Monetarism: A Historic-Theoretic Perspective

The first and most important lesson that history teaches about what monetary policy can do -- and it is a lesson of the most profound importance -- is that monetary policy can prevent money itself from being a major source of economic disturbance.[1]

Economists usually view their discipline as a progressive science in which new ideas constantly replace inferior old ones. A look at the history of economic thought suggests that new economic doctrines emerge primarily as an alternative or a counter reaction to previously existing orthodoxies. As a result of these "intellectual revolutions," new schools of economic thought form and develop, challenging the validity and diminishing the influence of their predecessors' beliefs and ideas.

Modern monetarism emerged in the 1950s as a reaction to the then-prevalent Keynesian approach to macroeconomic theory and policy. In 1956, the American economist Milton Friedman attacked the income-expenditure approach of John M. Keynes and proposed an alternative macroeconomic theory that viewed money as the root source of major economic calamities. The counter-revolutionary Friedman resurrected older economic doctrines in building his monetary theory and his ideas, expounded in the classic *Studies in the Quantity Theory of Money* (1956), marked the beginning of modern monetarism as a distinct line of economic thought.

Monetarism, a word coined in the 1960s by Karl Brunner, is a complex concept that has no universally accepted formal definition. Most generally, contemporary monetarism refers to the idea that a stable relationship exists between the growth of the stock of money in the economy and national income.[2] Therefore, monetarists place an exclusive role of changes in the growth rates of monetary aggregates in explaining the

[1] Milton Friedman, "The Role of Monetary Policy", *American Economic Review*, 1968: p.12
[2] Smith, D. *The Rise and Fall of Monetarism* (Penguin Books 1987) p.1

course of the business cycle, including changes in nominal and real income and inflation.[3] According to Karl Brunner, the core of monetarism can be summarized in the following series of propositions:

> *First, monetary impulses are a major factor accounting for variations in output, employment and prices. Second, movements in the money stock are the most reliable measure of the thrust of monetary impulses. Third, the behavior of the monetary authorities dominates movements in the money stock over business cycles.*[4]

In essence, monetarists hold a "money matters" view of the world and believe that 'inflation is always and everywhere a monetary phenomenon.' This contention is directly linked to the quantity theory of money, which postulates that

$$MV = PT,$$

where (M) represents the stock of money in the economy, (V) is the velocity of money circulation, (P) is the price level and (T) is the level of transactions. This equality simply reflects the fact that the value of money spent must equal the value of all goods bought. However, monetarists have developed a whole, relatively consistent theory based on this equation. As they assume that the velocity of money is relatively stable and the level of transactions is determined by exogenous factors, it follows that the price level P will be proportionate to the stock of money (M).[5] Therefore, movements in the money stock in the economy lead to proportionate movements in nominal income. However, monetarism goes even beyond that and asserts that since the demand for money function is relatively stable and insensitive to interest rates, in the short run, the quantity of money affects not only nominal variables, but also real ones, such as real income, output and employment.[6]

---

[3] Hafer, R. "What Remains of Monetarism" *Federal Reserve Bank of Atlanta ECONOMIC REVIEW* (Fourth Quarter 2001):13.
[4] Brunner, K. "The Role of Monetary Policy" *Federal Reserve Bank of St. Louis Review* 50, 7 (July 1968) 9, found in Stein, J. ed *Monetarism* (North Holland Publishing Company, Inc 1976) p.1
[5] Crystal, K. *Monetarism* Vol.1 (Edward Elgar Pub. 1990) Preface
[6] Laidler, D. "Monetarism: An Interpretation and Assessment" The Economic Journal, 91(March 1981) 5

This proposition might hold true only in the short run: there is no empirical evidence that monetary changes and real economic activity remain correlated over time.

Monetarism is not considered a separate school of economic thought, but rather a line of thought rooted in the neoclassical tradition. Presently, it is most often classified as a subspecies of the broader school of New Classical Economics under the label "rational expectations." Despite its relatively short history, monetarism has become one of the most widely criticized doctrines in modern economic history. The great debate between "Keynesians" and Monetarists has been the central issue of macroeconomics for decades and a vast array of distinguished economists have taken part in it. Since both of these schools are predominantly policy oriented, it is not surprising that the major bone of contention lies in the realm of normative economics: "whether money supply or fiscal variables are the major determinants of aggregate economic activity, and hence the most appropriate tool for stabilization policies."[7] However, the theoretical differences between the two camps are difficult to extricate. The monetarist attack on Keynes in the 1950s was not a rejection of the Keynesian type of framework *per se*, but rather an empirical reassessment of the actual values of some of the model's parameters.[8] As Friedman himself admits, "I continue to believe that the fundamental differences between us are empirical not theoretical."[9] While recognizing all of its controversies, I believe the concept of monetarism is important for understanding the evolution of macroeconomic ideas in the twentieth century and has its proper place in the history of economic analysis.

