

Using Monetary Policy to Coordinate Price Information: Implications for Economic Stability and Development

by Jim Granato and M.C. Sunny Wong

INTRODUCTION

One of the most impressive ongoing stories in the past fifty years has been the reduction in worldwide poverty. What is more important is that the process of poverty reduction has been accelerating. The 1997 United Nations Development Programme's Human Development Report noted that worldwide poverty has fallen more in the past 50 years than in the prior 500 years.¹ Many nations in the world have followed this trend, not only in terms of the reduction in poverty rates, but more recently with a decrease in the absolute number of citizens in poverty.

There is no doubt that material developments, fueled by economic development, are a major factor in poverty reduction. We also know that the influences on economic development are numerous. The purpose of this essay is to show how one type of policy practice is associated with longer periods of economic growth and sustained development. In this way, we show how some specific policy mistakes that have been made in the developed world need not be repeated by the developing world. Moreover, avoiding policy mistakes of the past means poverty reduction can continue and, possibly, accelerate even further.

Just what type of policymakers and policy are we referring to? The policymakers we focus on are individuals who influence the monetary authority. They are concerned with such things as taking the right policy action at the right time. Of prime importance are the actions (the policies) taken to stabilize business cycles. Business cycles are commonly characterized as the fluctuations (around the long-run trend) of the total output of goods and services within a country (i.e., gross domestic product [GDP]). What is typically called *stabilization policy* involves, among other things, using monetary

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policy to reduce the volatility of GDP (around its trend). Policymakers' emphasis is on reducing the length of recessions and increasing the period of economic expansion.

Policymakers are influenced by current economic challenges and evolving scientific debates. Policy goals or targets, long a policymaking concern, receive greater or less weight based not only on current economic conditions, but also on what science indicates is the best course of action. Policy linkage of contemporaneous events with scientific research is one way to guard against creating a problem tomorrow with today's "solution." Each can inform the other, and in doing so, allow for more effective policy.

[T]he simultaneous reduction in inflation and output volatility has the additional benefit of lengthening periods of economic expansion, and in doing so, could promote economic development.

The more recent interaction between economic events and scientific debate has reached the point where policymakers now use stabilization policy with an added emphasis on inflation stability.² We show that a priority on inflation stability has the by-product of also reducing GDP instability. Furthermore, we think the simultaneous reduction in inflation and output volatility has the additional benefit of lengthening periods of economic expansion, and in doing so, could promote economic development.

Why does a monetary policy that emphasizes inflation stability also have beneficial effects on output stability and possibly also on economic development? The answer lies in the fact that inflation stability is a prerequisite for getting maximum effectiveness out of a market economy. When policymakers engage in policy that stabilizes inflation, they help the public—firms, households, and labor—to create more accurate price forecasts. Accurate public price forecasts are consistent with the most efficient interaction between supply and demand, and by extension, the public's spending and investment plans.

BACKGROUND

For all practical purposes, scientifically informed stabilization policy was a response to the worldwide depression of the 1920s and 1930s. Following the work of John Maynard Keynes,³ policymakers used fiscal measures to counter the high rates of unemployment. In the aftermath of World War II, the emphasis on full employment was made a national priority in many industrialized democracies. In the United States, for example, this full employment emphasis manifested in the passage of the Full Employment Act of 1946.⁴

In the 1950s, there was a shift from emphasizing full employment to also including inflation as a consideration in policy decisions. There was a scientific basis for focusing on inflation and unemployment. In 1958, A.W. Phillips showed there was an inverse

relationship between nominal wages and unemployment: higher unemployment was associated with lower wages and higher wages were associated with lower unemployment.⁵ This relation was extended to incorporate a trade-off between inflation and unemployment. In the late 1950s and up to the late 1960s, most economists assumed that there was a stable trade-off between unemployment (output) and inflation. In fact, this stable relationship could be graphically demonstrated on what is now called the Phillips curve.

