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## **Money, Monetary Policy, and Central Banking**

### **Anna Schwartz – The Policy Influence**

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## Summary

Anna Schwartz's insights and careful analysis of the forces shaping institutions have contributed greatly to our understanding of money, central banks, and monetary policy. We discuss these contributions in the context of three issues: The first concerns governments' role in money. First, we focus on Anna's contribution to our understanding of the quality of money. In this context we consider how the acceleration of globalization and developments in information technology has, as an external development, forced improvements in institutions and social arrangements. The second issue concerns the potential for currency boards to serve as an intermediate institution in the evolution toward and, perhaps now, away from so many central banks and sovereign monetary authorities. Finally, we turn our attention to current issues in the implementation of monetary policy.

## 1. Introduction

Among the most salient features of Anna's body of work is the breadth of the perspective she brings to economic analysis. For example, a common thread running through Anna's published works on any subject over the decades has been the role of institutions and the political context in which institutions evolved—positively or negatively. Long before Robert Fogel and Douglass North emphasized the role of institutions and political economy, Anna was consistently providing an institutional perspective. Similarly, long before James Buchanan emphasized what became the public choice school of economic thought, Anna was employing in her writings what today we would call public choice issues. The importance of the elements of institutions and public choice in analyzing money, central banks, and monetary policy is more evident today than ever.

Institutions, of course, have always played a central role in the Austrian tradition. In work with Milton Friedman, Anna describes a certain paradox that arises in the Austrian view on institutions, particularly in the writing of Hayek: “His latest works have been devoted to explaining how a gradual evolution—a widespread invisible hand process—produces institutions and social arrangements that are far superior to those that are deliberately constructed by explicit human design.”<sup>1</sup> Yet Hayek recommends specific policies such as the introduction of currency competition. “On one hand, we are observers of the forces shaping society; on the other, we are participants and want ourselves to shape society.” Evolved institutions may be bigger and wiser than any

individual, but it seems clear that individual contributions to intellectual discourse are essential to the increased wisdom that becomes embedded in evolving institutions.

Anna's insights and careful analysis of the forces shaping the institutions of money, central banks, and monetary policy have clearly contributed to enhanced institutional wisdom. We discuss these contributions in the context of three issues: The first concerns governments' role in money. Drawing on Friedman and Schwartz (1986), we will focus on Anna's contribution to our understanding of what we call the quality of money. In this context we will consider how the acceleration of globalization and developments in information technology has, as an external development, forced improvements in institutions and social arrangements. The second issue concerns the potential for currency boards to serve as an intermediate institution in the evolution toward and, perhaps now, away from so many central banks and sovereign monetary authorities. Our discussion draws heavily on the insights in Schwartz (1993). We then turn our attention to current issues in the implementation of monetary policy.

## **2. Government's Role in Money.**

The *Monetary History of the United States* (Friedman and Schwartz, 1961) is one of the most influential books of our time. That volume, which originated as Anna's dissertation and was subsequently published as a co-authored volume with Milton Friedman, became the bible for all graduate school studies of money in subsequent decades. It became a basic foundation for students interested in the study of money, monetary policy, and central banking.

Milton had shortly before written an article that also was widely read in graduate schools. That essay, “The Quantity Theory of Money, a Restatement” (Friedman, 1956), was very important to the evolution over the next couple of decades of the activity we called monetary policy. However, the article published in 1986 by Anna and Milton, which is not nearly so famous, is much more relevant to where we stand today in our thinking about these topics. They called their article “Has Government Any Role in Money?”<sup>2</sup> We think they should have called it “*The Quality Theory of Money – A Restatement.*”

### 2.1. *The Quality of Money*

A common view of the role of money in the economy can be characterized in the context of a production function. Traditionally, economists talk about things being produced using some combinations of land, labor, and capital—where capital is taken to mean tools, machines, buildings, and so on. Productivity—or productive efficiency—improves when the same amount of output can be obtained with less of at least one of these inputs. Sometimes economists treat money as a factor of production that is separate from, and in addition to, land, labor, or capital.

