

Friedman's Maxim and the Theory and History of Inflation

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Highlights

- Friedman's maxim holds that inflation is always and everywhere a monetary phenomenon.
- Inflation's causes are often fiscal because fiscal policy can affect "monetary" phenomena, either because of "fiscal dominance" or "time inconsistency."
- Prices and the money supply do not move in lock step when money demand is unstable, or when inflation is rising.
- The exchange rate and price level also can diverge when a country's productivity growth in the tradeable goods sector differs from its trading partners.
- Emerging market countries have higher and more volatile inflation owing to their institutional differences from developed economies.

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Introduction

Inflation is widely regarded as an economic curse, and above-average rates of inflation have been associated with adverse growth consequences (Barro 2013).²

The great economist, Milton Friedman, famously claimed in a 1963 interview that “inflation is always and everywhere a monetary phenomenon.” That statement is surely correct in a narrow sense. In a fiat money regime, the government has a monopoly on the supply of money. It can achieve any change in the exchange rate of its money relative to other currencies (one way to define inflation), or any change in the price level of goods and services denominated in its money (another way to define inflation), if it is willing and able to vary the supply of money as needed with the sole objective of achieving that exchange rate or price level.

A few points of clarification, however, are warranted. Friedman’s maxim does not mean that variation in the supply of money *causes* variation in prices. Under the historical gold standard, for example, prices were largely pre-determined by the established parity of the monetary unit with a certain amount of gold, and the money supply adjusted in response to the parity that was established: under the gold standard it was more accurate to say that the price level determined the money supply. More generally, it is often the case that the money supply is itself determined by other influences, so variation in the supply of money is not always the causal factor in driving changes in inflation.

For that reason, Friedman’s maxim leaves unanswered a central question of great interest: why do some countries seem to have so much more trouble with inflation than others. Why do some countries suffer from high inflation on average, and highly volatile inflation, while others enjoy low-inflation and low inflation volatility? What drives their “monetary phenomena” to be different?

Before turning to those causal questions, it is useful to raise another caveat: Friedman’s maxim should not be misunderstood to claim that the exchange rate of a currency and price level in a country where that currency is the medium of exchange always move in lock step with the outstanding amount of money.

The Stock of Money and Its Value Are Related, but Do Not Move in Lock Step

There are three sets of reasons that today’s stock of money may not move in sync with the value of money: First, with respect to the value of money expressed as the reciprocal of the domestic price level, there can be fundamental instability in money demand (meaning that when real demand for money, which we can denote as $(M/P)^D$, shifts, M and P no longer move together according to a stable functional form that connects the two. Money demand is not stable in the U.S. and many other countries today, and central banks generally do not use M growth as their primary predictor of P growth (although M and P may trend together in broad terms). In recent decades, the growing importance of volatile financial market transactions, and changes in payments technology, have produced major and unpredictable shifts in

² An earlier version of this note was presented as the Inaugural Lecture of the Moldovan School of Economics.

$(M/P)^D$ which has weakened the predictability of the empirical relationship between M growth and P growth.

Second, M and P may diverge even when the real money demand function is stable. $(M/P)^D$ can vary predictably with *expected* future money growth. When expected money growth is high, prices should begin to rise even before the money supply increases as the result of the fact that money demand falls when inflation – which taxes money holdings – is expected to rise. The typical formulation of this is that money demand (which in equilibrium must equal real money supply) takes the form:

$(M/P)^D = m(y, i)$ where y is current real GDP, i is the current nominal interest rate.

Note that $i = r + \left(\frac{\Delta P}{P}\right)^e$ where r is the exogenous real interest rate, $\left(\frac{\Delta P}{P}\right)^e$ is expected inflation.