This assumption of a stable relationship had powerful appeal to policymakers. One could simply pick a mix of inflation and unemployment on the Phillips curve and conduct monetary (and fiscal) policy in accordance with those goals in mind. Furthermore, the low unemployment and inflation of the mid-1960s suggested that this approach to stabilization policy was effective.

Until the late 1960s, the emphasis on “fine tuning” and multiplier effects constituted the orthodoxy. All that was necessary, it was believed, was to construct statistical models that would accurately and confidently determine the effects of monetary and fiscal initiatives on unemployment and output. However, there soon emerged a critique on the assumptions underlying the use of the Phillips curve. Milton Friedman and Edmund Phelps argued that the Phillips curve was based on false assumptions about how people behaved, and, therefore, was bound to give incorrect predictions about inflation and unemployment.⁶

Friedman and Phelps emphasized that the Phillips curve trade-off could not permanently work when the public’s inflation expectations were considered. They argued that a stimulative policy could lower unemployment for a brief time if workers set their wage demands too low. This stimulative effect would occur if workers underestimated future inflation, but Friedman and Phelps reasoned that workers could not be fooled for long. They would eventually correct this mistake. As a result, there could be no stable or predictable Phillips curve trade-off.

The policy implications of Friedman and Phelps’ argument were equally clear. For example, if policymakers attempted to reduce the existing rate of unemployment, the result would be more volatile swings in monetary policy and, by implication, output, prices, and unemployment. Indeed, such policies would eventually be self-defeating, and instead create a combination of higher unemployment and higher inflation—a combination that came to be known as stagflation.

During the 1960s and 1970s, many industrialized countries ignored the Friedman and Phelps critique of the Phillips curve and, as a result, experienced stagflation. Yet, with this bitter lesson now learned, the scientific and policymaker consensus today is that there is no long-run Phillips curve trade-off. However, many still think there is a long-run trade-off between the *variability* of inflation and output (unemployment).⁷ We think this variability trade-off is also on weak footing. This skepticism makes sense when we consider the role of policymakers as a force to help the public coordinate their price information and inflation expectations.

HOW POLICYMAKERS SERVE TO COORDINATE PRICE INFORMATION

Since the late 1970s, stabilization policy has placed added emphasis on inflation stability. As noted above, this change is due in part to the interaction between economic events and evolving scientific doctrine. In addition, there is also a consensus that market-driven processes that make use of the price mechanism represent a superior way to allocate resources in an economy. To some, this conclusion will not come as news, since scholars have been asserting this for years:

Fundamentally, in a system where the knowledge of the relevant facts are dispersed among many people, prices act to coordinate the separate actions of different people in the same way as subjective values help the individual to coordinate parts of his plan...Assume that somewhere in the world a new opportunity for the use of some raw material...has arisen. All that users...need to know is that some of the [good] they used to consume is now more profitably employed elsewhere, and that in consequence they must economize...If only some of them know directly of the new demand, and switch resources over to it, and if the people who are aware of the new gap thus created in turn fill it from still other sources, the effect will rapidly spread throughout the whole economic system and influence the uses of [the good], but also those of its substitutes and the substitutes of these substitutes...and all this without the great majority of those instrumental in bringing about these substitutions knowing anything at all about the original cause of the changes. The whole acts as one market, not because of any of its members survey the whole field, but because their limited individual fields of vision sufficiently overlap so that through many intermediaries the relevant information is communicated to all.⁸

In principle, the information provided by prices should help the public avoid coordination difficulties. Of course, during a period of inflation, prices lose their effectiveness in conveying information. Price inflation creates noise in the price system. The usual signal prices provide is now blurred, since the public does not know what part of the price reflects changes in market forces and what part is just inflation. And this confusion can go on for some time. The public's plans (i.e., contracts) now lack the more accurate inflation expectations they had under inflation stability.