Although modern monetarism is a relatively recent theory, many of its underlying ideas have been around in economics for centuries. The quantity theory of money, which is the major building block of monetary analysis, is one of the oldest surviving economic

[7] Modigliani, F. "The Monetarist Controversy, Or Should We Forsake Stabilization Policies" *The American Economic Review*, Vol. 67, No. 2. (Mar., 1977) 1
[8] Ibid. 6
[9] Stein, J. ed *Monetarism* (North Holland Publishing Company, Inc 1976) p.315

doctrines. In its simplest form, the quantity theory states that a change in the quantity of money in the economy will result in a proportionate change in the general level of prices of all commodities.[10] Although there are some glimmerings of this theory in the ancient world, late medieval scholars are considered to be its true originators. In his famous *Response* (1568), the French social philosopher Jean Bodin used for the first time monetary arguments to explain economic phenomena – he attributed the dramatic inflation in sixteenth-century Europe to the massive influx of new gold and silver from South America.[11] However, later philosopher-economists such as John Locke, Richard Cantillon, and particularly David Hume, refined and elaborated Bodin's notion, formulated explicitly the quantity theory of money, and commenced the classical monetary tradition. In 1755, Richard Cantillon asserted: "Everybody agrees that the abundance of money or its increase in exchange, raises the price of everything"[12] This idea had been already accepted by many others, but Cantillon was the first thinker who tried to trace and explain the entire process of new money dissemination, or what monetarists would later call the transmission process. His major argument was that people who first took hold of newly introduced money would increase their consumption spending and as a result would bid up the prices of the commodities they purchased. The increased demand, on the other hand, would enrich suppliers and they in turn would increase their consumption. The result of this continuous process of price bidding is higher inflation in the economy:

> *I consider in general that an increase in actual money causes in a state a corresponding increase of consumption which gradually brings about increased prices.*[13]

---

[10] Humphrey, T. "The Quantity Theory of Money: Its Historical Evolution and Role in Policy Debates" *Federal Reserve Bank of Richmond Economic Quarterly* (May, 1974) 2
[11] Ibid. 2
[12] Cantillon, R. *Essay on the nature of commerce* Part II Ch.6 URL: www.ehcweb.ehc.edu/faculty/balove/inweb/courses/ 225/cantillon'sessay2chapter6.pdf
[13] Ibid.

The scholar who is most often credited with the birth of monetarism is the Scottish philosopher David Hume. In his essay "Of Money," Hume anticipated contemporary monetarism on an amazing number of issues.[14] He was the first to understand the distinction between nominal and real money, and asserted, that on an abstract level, there is no unique amount of nominal money that a country needs:

> *If we consider any kingdom by itself, it is evident, that the greater or less plenty of money is of no consequence; since the prices of commodities are always proportioned to the plenty of money ...*[15]

Like Cantillon, Hume gave an explanation of the transmission process based on his specie-flow mechanism:

> *At first, no alteration is perceived; by degrees the price rises, first of one commodity, then of another; till the whole at last reaches a just proportion with the new quantity of specie which is in the kingdom.*[16]

Hume incorporated the same principle to emphasize the ubiquity of the quantity theory of money. Similar to international monetarism today, Hume did not consider the stock of money in a given country to be exogenous from the rest of the world, but rather to be determined by the specie-flow mechanism. Hence, the quantity theory applies not only to a single country, but also to the world as a whole. In fact, Hume related monetary analysis with the balance of payments theory and showed that "causation can run from prices to money, as well as from money to prices."[17]

Because Hume believed that prices were determined by the proportion between money in circulation and commodities in the market, he recognized that money stock and prices need not move proportionately. Hence, in the extreme case that first recipients of

[14] Mayer, T. "David Hume and Monetarism" *The Quarterly Journal of Economics* Vol. 95:1(Aug. 1980) 89
[15] Hume, D. 'Of Money', found in Crystal, K. *Monetarism* Vol.1 (Edward Elgar Pub. 1990) 33
[16] Ibid. 38
[17] Mayer, T. "David Hume and Monetarism" *The Quarterly Journal of Economics* Vol. 95:1(Aug. 1980) 92

new money are simply to hoard it and spend no more than previously, there will be no reason for prices to rise.