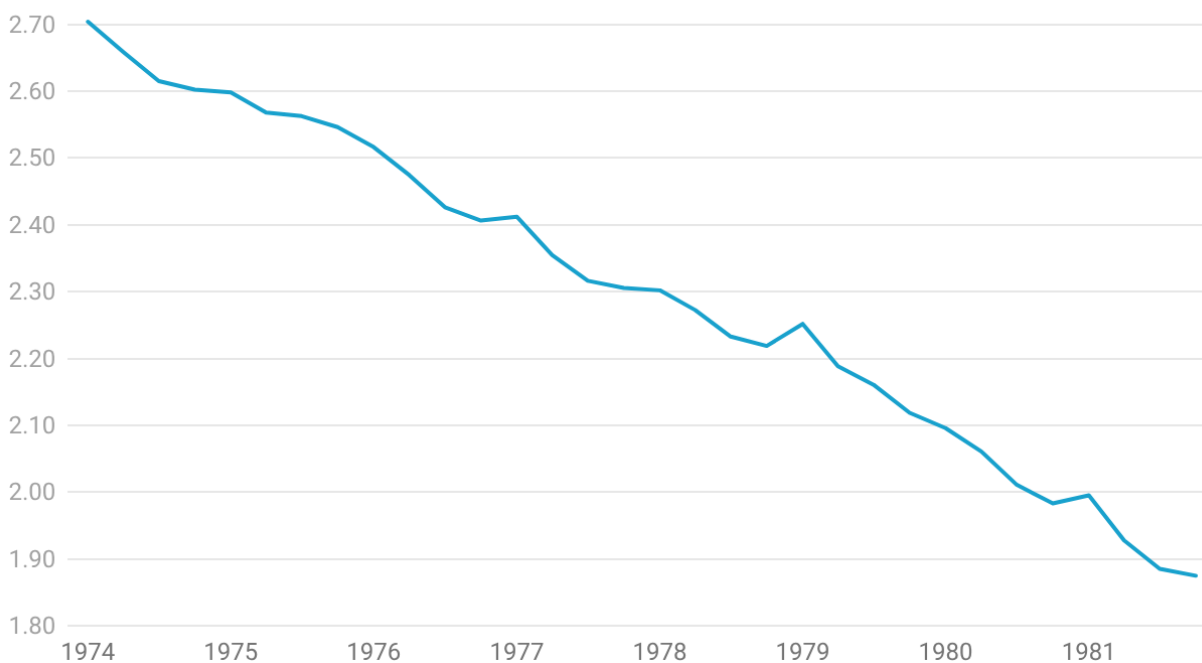
The observable influence that usually leads to very rapid and predictable money supply growth is growth in fiscal spending. There is an upper limit to the real demand for total outstanding government debt held by the public, and when you exceed that amount, you must print money to cover deficits. Another way to say that is that the ratio of public holdings of government debt relative to GDP cannot explode toward infinity, and when it starts to raise that concern, the market discount on debt rises dramatically, and central banks are forced to step in and buy the government's debt. That monetization of debt in reaction to excessive debt issues is called "fiscal dominance" of monetary policy because the fiscal constraint, not the monetary authority's targeting regime, determines monetary policy.

In fact, throughout history, high inflation has always been the result of a boom in spending (often related to wars) which leads to monetization of deficits. Friedman himself noted this early in his career and suggested as early as the 1950s that adhering to a low government debt growth rule was key to avoiding big inflations.

Fiscal Pressures and Inflation

Brazil's experience with accelerating inflation in the 1970s is an example of how money growth often results from high fiscal deficits. Brazil was a country with one of the highest average inflation rates in the world during the twentieth century. I began studying Brazil's inflation experience during a summer internship at the International Monetary Fund (IMF) and continued studying Brazilian inflation as part of my Ph.D. dissertation (which was eventually published in revised form as Calomiris and Domowitz 1989). Brazil's experience provides an example of how money and inflation can be closely linked even though (1) fiscal shocks are driving both, (2) the two don't move together in lock step, and (3) price changes tend to precede monetary changes.

Brazil Real Money Balances



Source: Calomiris, Charles W., and Ian Domowitz (1989). Chart displays the log of nominal M1 divided by the price level.

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During the 1970s, as inflation accelerated, rising to above 100 percent annually, real money holdings in Brazil (defined as currency plus bank deposits divided by the price level) declined by half. As a summer intern in 1981, I was asked to explain that decline in Brazilian real money balances, and also to explain why changes in prices and exchange rates preceded and forecasted changes in money, not vice versa (which was the pattern exhibited in most other countries). My research showed that Brazil's deficits were routinely and predictably monetized. People understood that the best way to observe spending increases was to monitor increases in government debt. When there was a shock to government debt, prices and exchange rates jumped immediately, and eventually the monetization of the debt occurred predictably. (M trailed P and E, but all three were driven by changes in debt).

Since then, I have found that experienced IMF staff, who are often charged with advising countries to manage troubled currencies, are well aware that big exchange rate and price level changes generally reflect government spending growth; their internal joke is that the initials of their organization actually stand for: "it's mainly fiscal."

Why do governments allow themselves to get into this trouble so often? After all, inflation is very unpopular and harmful, and increases in inflation often result in political backlash. One answer is force majeure. If you are fighting a war, it may not always be possible to control government spending, and there are political and economic limits on taxation capacity, so a government may find itself unable to control the growth in its debt. Then it may be forced by the upper bound on the demand for real government debt to monetize deficits, which is in essence another kind of tax (the “inflation tax,” where inflation causes citizens to lose wealth, and governments to gain it as the result of the erosion of the value of holdings of money, and the tax also applies to outstanding government debt if the inflation increase is not anticipated at the time the bonds are issued). Even though the inflation tax is unpopular, in very costly wars (like the U.S. Civil War, or World War II) governments are forced to be myopic (their survival is at stake).