The threat inflation instability poses to the public's ability to plan, and the barriers this instability creates to efficient interaction between the forces of supply and demand, suggests that stabilization policy and the role of policymakers in that policy need to be reassessed. This reassessment can include thinking of policymakers as actors whose actions can assist in coordinating price information for the public by reducing the ambiguity inflation instability creates.

What do we mean by coordinating price information? Consider that the public's relation to policymakers centers on the public choosing a contingency plan for the current and future variables that are under their control. These plans include the public's future assessments about the policy direction. A key issue in the public's assessment about policy is demonstrating how the public learns the policy. It is here that the specific coordination effect occurs, since policy can stabilize key variables (inflation) about which the public has expectations. In stabilizing these variables, policymakers remove uncertainty and expedite learning on the part of the public.

Our view is that policymakers should act to ensure that the price system works and that the coordinating function of prices is maintained. There is only one way to do this: policymakers must take policy actions that ensure inflation stability. This role for policymakers can be accomplished by making inflation stability an implicit or explicit target (goal) for policy actions.

What are the specific mechanics of this relationship between policymakers and the public? Policymakers coordinate price information for the public in the following way: when policymakers achieve and maintain inflation stability (usually by influencing interest rates), people can substitute what they think is an implicit or explicit inflation target (set by the policymaker) for past inflation.

In this environment, plans (i.e., contracts) now exhibit (price/inflation) stability. And since these plans have an effect on the overall inflation rate, the stability of these plans and contracts translates into inflation stability and output growing at its long-run rate. Perhaps most important is that an additional by-product of coordinating price information is the simultaneous reduction in both inflation and output volatility—what we term *inflation-output co-stabilization* (IOCS)—and more controversially, the extension of the period in which the economy grows.

There is also the possibility that if policymakers continue to tolerate inflation instability, then inflation persistence will become more pronounced and could take on an explosive nature.

On the other hand, when policymakers deemphasize inflation stability this policy tack implies that interest rates will not respond to inflation shocks, and sometimes perversely, interest rates may decrease, providing a procyclical response to an inflation shock. In this case, the price rigidities in the economy (i.e., contracts, expectation/information uncertainty) mean that the inflation shock will not die out soon. There is also the possibility that if policymakers continue to tolerate inflation instability, then inflation persistence will become more pronounced and could take on an explosive nature.⁹

INFLATION-STABILIZATION POLICY AND IOCS

Here, we show the relation between policy, inflation uncertainty, and IOCS in the United States for the period 1960 to 2000. If policymakers can coordinate information by stabilizing inflation, then during periods when policymakers actively stabilize inflation, inflation uncertainty should be less and IOCS should exist.

Policy can be thought of as a plan or action that makes use of policy instruments, which are the mechanisms that policymakers alter to achieve policy goals. In our immediate case, how does policy influence business-cycle fluctuations? A primary source is the real interest rate (i.e., the nominal interest rate minus inflation expectations) and its effect on aggregate demand and inflation expectations.¹⁰

Policymakers can influence real interest rates through the manipulation of various short-term interest rates. For empirical policy studies in the United States, the short-term interest rate under policymaker influence is typically the federal funds rate. The federal funds rate is the interest rate charged by a Federal Reserve district bank to member banks for overnight loans.

Yet, the federal funds rate itself is not an adequate indicator for inflation stabilization. The federal funds rate does not tell us the degree to which the policymakers attack inflation, nor does it indicate how policymakers maintain this policy stance to support positive real rates of return on investment and savings.

For comparability across time periods, we combine the log of the ratio of the federal funds rate with the annual inflation rate, i.e., the federal funds rate ratio.¹¹ Because the scale is logarithmic, equal proportions are shown as equal distances, which allows for greater comparability across time periods.

We argue that the federal funds rate ratio signifies an inflation-stabilizing policy emphasis when it is greater than or equal to one. This number, which on a logarithmic scale is equal to zero, is consistent with policies that raise interest rates in excess of any increase in inflation. On the other hand, a negative value on this logarithmic scale is consistent with a policy stance that de-emphasizes inflation stability.