This is not a useful way to think about the role of money. It tends to be derived from—and maybe to reinforce—a notion that there is not enough money in circulation. This view originated in the banking school of the nineteenth century. More recent forms are perhaps manifest in recent claims of Fed critics who assert that current monetary policy is starving the economy of liquidity. Such a false diagnosis is dangerous because

it usually is accompanied by a prescription that monetary authorities can make people better off by creating money units at a faster rate.

A more fruitful way to think about the role of money in a market economy is one in which money liberates resources—especially those used to gather information and to conduct private transactions. This view draws attention to the importance of the quality dimension of money. That money facilitates transactions appears to be clear to everyone. Its role in enhancing market knowledge about relative prices, however, is less well understood. Money's effectiveness depends largely on its quality. When the value of money is stable, households and businesses have reliable information about the relative value of goods and services. They can make sound economic decisions, and this in turn leads to economic prosperity. When the value of money is unstable, its quality deteriorates, requiring additional resources to conduct the same level of economic activity.

Anna and Milton maintained this latter view of money when they questioned whether money market mutual funds would have been invented in the absence of inflation, that is, had the quality of money not diminished. For example, "...the rise in nominal interest rates produced by the rise in inflation converted government control of interest rates in the U.S. via Regulation Q from a minor to a serious impediment to the effective clearing of credit markets. One response was the invention of money market mutual funds as a way to avoid Regulation Q. The money market funds performed a valuable social function. Yet, from a broader perspective, their invention constituted social waste. If either the inflation had not occurred or banks had been free to respond to market forces, there would have been no demand for the services of money funds, and the

entrepreneurial talent and other resources absorbed by the money market mutuals could have been employed in more socially productive activities” (1986, p. 39). Whether or not one believes money market funds would have *ultimately* emerged in some form or another, their point is surely still valid.

## 2.2. *Brand-Name Money*

We often hear the expression “money talks.” It means that money achieves a desired action. I’m going to use it in a different way. Money communicates important information: the relative value of goods and services. The whole world knows we are experiencing a revolution in communications technologies. We should expect that our monetary system and monetary institutions will also be altered in fundamental ways.

Like other communications systems (such as cell phones), we sometimes have clear, uninterrupted signals. At other times there is static or interference that distorts the signal. The same is true of money. The clarity of the signal is the quality dimension of money. Bad monetary policy induces static that interferes with the proper functioning of markets. A monetary policy that maintains the value of money, on the other hand, economizes best on the use of other real resources in gathering information and conducting transactions.

During the course of the past decade, we have seen a dramatic increase in the tendency of ordinary people to choose the currency of another nation, both as their preferred standard of value and—when not effectively prohibited—as the medium of exchange. Reputation and branding (hence quality) are important dimensions of money just as they are to other goods and services that must compete in an increasingly

borderless world of commerce.<sup>3</sup> Globalization and improved information technologies have improved the ability of people around the world to assess the quality of alternative brands of currencies.

### *2.3. Competition among Brand-Name Currencies*

As one possible protection against periodic government-induced inflations, Anna and Milton argued that one “alternative has been foreign currency which has occasionally been resorted to both as unit of account and medium of circulation, but again only under extreme provocation.” Since the time they wrote that statement, fourteen years ago, we have come a long way to the point today where the idea of using foreign currencies does not seem so extreme.

Also in their essay, they noted that “the unit of account has, invariably or nearly so, been linked to a commodity. We know of no example of an abstract unit of account—a fiduciary or fiat unit such as now prevails everywhere, having emerged spontaneously through its acceptance in private transactions.”<sup>4</sup> That statement causes us to pause and think carefully about the prospects for a successful euro. It has been increasingly common in the press over the last year to see references to the Deutsche mark, or French franc, or other European currencies being “pegged” to the euro. But that cannot possibly be true. The opposite must be true for at least the next couple of years.

There are many currencies in the world today—more than 150. There are only a few standards of value—fewer than a dozen. A hundred years ago there was only one standard of value—gold—but already many national currency units. A dominant trend of the past century was the proliferation of national currencies, especially as new nation-



states emerged from the breakup of the colonial empires and the Soviet Union. That trend may well have been broken just as the century ended.