Even when fiscal shocks are not very large, governments sometimes prefer to monetize their deficits – despite the inflation effects that this produces. Consider the U.S. experience from the 1960s to the 1980s. Lyndon Johnson engaged in a spending spree combining Great Society domestic spending and Vietnam War spending. Although annual government deficits relative to GDP never exceeded 2.8 percent from 1960 to 1974, and the government debt-to-GDP ratio remained at a modest level throughout that period, the government pressured the Fed to keep interest rates low to accommodate its deficits. Ultimately, that accommodation produced an accelerating inflation, which also produced rising interest rates over more than a decade – a period that we now call the Great Inflation.

Because prices were slow to adjust to monetary growth, much of the political cost for that inflation was born by the Nixon and Ford Administrations (who tried to fight it with price controls, which did not work), and by the Carter and Reagan Administrations, who made the difficult political decision to appoint and support a disinflationary Fed Chair, Paul Volcker. Carter lost the election of 1980 partly because of the negative real growth caused by inflation fighting, and Reagan almost lost re-election in 1984 because of the recession caused by continuing inflation fighting. My point is that inflation can be convenient to spenders like Johnson, and very unpopular and costly to subsequent politicians once it arises and has to be faced.

This historical overview points to an important fact: Although the so-called “flexible inflation targeting” policy regime—meaning targeting low inflation, albeit allowing some countercyclical monetary policy to stabilize real GDP while pursuing a long-run inflation target— has emerged as a common best practice that has helped central banks around the world to keep inflation stable in recent years, whether we will experience big inflation problems in the future is not really diminished much by that improvement in central bank practices.

Fiscal policies are the main driver of big inflations. There is now substantial risk around the world that inflation will happen as the result of cumulatively unsustainable fiscal deficits that will require monetization and high inflation as a matter of arithmetic. This potential inability of central banks to stop inflation produced by a fiscal train wreck is called “fiscal dominance” of inflation outcomes.

Inflation, Time Inconsistency and Central Bank Independence

A harder question to answer pertains to smaller inflations. Why is it that, even in the absence of fiscal dominance, governments and their monetary authorities find it convenient to create inflation? Government leaders and their political allies benefit from spending and don't bear all of the economic or political costs of the future inflation that will result from monetization (which they may view as the *next* government's problem).

The decision by a government to choose to inflate as a means of funding itself, even though inflation is harmful and unpopular, has been modeled in many famous economics papers as a predictable outcome of the government's inability to commit not to inflate. That inability to commit is called the "time inconsistency problem."

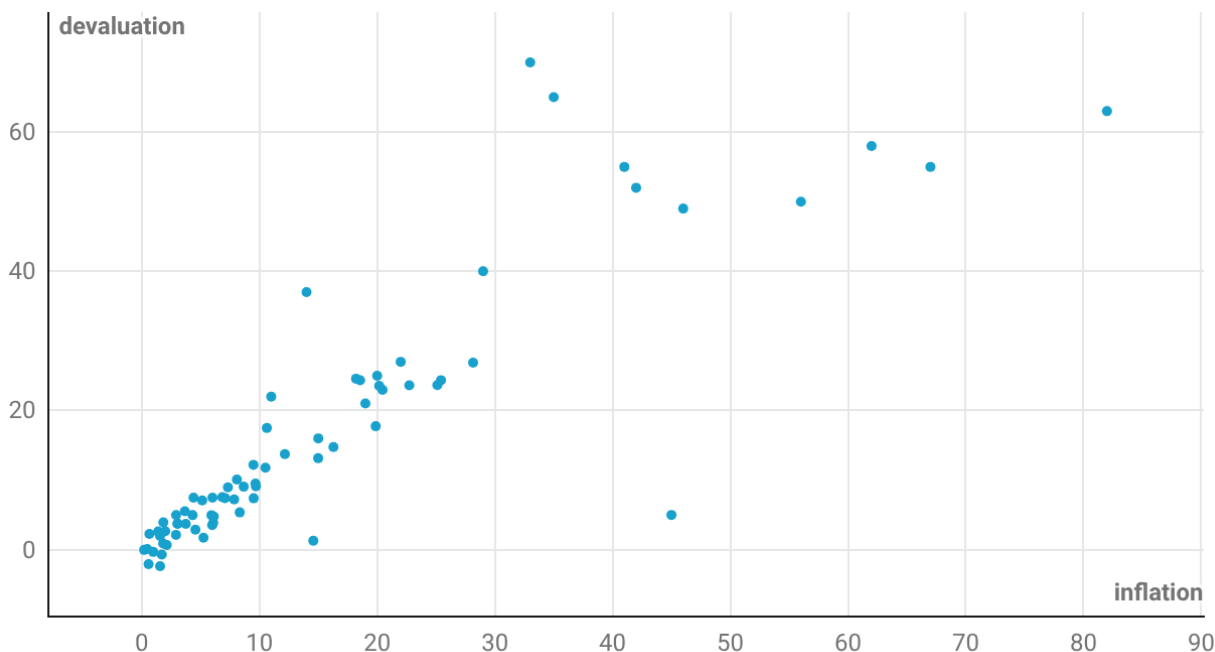
Kydland and Prescott (1977) formulated the problem, while Barro and Gordon (1983), Rogoff (1985) and Walsh (1995) pointed to solutions, showing that vesting monetary authority in an independent central bank with a clear mission to pursue price stability, and a reputation for opposing myopic inflation and either the operational independence to avoid it, or a private financial incentive to avoid it (through the structure of the central banker's salary), could solve the time-inconsistency problem. According to this literature, there is substantial empirical evidence (summarized in a literature review by Eijffinger and de Haan, 2026) supporting the proposition that establishing an independent central bank with a low inflation target, appointing credible inflation fighters as central bankers, and structuring employment contracts that reward central bankers for preventing inflation are all helpful for preventing myopic inflation.