Figure 1. Federal Funds Rate Ratio, 1960-2000. Note: This variable is the log of the ratio of the federal funds rate to the annual inflation rate (CPI). Data are quarterly. The federal funds rate and CPI data are provided by the Federal Reserve Bank of St. Louis (FRED II) and are available at (<http://research.stlouisfed.org/fred2/>). The zero line indicates that the federal funds rate and the inflation rate are equal. The shaded area represents 1974:I-1980:III.

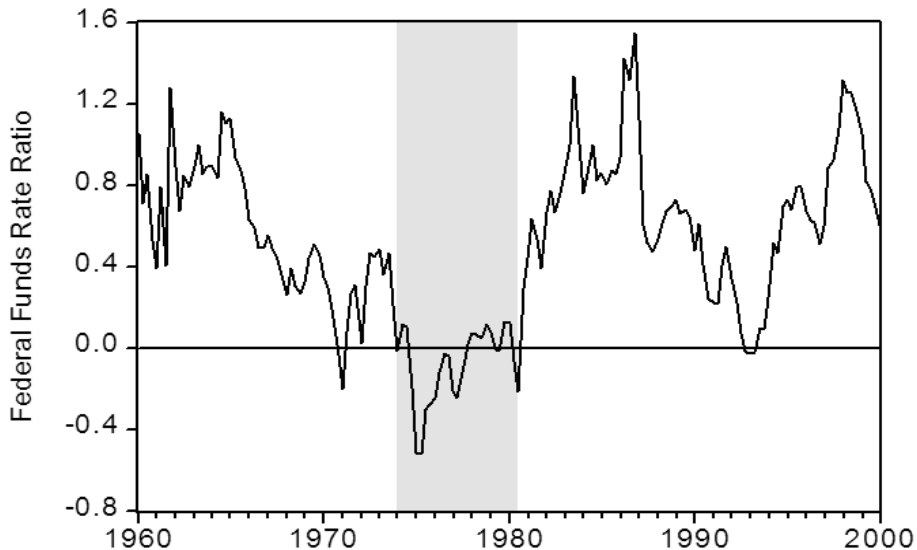
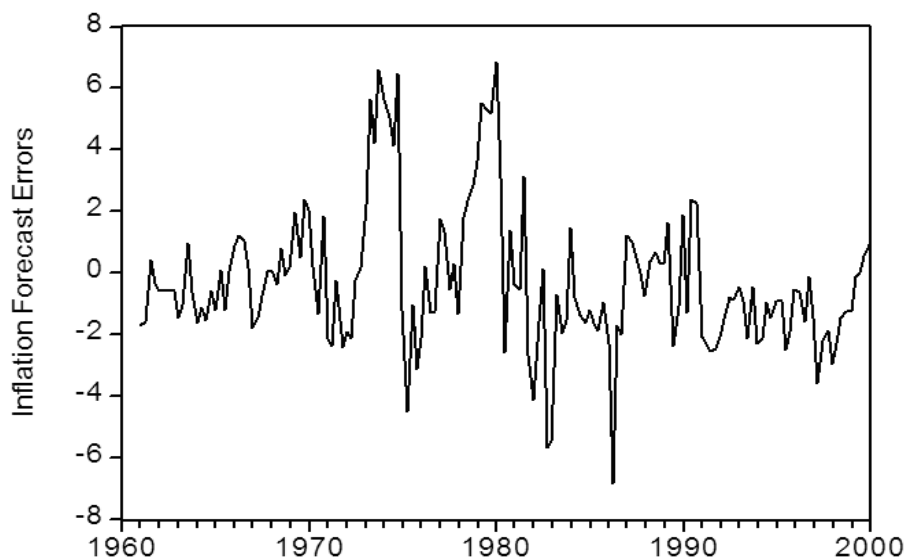