According to W. Taylor, Hume was the first economic thinker who distinguished clearly between the economy in the short run and the long run when he proclaimed the "golden" rule of monetarism: an increased growth rate of money stock increases real output and employment for only a limited time and after a while, it merely raises prices[18]:

> *In my opinion, it is only in this interval or intermediate situation, between the acquisition of money and rise of prices, that the encreasing quantity of gold and silver is favourable to industry…The good policy of the magistrate consists only of keeping it [money stock], if possible, still encreasing; because, by that means, he keeps alive a spirit of industry in the nation, and encreases the stock of labour, in which consists all real power and riches…*[19]

Although all classical authors of the nineteenth century were in a sense "monetarists", they did not add much to monetary theory. The majority of authors of this period took for granted Hume's ideas and accepted unreservedly the quantity theory of money. Thornton (1802) made the greatest contribution as he explored possible motives for holding money and investigated the interaction between money supply and interest rates.[20]

Nevertheless, the influence of monetary theories did not decline in the first half of the nineteenth century and quantity theorists "operated with a tenacity that has been inherited by their intellectual descendants."[21] At this time, discussions on money became dominated by the great debate between two schools of economic thought: the banking and currency schools. The debate was triggered in 1821 when Great Britain, after a 24-year experiment with inconvertible paper, restored the gold convertibility to her currency. One of the major quarrelsome issues was whether gold-standard money required

---

[18] Mayer, T. "David Hume and Monetarism" *The Quarterly Journal of Economics* Vol. 95:1(Aug. 1980) 96
[19] Hume, D. 'Of Money', found in Crystal, K. *Monetarism* Vol.1 (Edward Elgar Pub. 1990) 47
[20] Steele, D. "Birth and rebirth of monetarism" *The Journal of the Libertarian Alliance* Vol.1: No. 4 (Winter 1980)
[21] Smith, D. *The Rise and Fall of Monetarism* (Penguin Books 1987) p.167

additional statutory regulation to prevent overissue.[22] The economists from the currency school, such as Lord Overstone and R. Torrens, contended that in a credit-based economy, credit should be made to behave as if it were metallic money and a strict credit control should be maintained through harsh regulatory mechanisms. On the other hand, banking school theorists, such as J.S. Mill, T. Took and Lord Kaldor, thought that an increase in paper money, as long as it was convertible to gold on demand, would have no adverse effect on prices and hence there was no need for regulating and controlling the quantity of money in the economy.[23] The currency school won the debate when their call for monetary regulation was turned into law. The Bank Charter Act of 1844 prescribed that all bank notes should be backed by gold and assured that long-term price stability in Britain would be maintained. However, the banking school was right about the other major issue in the debate – they correctly perceived that checking accounts were analogous to paper money and should be treated as a part of the money supply.

In the second part of the nineteenth century, economists were more concerned with microeconomic issues than with macroeconomic ones and the quantity theory of money did not receive much attention.[24] Scholars of the period considered monetary theory as "a classical truism" and did not attempt to question its validity.[25] As the Cambridge professor Alfred Marshall wrote:

> *...If everything else remains the same, then there is this direct relation between the volume of currency and the level of prices, that, if one is increased by ten per cent, the other also will be increased by ten per cent*[26]

---

[22] Humphrey, T. "Mercantilists and Classicals: Insights from Doctrinal History" *Federal Reserve Bank of Richmond Economic Quarterly* (Spring, 1999) 55
[23] Smith, D. *The Rise and Fall of Monetarism* (Penguin Books 1987) p.167
[24] Ibid. 167
[25] Humphrey, T. "The Quantity Theory of Money: Its Historical Evolution and Role in Policy Debates" *Federal Reserve Bank of Richmond Economic Quarterly* (May, 1974) 2
[26] Marshall, A. *Money, Credit and Commerce* (Macmillan, London, 1923), p. 45