The Two Prices of Money Often Diverge

For a given monetary path, and a given real money demand, the domestic measure of inflation (growth in the price level) and the international measure (the depreciation of the nominal exchange rate) do not always track one another. This is understandable as a matter of economic theory, and economists have agreed on the main explanation since David Ricardo's analysis of the question in the early nineteenth century, formalized by Roy Harrod in the early 20th century, and given its full mathematical form in what is now known as the Balassa-Samuelson theorem (published separately by Balassa, 1964, and by Samuelson, 1964).

According to that theorem, changes in a country's relative productivity growth (which can reflect either physical productivity changes or changes in the global relative value of its exports) affect the real exchange rate (defined as the ratio of the nominal exchange rate between two currencies and the ratios of price levels of those same two countries). If a country experiences low productivity growth in its tradable goods sector, that translates into real exchange rate depreciation, which implies that – for a given path of domestic prices – the nominal exchange rate will have to depreciate relative to its past.

Annual Inflation versus Devaluation in Various Countries: 1972-1996



Source: Beim, David O., and Charles W. Calomiris (2001); Horizontal axis is mean average inflation relative to U.S. dollar; vertical axis is mean devaluation versus the U.S. dollar.

Created with Datawrapper

Changes in real exchange rates can be substantial. In the above graph, drawn from Beim and Calomiris (2001), some countries—those to the right of the 45 degree line—experienced long-term real exchange rate appreciation relative to the U.S. over the period 1972-1996, while those to the left of the 45 degree line experienced real exchange rate depreciation.

Inflation Challenges Around the World Today

Let's take these theoretical and historical building blocks and apply them to the world today. The big question for the U.S., Europe, China, and many other countries today is whether they will be able to rein in spending to keep their government Debt/GDP ratio from spiraling upward and out of control. The main problem gripping governments around the world are *safety net* policies – most importantly, health insurance and retirement benefits that governments provide – and secondarily, *financial safety net* bailouts of banking systems, which in the late 20th century became a chronic contributor to ballooning government debts in emerging market (EM) countries.

Although banking bailouts have been major fiscal shocks in emerging economies (with bailout costs often raising government debt-to-GDP by more than 20 percent), they haven't had as large a government debt impact in developed economies because financial losses/GDP tend to be much higher for EM countries on average. The 2008-2009 Subprime Mortgage Crisis in the U.S. had a bailout cost less than 3 percent of GDP, while the costs of EM crises in Mexico (1995), Thailand (1997), Korea (1997) and Indonesia (1997) all were greater than 20 percent of GDP (Indonesia's was an extreme case at roughly three times that percentage).

The main fiscal threat for developed economies comes from the other safety net policies: medical and retirement benefits that were politically popular to enact have been outstripping their economies' abilities to pay for them. The U.S. and France are prominent examples of unwillingness to reduce spending/GDP even as Debt/GDP grows to the point of unsustainability. France is an extreme case in rejecting any attempt to even extend the retirement age to counter the social costs of pensions. The percentage of people in France today who work after age 65 is only 4 percent, in contrast to 7 percent in Germany, 9 percent in the UK, 20 percent in the U.S., and much higher percentages in Japan and Korea.

