008:Q3 expansion and the subsequent 2008:Q4–2012:Q1 bust and timid recovery. Supply shocks (negative correlations) are largely limited to episodes of international oil price shocks.

Second, the model's only rigidity or friction is the absence of indexed debt contracts. Therefore there is no role for the central

bank other than generating perfectly countercyclical inflation under nominal income targeting. This is a rather narrow policy implication. In the real world of nominal and real frictions, taking on board this additional policy objective (completing financial markets in the absence of indexed debt contracts) would distort attainment of conventional policy objectives (minimizing inflation and output variability).

The paper's third key assumption is full real-time controllability of inflation. This means that whenever an output shock is realized, the monetary authority is able to generate simultaneously an inflation rate of the magnitude but of opposite sign of the output shock. This contradicts three basic features of monetary policymaking embedded in all policy models: monetary policy acts with a significant time lag on inflation (typically ranging from six to ten quarters), central bank controllability of inflation is weak, and inflation exhibits uncertainty.

3. A First-Best Policy in the Real World

Considering the theory and practice of monetary policy, a first-best policy is not to contaminate monetary policy with another objective like the one advocated in this paper. It is completing the missing market: supporting market development of inflation-indexed bonds and other financial liabilities, including bank deposits, corporate bonds, mortgages, or pensions. Inflation-indexed financial liabilities have been developed partly in several inflation-prone South American countries since the 1960s (including Colombia and Brazil) and more systematically in Chile since 1967, when a daily unit of account (termed Unidad de Fomento, or UF), indexed to last month's CPI inflation rate, was started. The Chilean government allowed and/or encouraged issuance of inflation-indexed (i.e., UF-indexed) financial instruments and, more generally, underwriting of all type of term contracts (including rental, insurance, and employment contracts) with obligations, premiums, or wages indexed to inflation through the UF unit of account.

As inflation rose from 30 percent in the 1960s to close to 1,000 percent in the early 1970s, nominal (i.e., non-indexed) financial and non-financial contracts were replaced by UF-indexed contracts. Even the main monetary policy instrument, the overnight interbank

lending rate of the Central Bank of Chile (CBC), was specified as an indexed rate. As inflation fell to 3 percent in the early 2000s, the CBC replaced its indexed policy rate with a non-indexed policy rate, supported by a shift from indexed to non-indexed CBC short- and medium-term liabilities. This policy change was motivated by the aim to widen the range for policy rate reductions toward the zero lower bound in case it were necessary. The reason is that, with an inflation target at 3 percent, the zero lower bound of an indexed policy rate is equivalent to a lower bound of 3 percent of a non-indexed (nominal) policy rate.

The latter policy change and attainment of low and stable inflation led to a major change in Chile's portfolio composition from indexed to non-indexed assets, and a reduction (increase) in the volatility of short-term non-indexed (indexed) interest rates (Fuentes et al. 2003). Yet still today a significant share of Chile's medium- and long-term financial assets and contracts—including medium-term bank deposits, government and corporate bonds, mortgages and mortgage bonds, insurance contracts, and rents—continue to be UF indexed. Coexistence of indexed and non-indexed financial instruments has contributed to capital market completion, inflation protection, and maturity extension of the markets for bonds, bank deposits, mortgages, insurance, and pensions (Walker 1998).

Robert Shiller, reviewing Chile's UF experience, has advocated government creation of a Chilean UF-type unit of account in countries with low inflation and, in particular, in the United States (Shiller 2002). He has also supported U.S. government endorsement of a second unit of account linked to personal income. He argues that existence of the two latter official units of account would help complete financial and labor markets in the United States.

In sum, the first-best solution to the missing-market problem is to support development of an official inflation-indexed unit of account and then, probably, nudge markets toward issuance of inflation-indexed assets and contracts. As Chile's long-standing experience shows, this is feasible.

4. Empirical Estimation

The paper ends with "suggestive evidence," a section that reports one OLS estimation result based on 1985–2010 quarterly time series

for commercial banks' loan delinquency rate regressed on nominal GDP growth surprises and CPI inflation surprises. While the former variable is significant, the latter appears to be not significant. In addition to possible simultaneity bias, acknowledged by the author, omission bias could be another potential problem due to exclusion of other relevant determinants of the delinquency rate, such as the business cycle and interest rates. Finally, multi-colinearity is very likely to affect the estimates' standard errors because nominal output growth and inflation are highly and positively correlated: both by definition (inflation is part of nominal GDP growth) and empirically (the correlation between deviations of both variables for 1970–2010 is 0.31, as reported in table 1).

References

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