The appeal and intellectual dominance of the quantity theory of money was enhanced at the beginning of the twentieth century when neo-classical economists refined, elaborated and extended classical monetary analysis. In his *Purchasing Power of Money* (1911), Irving Fisher formalized the quantity theory and expressed it mathematically with his famous equation of exchange: MV = PT.[27] In this representation, the elementary unit is a transaction: the right-hand side of the equation refers to the transfer of all goods, services and securities in the economy; the left-hand side, to the corresponding transfer of money.[28] Fisher then argued that both the level of real transactions (T) and the velocity of money circulation (V) are nearly constant – they are determined by exogenous factors, such as individuals' cash-holding decisions, the structure of the banking system and other institutions, the frequency with which people are paid, customs and traditions, etc. Therefore, for an equality to hold true, a change in the stock of money must be followed by a proportionate change in prices. Moreover, Fisher linked theoretical monetary analysis with empirical research and turned the quantity theory into a tool for predicting prices, inflation, and interests rates.[29]

Fisher's equation of exchange set off a vigorous academic debate, not only on its practical applications, but also on whether it best represented the quantity theory of money. As Fisher could not define unequivocally the concepts of "transactions" and "general level of prices" in his equation, British economists proposed an alternative approach to monetary analysis and expressed the quantity theory with the famous Cambridge cash balance equation:

$$M = kPy,$$

[27] Fisher, I. *The Purchasing Power of Money* (New York, Macmillan 1911)
[28] Friedman, M. "A Theoretical Framework for Monetary Analysis" *The Journal of Political Economy* 78:2 (March 1970) 196
[29] De Long, J. "The Triumph of Monetarism?" *Journal of Economic Perspectives* 14 (1:2000) 85

where (M) is the stock of money, (k) is the desired cash balance ratio (the ratio of nominal money supply to nominal income), (P) is the general price level and (y) is real national output (income). In contrast to Fisher's view that money was simply a means of exchange, Cambridge economists emphasized that cash balances served also as a temporary storage of purchasing power. The level of these cash balances would be determined by habit and experience, as well as by some precautionary holdings for unforeseen circumstances, and would presumably comprise a relatively stable proportion of income.[30] Hence, the Cambridge equation reflects the belief that the volume of potential purchases is affected by people's demands for cash holdings as a means of storing purchasing power for the imminent future. The difference between Fisher's and Cambridge's definitions of money led to diverging analytical approaches and techniques.[31]

Quite ironically, the first major blow to the quantity theory of money came in 1936 from the British economist J.M. Keynes, who was one of the founders and early proponents of the Cambridge cash balance equation. In *The General Theory of Employment, Interest and Money*, Keynes poured tons of criticism on the quantity theory and banished it completely as a meaningless framework for short-term economic analysis:

> *Now 'in the long run' this [way to summarize the proposition that a doubling of money stock doubles the price level] is probably true…But this long run is a misleading guide to current affairs. In the long run we are all dead. Economists set themselves too easy, too useless a task if in tempestuous seasons they can only tell us when the storm is long past the ocean is flat again.*[32]

Briefly stated, Keynes rejected first the classical assumption that there was an automatic natural tendency for the economy to operate at full capacity and employment.

---

[30] Smith, D. *The Rise and Fall of Monetarism* (Penguin Books 1987) p.169
[31] Friedman, M. "A theoretical framework for Monetary Analysis" *The Journal of Political Economy* 78:2 (March 1970) 196
[32] Keynes, J.M. *A Tract on Monetary Reform,* chapter 3, p. 80 (1923)

Second, he argued that the monetary equations were tautological and could not be treated as theory producing since velocity of money was not as stable as it was previously assumed. Third, he discarded the notion that monetary policy could be used to regulate real economic activity and cure downturns in the business cycle. Finally, Keynes rejected the quantity theory as an analytical tool and proposed his income-expenditure framework instead.[33]