Symbols of nationhood have generally included a flag, an army, a currency—and a central bank to issue the currency—along with legal institutions and other characteristics of sovereignty. At times, public discourse has tended to treat the subject of national currencies much like flags—important symbols of national identity. At that level, the issue of whether a currency unit was an independent standard of value or merely a domestic name for some other monetary standard was not so important.<sup>5</sup> However, the notion of an independent monetary policy means that national currencies become something more than pieces of paper and metal coins for displaying images of national heroes and monuments. It means that their supplies are determined by independent central banks.

### **3. Central Banks, Currency Boards, and Dollarization**

The number of central banks increased substantially after World War II as former colonies became independent nations. The dominant monetary system among colonies was one that relied on currency boards for establishing monetary stability. The newly formed nations, however, abandoned the currency-board system for a number of reasons, which Anna discusses in her article titled, “Currency Boards: Their Past, Present, and Possible Future Roles,” (Schwartz 1993).<sup>6</sup> She notes that “Currency boards lost their standing as valuable institutions for establishing monetary stability after World War II because of the dramatic change in conventional intellectual beliefs, especially the erosion of the legitimacy of imperialism.” Perhaps more significantly, however, Anna notes the

prevailing belief “that a central bank with discretion would outperform a rule-bound currency board.” We consider the durability of these beliefs in turn.

### *3.1. Trappings of Sovereignty*

A prominent characteristic of the second half of the twentieth century, especially in newly formed nations, was the almost universal frequency of attaching “national” or “federal”—or their foreign-language equivalents—to so many industries or lines of business. Nationhood seemed to have been tantamount to the establishment of a national rail system, a national airline, national telephone companies, national banks, a national postal service, and so on. A national bank—or, more generally, a central bank issuing a national currency—was one of the items on the checklist of what it meant to be a nation.

With the passage of time, it will probably become increasingly difficult for young people to reflect back on the time of their parents or grandparents and truly understand the patriotic fervor associated with organizations such as the national oil company, telephone company, or airline. A couple of decades ago, even very small countries like New Zealand insisted on having banks and airlines that were owned and operated by New Zealanders. It seems that at some point they simply stopped caring about such things.

It now seems that the once heated public debates about national origin and local content will become a topic for the history books. Consumers are much more interested in the brand name of their running shoes than the location of the assembly plant or the nationality of the shareholders. Moreover, as the past century drew to a close, a trend toward greater cross-border ownership of commercial banking, investment banking,

merchant banking, insurance, and other financial services was already well advanced, and the pace seems to be accelerating.

One by one, countries are dropping their previous outright prohibitions of foreign investment in various sectors of the economy, including banking. Often the transition has involved relegating foreign investors to a minority-interest purgatory before graduating to majority control or full ownership. It seems increasingly likely that the sea change in attitudes to those that elevate the demand for quality over concerns of local content also might apply to central banks.

### *3.2. Central Banks in a Global Economy*

In the world of central banking, the importation of monetary policy from another country has been a growing trend in recent years. For some years now, countries such as Austria and the Netherlands imported their monetary policy from Frankfurt. In the 1990s, Argentina joined Panama, Hong Kong, and others in the importation of their monetary policy from the Federal Reserve System. Once eleven sovereign countries of Western Europe implemented their plan to shift monetary policy decision-making from the autonomous national central banks to a newly created supranational central bank—in route to phasing out the eleven national currencies in favor of a single monetary standard to be used by all—the trickle of countries giving up any notion of monetary autonomy and national currency has started to become a flood. Just this year Ecuador began to phase out the sucre in favor of the U.S. dollar.<sup>7</sup>

Aside from national pride, the idea that a nation-state should have its own currency and independent monetary policy was intellectually supported by the idea that

some positive rate of inflation was optimal. Even when economists would not defend deliberate debasement of the currency, authorities often rationalized inflation on grounds of political necessity, especially in the face of often large and growing national debts. The political expediency of the “unlegislated tax of inflation” seems to have had a near universal appeal.

Over time, the political benefits of deliberate inflation have been counterbalanced by financial innovations in domestic and global markets. In fact, the balance appears now to have shifted such that the costs associated with rising inflation outweigh any residual benefits. First central bankers, then ministers of finance, and finally politicians generally are finding that a reputation for tolerance of inflation is undesirable.