Figure 1 depicts the federal funds rate ratio for the period 1960 to 2000. The figure shows that inflation stability is de-emphasized approximately during the period 1974 to 1980 (shaded area). There was a slight shift toward an inflation-stabilizing emphasis in 1978, but it was against the overall trend.¹²

The federal funds rate ratio also showed a distinct pattern of declining resolve in maintaining an inflation-stabilizing policy. This pattern started in 1966 and was not reversed until 1981, when inflation-stabilizing policy reasserted itself and continued to the year 2000. In 1993, policy responded to an economic slowdown by becoming expansionary, but the ratio still did not fall below zero. This drop was consistent with the aggressive inflation-stabilizing policy tack of the 1980s and 1990s, since it was both temporary and not conducted in an environment of inflation instability.

Figure 2. Inflation Forecast Errors, 1961-2000. Note: This data is the difference between the actual inflation rate (CPI) and the surveyed inflation expectations for that date. The surveyed inflation forecasts in this sample are quarterly and are provided by the University of Michigan (SRC) "Surveys of Consumers" (<http://www.sca.isr.umich.edu/>), Table 19. CPI data are provided by the Federal Reserve Bank of St. Louis (FRED II) and are available at (<http://research.stlouisfed.org/fred2/>).



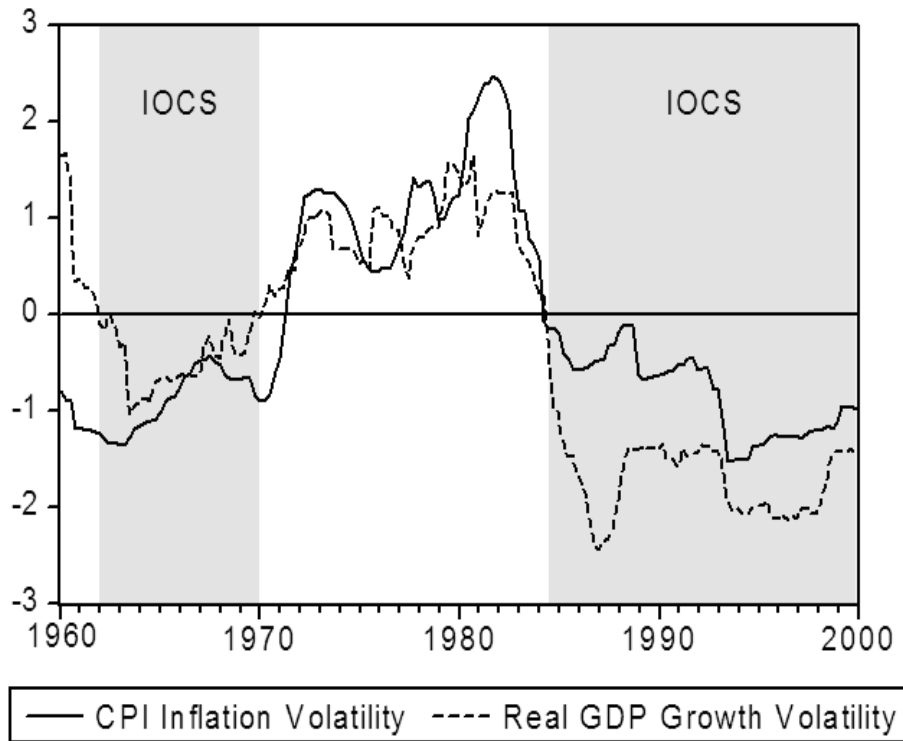
What about the link between inflation stabilizing policy and inflation uncertainty? We asserted previously that when policymakers act aggressively to stabilize inflation, they encourage information coordination for the public. Therefore, we expect a negative relation between the size of inflation forecast errors and periods when policy placed emphasis on inflation stability.¹³ We conjecture that inflation forecast

errors should be smaller and less volatile in the 1960s, the 1980s, and the 1990s. Figure 2 shows this prediction is indeed the case. We find by simple examination that the size of the forecast error is greatest in the 1970s.