The fundamental arithmetic of debt unsustainability is simple. Consider a case where Government debt/GDP has reached 100 percent. Suppose inflation is currently zero. Suppose (for simplicity) that the government isn't going to spend or tax anything in the future, except to pay interest on its existing debt. Further suppose that the current interest rate is $r > g$ (where g is the rate of real economic growth). The growth in debt implied by these assumptions is unsustainable (the debt/GDP ratio trends toward infinity) unless debt monetization occurs, which means inflation must increase. Another example of an unsustainable path would be where government debt/GDP has exceeded 100 percent with $r = g$. In both cases, the explosive path of government debt/GDP means that the central bank will have to monetize debt to keep the ratio of public holdings of government debt/GDP from growing without limit, which would eventually produce a debt default.

In an article I published recently in the St. Louis Fed's Review (Calomiris 2023), I showed (as many others have before me) that current U.S. spending on Medicare and Social Security (and also defense) are producing predictable future deficits that will result in inflation rates that will be quite high (almost certainly greater than 10 percent, and perhaps much greater than that) unless promised "entitlements" and military spending are curtailed. The U.S. has known about this unsustainability problem for decades and has done nothing to solve it for a simple reason: the political costs of taking action to reduce benefits are too great. Politicians don't want to cut spending because they believe it is unpopular to do so, a belief that reflects the electorate's apparent lack of interest in addressing the problem. It may seem puzzling that young people don't care more about the growth of government debt, given that they will be the ones to pay the price of unsustainable debt growth, in the form of inflation and/or severely reduced benefits (the longer one postpones benefit reduction, the larger the annual reductions will have to be to prevent inflation). The U.S. currently has a government debt/GDP > 100 percent and that ratio is rising rapidly.

It is hard to predict exactly when people will conclude that future spending reform is not going to occur to solve the debt problem, which will cause a big rise in bond yields in anticipation of a permanent increase in

inflation. Based on historical examples, a reasonable guess would be that it could happen in less than 5 years.

How do unsustainable debt crises usually play out? There is a book currently in progress by George Hall and Tom Sargent, building on several of their papers about the history of bond markets reactions to big fiscal spending episodes. They show how wars cause government debt to balloon and end in high inflations (Hall and Sargent 2021, 2022, 2025). Their primary finding is that, perhaps surprisingly, bond markets tend not to anticipate very well the unpleasant arithmetic of unsustainable debt, and then the market suddenly reacts with very large (unanticipated, but anticipatable) losses to the value of bonds. That is an interesting fact because it tells us not to take too much comfort right now in the complacency of global bond markets. You might wonder if bond investors know something that economists don't know that makes them worry less about the fiscal risks we face. The answer from the history of bond market collapses after fiscal binges: probably not. Bond investors seem to be unable to learn to anticipate the consequences of unsustainable accumulations of government debt.

Perhaps strangely, the market and commentators focus on short-term inflationary influences much more than on long-term inflation risks. Inflation in the U.S. has been elevated for several years, and inflation expectations of consumers (measured by the Michigan survey) for the next five years are above 4 percent. So there clearly has been some loss of credibility about Fed inflation targeting. At the moment, there is much relief because inflation seems to be declining and there is also some cause for optimism because of Kevin Warsh's appointment as Fed Chair, given his history as a staunch anti-inflationary policy maker. But much of the discussion of inflation ignores the pressing medium-term concern about the possibility of "fiscal dominance": that the amount of government debt might dominate flexible inflation targeting or the desires of monetary policy makers because of the need to monetize government debt to avoid a default. From that perspective the 3 percent current inflation and concerns about Warsh's commitment to get back to 2 percent may be beside the point, as inflation in the U.S. could be in the double digits within a few years if major spending or taxation reform isn't undertaken.

Inflation is not the only possible unpleasant outcome of the unsustainable accumulation of government debt. If you issue debt in a currency that you don't print, then an unsustainable debt buildup leads to a debt default. Note how quickly the Greek crisis and debt write down of 2010-2012 occurred once its debt accelerated above 100 percent in 2010 (rising to a debt/GDP ratio of about 130 percent).