Twenty years ago, it was fairly common to hear even prominent, well-respected economists argue the merits of a weak external value of the national currency (devaluation) in order to gain some presumed competitive advantage over trading partners.<sup>8</sup> Such notions now seem increasingly quaint. It is now unimaginable that a politician anywhere would achieve success by arguing that accelerating inflation and a weak currency would benefit local constituents. Much of what has happened in recent years perhaps reflects the rise in so-called financial market vigilantism, which imposes a level of discipline not anticipated years ago.

Neither monetary sovereignty nor independent monetary policy is deemed to be worth very much in today’s global financial markets. Moreover, seigniorage is quite small in a noninflationary world. Hence, it is becoming more widely understood that any net benefits associated with maintaining a national central bank and a national currency

are quite small. Increasingly, the behavior of businesses and households around the world has included the pragmatic adoption of standards of value that serve their purposes irrespective of national origin.

For the past couple of decades, the people of the former Yugoslav republics have used the Deutsche mark as their preferred monetary standard for the same reason that people of Mexico and elsewhere in Latin America use the U. S. dollar. A reputation for stability of purchasing power means more to the consumer than the local content or national origin of the currency. As we have seen in the case of consumer goods, when the barriers to the free importation and use of superior quality products and services are removed, people pragmatically choose quality and performance over patriotic gestures. To the extent that this trend continues we would expect to see a continuation of monetary unification.

### *3.3. Currency Boards as an Institution for Transition*

Among the many insights we gleaned from Anna's writings is the possible role that currency boards may serve as a transitional state in the recent trend toward monetary unification. In (Schwartz 1993), Anna concludes that "currency boards worked well in the hundred years which they operated ... They limited monetary growth. Homegrown inflation was not a problem. ... There was no need for a lender of last resort. ... Governments did not engage in deficit finance." Further, she proposed that a currency board "may well be a good temporary solution for East European countries with undeveloped financial markets, rapidly depreciating central bank notes, and the urgent need to revitalize their economies."

Anna also noted, however, that the “fundamental political hurdle to a successful return to a currency board system is the resistance of authorities and modern democracies to precommitment and to forswearing of discretion.” This left Anna skeptical about the prospects for Argentina’s currency board or for the role of currency boards in eastern Europe. The currency boards in Hong Kong and Singapore exhibited, in her view, a progressive dilution of precommitment.

That skepticism may have been justified in 1993. However, a lot has happened since then—the launching of the euro, acceleration in globalization and information technology, and the durability and favorable record of the “currency board” in Argentina. No doubt these events have had a great effect on the prospect for monetary unification. Another key factor is the widespread recognition that having their own central banks did not produce the results that newly formed nations had anticipated. Rather, in Anna’s words, “hopes of great improvement under central-bank management of the economies of former colonies by those who disparaged currency boards were clearly not realized.”

As we have argued above, what matters today in the global economy is performance. For a monetary authority, performance is measured in terms of monetary stability. Monetary stability in turn depends on the *quality of money*. We submit that Argentina’s relative resiliency to external shocks in recent years is due largely to the fact that it established a credible monetary standard by adopting a currency board. Despite its own banking crises in 1994, the Asian financial crises, and the Russian default, Argentina’s real output per capita grew at an average annual rate of 4.6 percent from 1992 to 1998, offsetting a significant fraction of the contraction suffered over the 1980s.

What's more significant, however, is that the annual inflation rate in Argentina declined from 25 percent to nearly 1 percent over the same period.<sup>9</sup>

### *3.4. Responsibilities of the Reserve Currency*

The case of Argentina offers an example of the promise that currency boards may hold as a way-station on the path back to monetary stability. But it is important to remember that adoption of a currency board does not guarantee monetary stability. Again Anna's writings offer insight: "The choice of the right foreign currency is crucial to the success of a currency board, but the possible undesired effects of an unanticipated disturbance in the reserve currency is not sufficiently stressed in the advocacy literature."