We turn now to a central concept in this paper: the simultaneous decline in inflation and output volatility, or IOCS. In the aggregate, under a policy that emphasizes inflation stability, the predictive price stability current plans now possess is consistent with further inflation stability and output growing at its long-run rate. Within this economic environment, inflation stability and output stability can be sustained (up to a point), since the public's plans exhibit greater (price) stability. The linkage then flows from policy to inflation stability to IOCS.

Many researchers have documented the decline in economic volatility in the United States and elsewhere.¹⁴ Much of this work focuses on output stability. One consistent finding is that this work dates the decline in volatility to the 1980s.

Figure 3. IOCS, 1960-2000 (5-year moving standard deviation). Note: Data are from James Bullard, "Trading Trade-offs?" National Economic Trends. St. Louis: Federal Reserve Bank of St. Louis, December 1998. The data are transformed to 21-quarter (5-year) moving standard deviations for the CPI inflation rate and real GDP growth. The zero line indicates the average for each series. Shaded areas represent periods of IOCS (1962:I-1970:I and 1984:III-2000:I).



We measure inflation and output volatility using the standard deviation of the Consumer Price Index (CPI [rate of change]) and real GDP (growth rate), respectively. Our expectation is that periods of IOCS will coincide with a policy that emphasizes inflation stability as well as the public having lower inflation forecast errors. In short, IOCS should exist during the 1960s, 1980s, and 1990s.

We use Bullard's measures of inflation (percentage change in the CPI) and output (real GDP growth) volatility.¹⁵ Bullard constructs the measure so that zero signifies the average for the entire series. Using these series, we argue that IOCS occurs when both the inflation and output series exhibit below-average volatility. The correlation between the two series is 0.73.

Figure 3 shows that IOCS occurs between 1962:I-1970:I and 1984:III-2000:I. Figure 3 also shows that during the forty-one year period, only in four years, or portions thereof (1960, 1961, 1970, 1984), do the two series have opposite movements in volatility.

To summarize, if we consider United States IOCS performance in the last forty-plus years and classify this period by inflation-stabilizing policy stances, a few facts emerge. Between 1960 and 2000, policy practices that emphasize and de-emphasize inflation stability coincide with distinct IOCS and non-IOCS behavior. Among the more dramatic business-cycle episodes were the stagflation of the 1970s, the sharp disinflation of the early 1980s, and the expansions of the 1980s and 1990s.

EXPANSION DURATION

A traditional argument is that inflation instability can have adverse long-run consequences on economic development.¹⁶ The public is encouraged to divert its attention away from wealth-producing ventures. As inflation becomes more volatile, more resources are diverted to hedging and to speculation. Interaction with tax rules produces additional difficulties for firms as they manage their balance sheets.¹⁷ Consequently, due to the uncertainty of the real value of the expected future payments, capital inputs are reduced and long-run planning becomes increasingly difficult. The end result is that inflation reduces the scope and scale of activities that facilitate economic growth.

We argue that inflation instability, because it hinders economic coordination, can also affect the sustainability of an economic expansion. If we examine the business-cycle performance of the United States since 1960, we find an almost continuously sustained expansion in the 1980s and 1990s and a similarly lengthy expansion in the 1960s. These long periods of expansion occurred during periods of inflation stability and IOCS.¹⁸

IMPLICATIONS FOR POLICYMAKERS

A practical message in this paper is that all details of monetary policy implementation, regardless of the mix of institutional and procedural features, should be guided by a focus on information coordination. Information coordination can be accomplished by stabilizing inflation, which is a feasible policy goal. Procedures and institutions can be structured and restructured with information coordination in mind. However, we recognize that no policy is implemented with complete certainty. Policy implementation is a complicated process, with imperfect information pertaining to problem recognition, the effects of policy, and even shifts in policymaker preferences.¹⁹

For example, one concern about policy implementation deals with how fast and how high interest rates should be raised or lowered in response to a surge in inflation. Our recommendation is that interest rates should respond in a manner that is most consistent with maintaining information coordination (i.e., minimizing public forecast errors). But policymakers must be careful in discerning what caused the inflation shock. Demand and supply shocks may require more (less) aggressive interest rate responses.