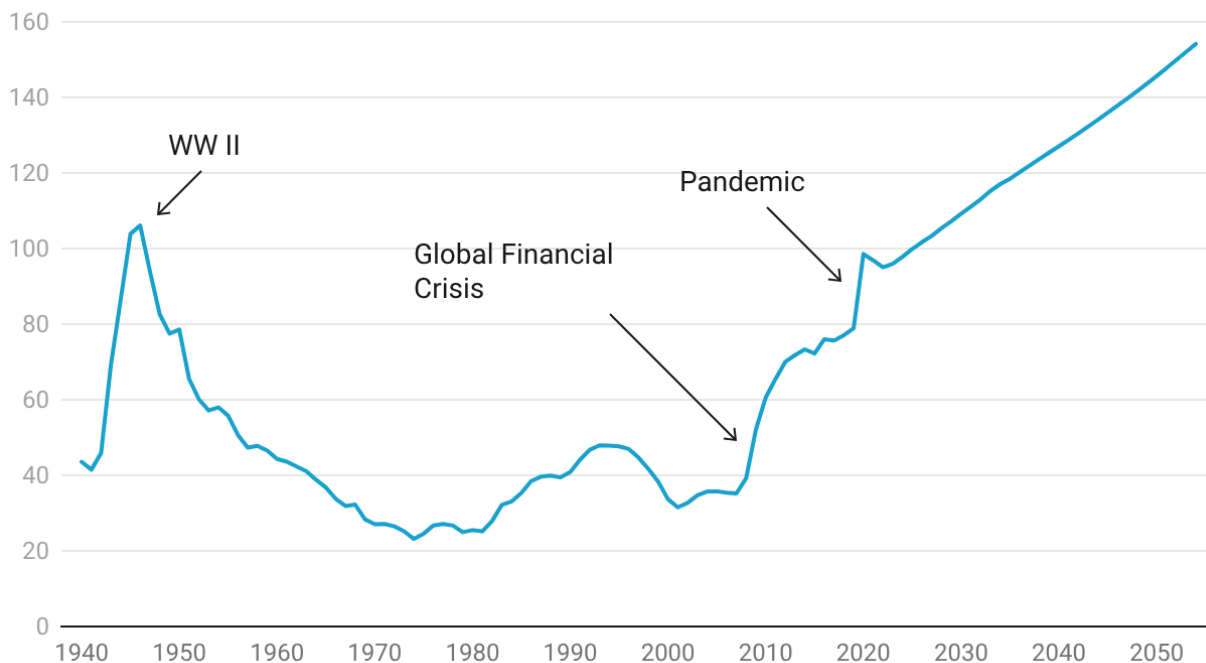
France, like Greece, is a member of the eurozone and is not unilaterally able to decide to monetize its deficits. Its debt-to-GDP currently at 113 percent is projected to rise to 125 percent by 2030, and France is now clearly the weakest fiscal link in the eurozone (other eurozone countries that were major risks in the past, such as Greece, have either declining or more slowly rising debt-to-GDP trajectories). French ten-year bonds have a yield to maturity (at this writing) of 3.3 percent, which is substantially above those of Germany (2.7 percent) and Netherlands (2.8 percent). It is quite possible that within a few years the market will conclude that France's debt/GDP ratio, and lack of political will for fiscal reform, imply that it will have to default, or get bailed out by the ECB through a monetization of its debt.

The latter is by far the more likely scenario. In 2022, a new funding mechanism was established at the ECB, which is called the Transmission Protection Instrument (TPI). The TPI can be used to counter “unwarranted, disorderly market dynamics,” and would permit the ECB to purchase government debt of any member country in response to declining market prices. Although French fundamentals clearly justify a major price decline in French debt, the ECB would be free to view such a decline as “unwarranted,” and doing so would be the path of least resistance. If the TPI were used to bail out the French, then the ECB is supposed to prevent an acceleration of inflation by reducing its purchases of other debts. But how will Germany, Netherlands, Spain, and others react to this back door bailout at their expense? It is possible that France’s fiscal crisis could lead to a euro-zone decision to tolerate a rise in inflation so that other countries’ debt can continue to be purchased by the ECB alongside increased purchases of French debt.

In the French case, it is also noteworthy that its banks are among the most vulnerable in the eurozone. According to the SRISK model of the Stern School at NYU, France’s banks are much more vulnerable to a major global shock than the banking systems of other European countries, and the cost of recapitalizing them in the wake of a major global shock (one associated with a 40 percent stock market decline) could add substantially to the French government’s debt/GDP ratio (roughly 9 percentage points, given the Stern School estimate of an SRISK for French banks of \$280 billion).

The architects of the euro were aware of the risk of fiscal free riding by profligate member governments. When the eurozone was founded, its founders created a common fiscal standard known as the Maastricht Criteria, which limited each country’s annual fiscal deficits to 3 percent of GDP and outstanding government debt to 60 percent of GDP. Unfortunately, this standard has proven to be a toothless form of fiscal discipline. France routinely meets with the managers of the European Deficit Procedure (EDP) to promise fiscal reforms consistent with returning to levels consistent with the Maastricht Criteria, but so far these have never materialized, and there is no obvious mechanism through which the EDP can produce fiscal reform in France.

Federal Debt to GDP Ratio



Source: Congressional Budget Office <https://www.cbo.gov/publication/61187>; series plotted is the ratio of federal debt held by the public relative to nominal GDP.