To dramatize this issue, Anna noted that in February 1992, Hanke, Jonung, and Schuler proposed linking the Estonian kroon one-to-one with the Swedish krona: "The Swedish krona in turn at that time had a fixed exchange rate with the ECU. In mid-September 1992, in a desperate effort to defend the exchange rate, despite rising unemployment, recession, and severely troubled banks, Sweden raised the marginal rate on loans from 15 to 24 to 50 to 500 percent. ... Suppose Estonia had adopted the plan the authors were promoting. It would have been exposed to a severe deflationary shock and the same economic problems the Swedish economy has been wrestling with. ... Estonia escaped this outcome. In June 1992, it pegged the kroon to the D-mark."<sup>10</sup>

Currency boards offer no panacea because their adoption does not resolve the issue of monetary quality. Rather it shifts the onus of maintaining quality to the monetary authority of the reserve currency. In today's world, where all currencies are fiat currencies, it seems inevitable that only currencies that are credibly committed to

domestic price stability will be chosen as reserve currencies. Having the right goal, however, offers no guarantee of achieving that goal. We now turn our attention to the implementation of monetary stability.

#### **4. Formulation and Implementation of Monetary Policy**

In the not too distant future, we hope young people studying economics in our colleges and universities will find it humorous at best when the professor describes a recent past period of history when it was thought that a positive rate of inflation was in some ways desirable. That is different from saying that some positive rate of inflation was unavoidable or was politically expedient or a necessary evil. There actually was a line of thinking that concluded that the gradually falling purchasing power of money and the rising price level was a good thing. We hope that most people in most countries of the world today would react to the suggestion that a higher rate of inflation than presently prevails would in some way be desirable as a silly idea.

And then there are the politically expedient or “necessary evil” arguments about inflation. For some period of time, it seemed that central banks and monetary policy operated under the cloud of a fiscal-dominance hypothesis. The idea simply was that any place that found it difficult to constrain government outlays in a range around the amount of tax receipts would also lack the political will to resist the temptation to debase the currency as a form of unlegislated tax. In that sense, monetary policy became a form of fiscal action—an alternative way of financing government expenditures. It was a highly regressive form of taxation, as well as a form of taxation that undermined the efficient utilization of resources. Nevertheless, it was politically popular in many places. The



ultimate failure of any policy that was tolerant of inflation, however, has undermined the political appeal of this view.

#### *4.1. Achieving Monetary Stability*

Let me now turn to a description of the current environment for the formulation and implementation of a policy that achieves monetary stability. Recently, questions have been raised about the implications of rapid technological innovation and increased productivity on monetary policy. Efforts to deal with these issues have been confounded by breakdowns in both of the two most popular frameworks for implementing monetary policy.

For a long period of time, people thought about monetary policy within either of two basic competing paradigms. One of them had to do with supply and demand for something we call money. The other has to do with supply and demand for output or labor. Both of them enjoyed a period when their statistical reliability appeared quite high, and they seemed to perform pretty well and served as a guide to policy decisions. In this country, and in other countries around world, the supply-and-demand-for-money paradigm worked quite well for much of the post-World War II period, but it seemed to come apart in the 1990s, particularly in the United States. The basic idea behind it was that statisticians could estimate the demand for money balances somehow. If money demand was predictable—stable in a functional way—and if it were possible to control the money supply, then (theoretically, at least) you can keep the two of them in balance and avoid inflation.

The competing paradigm was supply and demand for output or employment—the so-called Phillips Curve. There the idea was that supply and demand entered with the reverse relationship. The effort was to estimate the supply of output (or labor) and control the demand for it. So, both paradigms had an element of supply, and they both had an element of demand. Both had something you forecast and something you controlled to try to maintain a balance, and both provided guidance that, at times, tended to work pretty well. Neither paradigm plays a significant role in the way we think about monetary policy today. What does?

#### *4.2. Interest Rates in a Stable Monetary Environment*

All economists are familiar with some variation of the idea that household consumption behavior tends to reflect some expectations about longer-term ability to consume. This phenomenon has been called the life-cycle hypothesis, standard or standardized income, and, of course, permanent income by Milton Friedman in the *Theory of the Consumption Function* (Friedman 1957).

The basic idea is familiar to everyone. We observe that as transitory changes in measured income or cash flow fluctuate around some longer-term average, household consumption behavior does not (in the short-run) fully reflect these transitory changes. Rather, it is observed that household consumption behavior tends to smooth out such fluctuations over time. Sudden sharp increases in measured cash-flow income are not fully reflected in the corresponding increases in current consumption—nor are sudden rapid declines in measured cash-flow income reflected in corresponding declines in consumption spending.