We have downplayed the influence of fiscal policy, since inflation is a monetary phenomenon and is, therefore, influenced directly by monetary policy. Yet, that does not mean fiscal policy is irrelevant. Recall that government spending can be financed in the following ways: taxation, borrowing from the private sector, borrowing from public and private foreign entities, and borrowing from the monetary authority (monetization). Much of the debate about government spending focuses on when budget deficits are created.²⁰

This concern about the effects of fiscal policy is particularly relevant for the developing countries that run deficits and finance their debt issue using the inflationary route (monetization). We think the mechanisms for financing government spending should now include the trade-off between the means chosen and the effect such financing has on information coordination, and, by extension, inflation stability, IOCS, and economic development.

In the end, what we have attempted to do is focus attention on the best role a monetary policymaker can provide. In doing so, we contend there is a better chance to avoid economic calamities that result from self-inflicted—and preventable—monetary policy errors.²¹

Notes

¹ United Nations Development Programme, *Human Development Report 1997: Human Development to Eradicate Poverty* (New York: UNDP, 1997), 2.

² Inflation is defined as sustained increase in the price level. The price level is the weighted average of the prices of goods and services. The price level is measured by a price index, which is a sample of goods and services in a given period of time. The Consumer Price Index (CPI) is an example of a price index. The inflation rate is the percentage rate of change in the price level. Price or inflation stability can be defined as the achievement of a specific pre-specified inflation target or when citizens no longer account for actual or prospective inflation in their decision making. For further

background see Pierre L. Siklos, *The Changing Face of Central Banking: Evolutionary Trends since World War II* (New York: Cambridge University Press, 2002).

³ John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (London: Macmillan, 1936).

⁴ Since unemployment/employment is correlated with output, researchers often treat these two outcomes interchangeably.

⁵ A.W. Phillips, "The Relation Between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861-1957," *Economica*, New Series, Vol. 25, No. 100, November 1958, 283-299.

⁶ Milton Friedman, "The Role of Monetary Policy," *American Economic Review*, Vol. 58, No. 1, March 1968, 1-17 and Edmund Phelps, "Money Wage Dynamics and Labor Market Equilibrium," *The Journal of Political Economy*, Vol. 76, No. 4, Part 2: Issues in Monetary Research, 1967, July-August 1968, 687-711.

⁷ See, for example, John B. Taylor, "The Inflation /Output Variability Trade-off Revisited," *Goals, Guidelines, and Constraints Facing Policymakers*, in Jeffrey C. Fuhrer, ed. (Boston: Federal Reserve Bank of Boston Conference Series 38, 1994), 21-38. Note also that since output and unemployment are highly correlated they are sometimes used synonymously in this research.

⁸ F. A. Hayek, "The Use of Knowledge in Society," *American Economic Review*, Vol. 35, No. 4, September 1945, 526.

⁹ We do not ignore the possibility of deflation. However, an IMF Report noted that "there had been few sustained deflationary episodes in the post-Second World War period in the major economies." (Underline in original.) International Monetary Fund Task Force, "Deflation: Determinants, Risks, and Policy Options—Findings of an Interdepartmental Task Force," April 30 2003, 15. While we do not discount the possibility for a deflation we suggest that much of the harmful effects of a deflation occur when the deflation is unanticipated. We contend that unanticipated deflations (or inflation) are extremely unlikely when a policymaker consistently achieves an inflation target (implicit or explicit) and, thereby, steers public expectations and plans.

¹⁰ We argue these episodes signify fundamental structural relations that are repeated over many different eras. One such relation is the effect policy shifts have on interest rates and inflation. See Steven Sheffrin, *The Making of Economic Policy: History, Theory, Politics* (Cambridge, Massachusetts: Basil Blackwell, 1989), 77-79.