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Inflation Risks in Developing Economies Reflect Different Institutional Circumstances

While developed countries struggle to reconcile their welfare state policies with arithmetic, developing countries face somewhat different inflationary threats. Despite less generous social safety nets, historically developing countries have tended to have higher average inflation, and much more volatile inflation. Developing countries can see big jumps in inflation – like the rise to nearly 35 percent inflation that Moldova suffered in 2022. What is driving those differences in inflation experiences?

The monetary system of a developing, small, open economy operates under a different institutional environment. Their taxation systems are less developed, their connections to the world through international trade are riskier, and their financial systems tend to be dominated by banks, although those banking systems are sometimes small relative to GDP—reflecting the fact that the availability of bank credit is frequently constrained by a combination of weak creditors' rights protections and policies that direct bank credit unprofitably to support favored borrowers. All three of these factors have important consequences for inflation risk.

First, constraints on fiscal resources (underdeveloped systems for collecting taxes) tend to be a bigger problem in developing countries, and the consequent reliance on inflation taxation is more common, especially in the form of employing “financial repression” (McKinnon 1973) through high and non-remunerated reserve requirements for the captive banking system (which are a way to increase the tax base on which the inflation tax is charged). But this has major negative consequences for growth by limiting the banking system’s ability to supply loans.

Second, the lack of export diversification, which can produce sudden declines in export productivity, can also be a problem driving inflation. A big shift in the global terms of trade against a small, open economy with undiversified exports can put it in the position of facing a large real devaluation shock that requires it to allow its currency to depreciate abruptly to maintain its domestic inflation target. Because a terms-of-trade shock is a supply shock, it is unwise to try to undo its effects with monetary policy, and trying to do so will result in a rise in domestic inflation and an even larger eventual currency depreciation. But because currency depreciation can be very disruptive to imports and to import-dependent industries, it can be tempting for governments to try to offset the international competitiveness shock by some combination of monetary and fiscal expansion. In many cases in the 1980s and 1990s, those actions to stabilize the exchange rate ended disastrously with an eventual collapse of the economy, a rise of inflation, a major currency devaluation, and debt defaults that often caused much more economic pain than the initial exchange rate adjustment that was avoided.

The 1990s are full of examples of so-called twin crises (collapse of banking systems and exchange rate pegs) in EMs that resulted from precisely this sort of unsustainable exchange rate pegging. The East Asian economies are among the clearest examples. As slowing productivity growth led to a decline in global competitiveness, the consequences for exchange rates were resisted at first using microeconomic tools to prop up producers with subsidized credit, while keeping exchange rates overvalued, which eventually led to exchange rate devaluations, sharp recessions, inflations, and banking system collapses.

In the Korean case, as productivity growth in exports declined – partly reflecting the protected status of low-productivity incumbent firms that enjoyed favored access to bank credit and implicit government guarantees on their international dollar-denominated bonds – the government maintained its exchange rate peg despite the rising overvaluation problem due to declining productivity. Protected Korean firms were not forced to improve their competitiveness despite increasingly visible problems in the 1980s and 1990s. Instead, their productivity and profitability continued to decline. This resulted in an amassing of non-performing bank loans that produced a 30 percent of GDP surge in government debt when the banks were bailed out (Calomiris and Jaremski 2024).

The combination of greater macroeconomic exposure to terms-of-trade shocks in developing economies and their desire to try to offset those shocks’ effects on economic growth and employment go a long way toward accounting for higher and more volatile developing country price inflation and currency depreciation. But that is not to say that developed countries are immune to the same influences. The OPEC oil price shocks of the 1970s were adverse terms-of-trade shocks for developed countries that were oil importers. Policy makers in those countries, including in the U.S., sometimes blamed the increased relative price of

oil for the increase in inflation that followed it. That is a fatuous claim – and one that illustrates the usefulness of Friedman’s maxim: it was the expansionary monetary policies that those countries employed to offset the oil price shock that caused inflation to accelerate, not the rise in the oil price, per se.