The way this theoretical framework and the empirical observations have traditionally been used is that the permanent income or life-cycle income is taken to be relatively steady, while transitory changes in measured income are more variable.

However, it can also be the case that in periods of significant technological innovations and rising productivity there is a generalized perception that permanent or life-cycle income is rising relative to measured or cash flow income. People come to form this expectation in a variety of ways. It may be simply that sustained periods of steady employment and growing paychecks lead people to expect that not only has their real standard of living risen, but it will continue to rise in the future—possibly at a faster rate than previously expected. People come to expect that they will be able to consume more in the present, as well as in the future, than they previously thought. For example, observing that their 401K savings plans or defined-contribution retirement programs now promise a higher future stream of income than previously thought, households feel justified in consuming more.

It may also be that a sustained period of low inflation and increased credibility of the commitment to maintain a noninflationary environment causes the inflation premium in nominal interest rates to be purged from the financial markets. This affords households (and businesses) the opportunity to refinance debt obligations at lower nominal interest rates and thus reduce debt-service burdens. As a consequence, the discretionary component of disposable income is higher than before, creating the opportunity for greater consumption spending out of a given cash flow.

As a result of any (or some combination) of these various forces at work in the “new economy” environment, households perceive that their long-term ability to consume is higher. They believe they can not only consume more in the future but, through access to credit markets or through reduced contemporaneous savings, can afford greater consumption in the present. In economists’ language, they have moved to a higher indifference curve. The trade-off between present and future consumption is manifested in higher real interest rates.

#### *4.3. The Real Rate of Return on New Business Investment*

In the business or entrepreneurial sector, an enhanced pace of technological innovation and rising productivity mean that the marginal efficiency of capital is higher. Again in economists’ jargon, the production possibility boundary has shifted outward. This also translates into higher real interest rates because the new opportunities will be associated with a higher rate of return on new business investment.

These higher real interest rates are not a matter of policy, choice, or anyone’s discretion. Rather they are a manifestation of the economic forces that result in heightened competitive uses for available productive resources. With households and businesses both increasing their claims on current productive resources, real interest rates will rise in competitive markets.

Higher real interest rates need not imply higher nominal interest rates. Under a gold standard, acceleration in productivity and technological innovation would cause downward pressure on the prices of some goods. Institutionalized monetary stability

implied by a gold standard means that the price level falls—the purchasing power of money rises—in the face of greater productivity.

The falling price level means that the greater real income (or wealth) is distributed to society in the form of higher real take-home pay. Households are able to consume more with the same level of nominal income. One might expect to observe that the discretionary components of a constant measured income have increased. The falling price level also implies that the same nominal interest rates, or possibly even somewhat lower nominal interest rates, correspond to higher real interest rates. This is the mechanism by which the heightened competition between consumers and investors for available resources results in a rationing process in the marketplace between present consumption versus augmented future consumption.

Similarly, under a disciplined monetary policy that constrains the growth of nominal final demand, we would expect to observe that an acceleration in the pace of productivity and technological innovation will put downward pressure on the inherited rate of inflation. In fact, the rate of inflation could turn negative as a result of accelerated real growth reflecting increased productivity. In any case, the inflation-premium component of nominal market interest rates declines so the same level of market interest rates embodies a higher real interest rate than previously.

In an interest-rate-pegging environment, the upward pressure on real interest rates that is a necessary consequence of the greater productivity and faster pace of technological innovation initially causes upward pressure on nominal interest rates. Greater and greater injections of central bank money are then necessary in order to

maintain the same pegged level of the nominal overnight interbank rate in the face of rising market-determined interest rates. Rising market interest rates mean that the opportunity cost of holding money balances is rising. In turn, that means the quantity of money demanded is lower and the pace of money income velocity is higher. The combination of the higher trend growth of velocity and the faster growth of central bank money means that the rate of nominal final demand growth is accommodated by a more expansionary stance of central bank actions.

In such an environment the increase in nominal interest rates—while initially reflective of upward pressure on real interest rates—can become augmented by a rising inflation premium in such market rate structures. In this environment, the equilibrium overnight interbank rate is under persistent upward pressure so long as it continues to lag behind market-determined interest rates.