¹¹ Jim Granato, "The Effect of Policymaker Reputation and Credibility on Public Expectations: An Application to Macroeconomic Policy Changes," *Journal of Theoretical Politics*, Vol. 8, 1996, 549-570.

¹² We know from historical accounts that for part of the 1960s and nearly all of the 1980s, policy was trying to maintain inflation stability. See Herbert Stein, *Presidential Economics: The Making of Economic Policy from Roosevelt to Regan and Beyond* (New York: Simon & Schuster, 1985).

¹³ Inflation expectations surveys are conducted by the Survey Research Center at the University of Michigan and the results are published in the Survey of Consumer Attitudes. Survey respondents are asked approximately fifty core questions that cover three broad areas of consumer opinion: personal finances, business conditions, and buying conditions. We use the following questions that relate to measuring inflation expectations: 1. During the next 12 months, do you think that prices in general will go up, go down, or stay where they are now?; 2. By about what percent do you expect prices to go (up/down), on the average, during the next 12 months? If respondents expect the price level will go up (or down) on question 1, they are asked in the second question to provide the exact percent the price level will increase (or decrease), otherwise the second question is coded as zero percent. For details see <http://www.sca.isr.umich.edu/>.

¹⁴ Bill Martin and Robert Rowthorn, "Will Stability Last?" (Research paper, *UBS Global Asset Management*, July 2, 2004).

¹⁵ James Bullard, "Trading Trade-offs?" Federal Reserve Bank of St. Louis *National Economic Trends* (December 1998).

¹⁶ See, for example, Robert Barro, *Getting it Right: Markets and Choices in a Free Society* (Cambridge, Massachusetts: The MIT Press, 1996), 65-68.

¹⁷ See, for example, Martin Feldstein, "The Costs and Benefits of Going from Low Inflation to Price Stability," *Reducing Inflation: Motivation and Strategy*, eds., Christina D. Romer and David H. Romer (Chicago: University of Chicago Press, 1997).

¹⁸ To expand on this point further, consider the United States business-cycle performance since 1982 in comparison to all peacetime expansions recorded since 1854. The average duration for peacetime business expansions since 1854 is 30.5 months. In contrast, the average duration of the two peacetime

expansions between 1982 and 2002 was 106 months. See <http://www.nber.org/cycles.html>.

¹⁹ The data and “evidence” can at most be thought of as correlations. More rigorous examinations require models that transparently show the linkages we discuss above, and which have testable implications for many countries and many periods. For an example of linking policy effects to outcomes in this way, see Eric M. Leeper, Christopher A. Sims, and Tao Zha, “What Does Monetary Policy Do?” *Brookings Papers on Economic Activity*, Vol. 2, 1996, 1-63. For an example that relates inflation stabilization policy to IOCS in a more rigorous way, see Jim Granato and M.C. Sunny Wong, *The Role of Policymakers in Business Cycle Fluctuations* (New York: Cambridge University Press, forthcoming).

²⁰ What is missing from most of accounts about debt and deficits is an acknowledgement that deficits are really a “second-order” problem. The more severe problem is excessive government spending, since it is government spending that has the potential to crowd out private investment and make future generations poorer. Although the financing of government spending can have different effects, the real threat is the cumulative displacement of private funds, savings, and investment, which all add to things such as dividends, profits, and interest payments. These variables are indicators of changes in our capital stock. No one can be worse off with increases in the capital stock, although there will be distributional differences. Consequently, the harmful effects of government borrowing and taxation will be greater or less, depending on the total level of government spending.

²¹ We note that a good deal of policy failure can be attributed to non-monetary policy factors, including the absence of a stable set of institutions that provide incentives compatible with economic development and which encourage the efficient use of resources and the enforcement of contracts. These institutions, or rules of the game, include, among other things, the enforcement of private property rights and the rule of law.