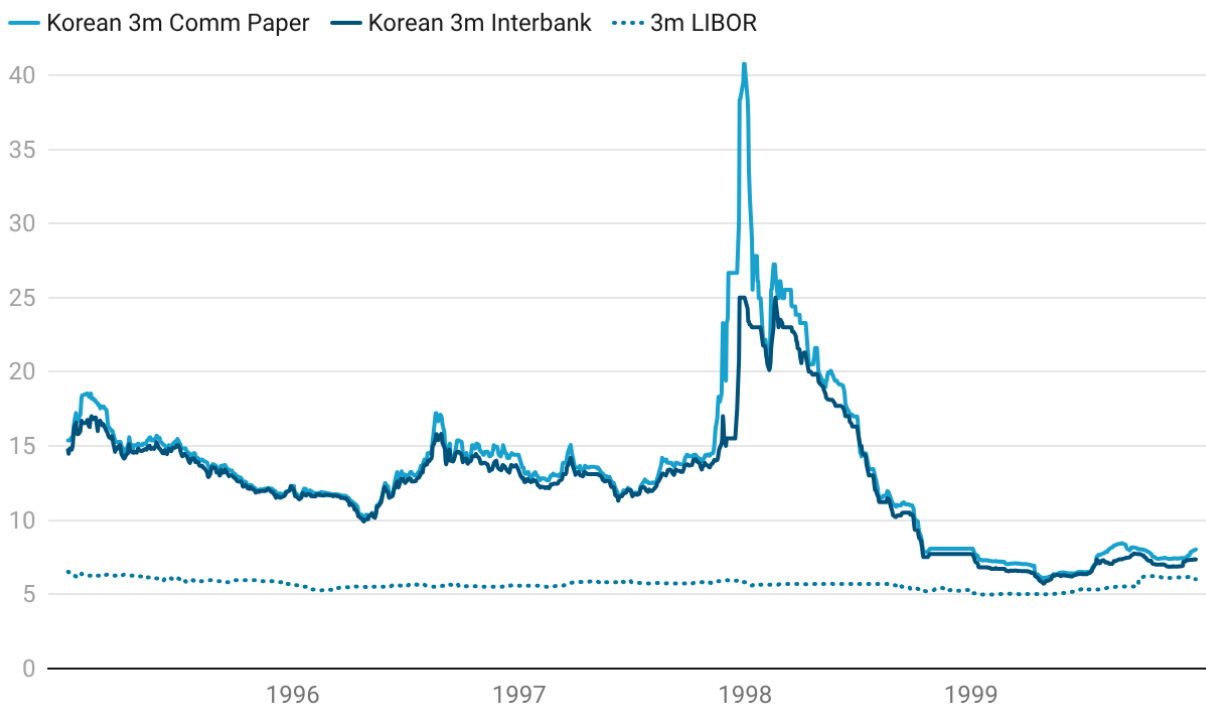
Exchange Rate: Korean Won per Dollar



Source: Bank of Korea, <https://snapshot.bok.or.kr/dashboard/A2>

Created with Datawrapper

Korean Short Term Interest Rates: Percent



Source: Bank of Korea, <https://snapshot.bok.or.kr/dashboard/A2> and Macrotrends, <https://www.macrotrends.net/2520/3-month-libor-rate-historical-chart>

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Third, Inflation in EMs can also be driven by shocks that cause sharp increases in capital inflows. Capital inflows from abroad can be very large relative to the existing banking system and the stock of central bank liabilities in small, open economies. An important implication is that you cannot manage monetary policy the same way developed countries do. In particular, relying only on moving the short-term interest rate up and down will not work as a means of achieving flexible inflation targeting.

Consider the case of Colombia in 2007-2009. In the face of the U.S. financial crisis shock, and the declines in U.S. interest rates that accompanied it, Colombia experienced large capital inflows because foreign investors wanted to take advantage of its (now relatively higher) interest rates. But capital inflows translate into foreign currency accumulation by a country's central bank, which fuels loan and deposit growth in the banking system. As Colombia saw its current account deficit widen due to capital inflows, it also saw a sharp acceleration of loan and deposit growth, and consequently, higher domestic inflation.

Its initial response was to raise its interest rate (which in a large economy like the U.S. would cause the money supply to contract). But in Colombia the rise in the interest rate (eventually by 4 percentage points) caused even more capital to flow in, fueling even more inflation. Then the central bank and other authorities coordinated a combined macroprudential financial system response to raise bank capital and provisioning requirements, raise bank reserve requirements, and impose a special reserve requirement on short-term capital flows (the so-called *encaje*), which succeeded in ending the capital inflow surge, which resulted in reduced loan growth and inflation, allowing the economy to achieve a soft landing that was quite unusual in 2008-2009. This example illustrates that the monetary authority in a small open economy not only faces bigger shocks but also needs a broader toolkit to deal with them.

In conclusion, this brief survey of the theory and history of inflation shows that a country's inflation experience is best seen as a mirror of its political and economic institutional circumstances – including its political system, its level of financial and economic development, its trade opportunities, and especially its fiscal resources. In that sense, the impression that one might get from the simplicity of Friedman's maxim can be misleading. Friedman's maxim may be correct in a narrow sense, but it also may be viewed as an empty truism in terms of its ability to understand a country's inflation experience: inflation's causes aren't "always and everywhere" the same and, differences across countries in their average inflation and its variation reflect unique aspects of a country's economic structure and identity.

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