This dynamic process describes an environment in which an acceleration in the pace of technological innovation and productivity can inadvertently become an inflationary process, as a consequence of the central bank's passive accommodation of the heightened demands for various forms of credit that are necessary to ration the available real productive resources among alternative competing uses.

## **5. Summary and Conclusions**

In *The Monetary History of the United States*, Anna and Milton documented the intellectual debates of the time and identified faulty thinking that contributed to various policy mistakes. Anna and Milton's 1986 paper clearly addressed the role of economic theories in assessing the evolution of institutions and policies. In the 1993 Carnegie-

Rochester paper that focused on central banks and currency boards, Anna again points to dominant economic ideas of the time that served as the intellectual underpinnings of the events that transpired.

When Anna documents the rise and decline of currency boards—as well as the evolution of such boards into monetary institutions that we call central banks with fiat/fiduciary currencies—she points towards a way of thinking about a possible reversal of that evolution. The recent reemergence of interest in currency boards may represent a transition away from monetary institutions, the proliferation of nation-state monies, and the discretionary monetary policies that dominated the latter part of the past century. If her 1993 pessimism about the future of central banks and currency boards turns out to be wrong in time, it will be because of her expectation then that inherited economic ideas would persist.

Specifically, Anna's pessimism concerning the willingness of monetary authorities to precommit to price stability hinged critically on her pessimism about prevailing economic ideas becoming undermined by new competing ideas. Anna seemed to believe that the ideas, philosophies, and theories of the economics profession, which justified the use of discretionary fiscal policies, would continue to dominate. If we are seeing a change, it is because the prevailing ideas of that time have changed—ideas about the role of money, ideas about the multiplier associated with deficit spending by governments, and ideas about the costs and benefits associated with a positive rate of inflation.

In closing, we are reminded of James Madison's skepticism about the wisdom of a paper currency.<sup>11</sup> Though he recognized that a stable paper currency was theoretically possible, he asked: "What is to ensure the inflexible adherence of the Legislative Ensurer to their own principles and purpose?" As the primary architect of the U.S. Constitution, on the other hand, Madison understood and promoted the role of checks and balances. It seems evident that recent trends in globalization and information technology have contributed to the rise in financial market vigilantism that provides a form of discipline on monetary policies around the world. There is now reason to hope that such discipline will provide a sufficient check against the recurrence of monetary policies that do not preserve the value of money.



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<sup>1</sup> See Friedman and Schwartz 1986, p. 6, from Hayek (1979).

<sup>2</sup> In this article, they concluded that “times of crisis” are the only times major changes in monetary and other institutions are possible. “What changes then occur depend on the alternatives that are recognized as available.”

<sup>3</sup> The importance of brand-name capital and best practices are discussed in Jordan (2000).

<sup>4</sup> For Mises money without a history was unthinkable: “The acceptance of a new kind of money presupposes that the thing in question already has previous exchange value on account of the services it can render directly to consumption or production. Neither a buyer nor a seller could judge the value of a monetary unit if he had no information about its exchange value--its purchasing power--in the immediate past.” (Mises 1949, p. 411)

<sup>5</sup> Aside from national pride, the idea that a nation state should have its own currency and “independent monetary policy” was intellectually supported by the idea that some positive rate of inflation was optimal. Even when deliberate debasement of the currency was not defended by economists as desirable, inflation was often rationalized on grounds of political necessity, especially in the face of often large and growing national debts. The political expediency of the “unlegislated tax of inflation” seems to have had a near universal appeal. Such notions were of course challenged. (Friedman 1959 and Friedman 1978).

<sup>6</sup> For a discussion of this paper see Hetzel 1993.

<sup>7</sup> See *Economist* January, 15, 2000.

<sup>8</sup> Mises was direct in his condemnation of such arguments: “It is impossible to take seriously the arguments advanced in favor of devaluation.” (Mises 1949, p. 790).

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<sup>9</sup> See Altig and Humpage 1999.

<sup>10</sup> See Hanke, Junung, and Schuler 1992.

<sup>11</sup> Other issues concerning governments and money are discussed in Jordan 1995/1996.

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