Although the Keynesian revolution caused the influence of monetary analysis to decline dramatically in subsequent years, the quantity theory of money did not die completely and it continued to be present in the writings of Chicago economists such as Simons, Viner and Knight. This school of monetarist thought was later called the Chicago oral tradition and gave rise to a long controversy whether it was the precursor of Friedman's classic monetarism. According to Friedman himself, the earlier Chicago economists had a good notion of the quantity theory as "a flexible and sensitive tool for interpreting movements in aggregate economic activity and for developing relevant policy prescriptions."[34] However, in the 1960s Don Patinkin denied the existence of a Chicago tradition in monetarism and produced evidence that during the dark decades of the quantity theory, from the mid-1930s through the mid-1940s, Chicago economists were using Fisher's equation of exchange as a theoretical model, and hence the tradition had been neither original nor unique.[35] Furthermore, he claimed that Friedman's monetary analysis was built not on any pre-existing Chicago tradition but rather on Keynes's liquidity preference theory. Alternatively, authors such as Tavlas and Johnson point out that early Chicago economists, unlike Fisher, did not believe in the stability of

---

[33] Humphrey, T. "The Quantity Theory of Money: Its Historical Evolution and Role in Policy Debates" *Federal Reserve Bank of Richmond Economic Quarterly* (May, 1974) 113

[34] Friedman, M. "The Quantity Theory of Money – a Restatement" In *Studies in the Quantity Theory of Money*, edited by M. Friedman Univ.Chicago Press, 1957 (p.3)

[35] Patinkin, D. "The Chicago Tradition, The Quantity Theory and Friedman" *Journal of Money, Credit and Banking*, 1969:1, February 46

money velocity and developed a unique monetary approach to explaining the business cycle and prescribing monetary policy:

> *The Chicago tradition was distinctive both in how it used the Fisherine equation of exchange to describe the economic cycle and its policy responses. No other U.S. quantity theorist during the 1930s formulated a theory of the cycle combining the particular elements used at Chicago…*[36]

In any event, there is no doubt that it was Milton Friedman who triggered the monetarist counter-revolution and laid the groundwork of modern monetary theory. During the 1950s, Friedman and his students at the University of Chicago did a vast empirical research on the role of money in the business cycle and published their results in the classic *The Studies in the Quantity Theory of Money* (1956). Friedman's introductory essay *The Quantity Theory of Money – a Restatement*, whose major massage was that "money matters," has become the cornerstone of modern monetarism. Counter-attacking Keynes's criticism of monetary analysis, Friedman resurrected the old quantity theory of money as a theoretical tool that viewed money as the root source for cyclical fluctuations in economic activity and the predominant factor for determining prices and inflation. However, Friedman did not simply re-assert the classical postulates of the quantity theory in some abstract long run, but rather he created a whole new theory in which money had strong real effects on short-term economic activity:

> *I regard the description of our position as 'money is all that matters for changes in nominal income and for short-run changes in real income' as an exaggeration but one that gives the right flavor of our conclusions*.[37]

Based on Keynes's proposition that money was not neutral in the short run, Friedman reformulated the classical quantity theory as a theory of the demand for money. Friedman agreed with Keynes, that money was an asset that could be substituted for other

---

[36] Tavlas, G. "Was the Monetary Tradition Invented?" The Journal of Economic Perspectives Vol. 12:4 (Autumn, 1998) 212-213

[37] Friedman, M. "A theoretical framework for Monetary Analysis" *The Journal of Political Economy* 78:2 (March 1970) 174

assets, but he rejected Keynes's emphatic statement that bonds, or financial assets, were the only substitutes of money.[38] Within Friedman's approach, money is regarded as a substitute for all assets alike, both real and financial. Hence, the demand for real money balances is determined not only by expenditure on financial assets, but also by expenditure on durable and non-durable goods, investment in capital goods, investment in education, etc.:[39]

> *The most fruitful approach is to regard money as one of a sequence of assets, on a par with bonds, equities, houses, consumer durables…*[40]

In essence, Friedman considered the demand for money as part of wealth or capital theory and argued that it depended upon three major factors: (1) the wealth constraint, which determined the maximum amount of money that could be held, (2) the yield on money in relation to the yield on other competing assets, and (3) the asset-holder's tastes, preferences and expectations:[41] More specifically:

$$M^d = f\ (Y_p, r_b, r_e, r_m, \pi^e),$$

where money demand is positively related to *permanent* income (Y_p), negatively related to expected interest rates on bonds (r_b), the expected rate of return on equity (r_e) and expected inflation (π^e).[42] According to Friedman, the relationship between current (nominal) income and the demand for money is highly volatile because utility-maximizing individuals readjust constantly the composition of their asset portfolios. Hence, it is permanent income, the "lifetime human net wealth," upon which the demand for money is decided.[43] Based on the assumption that permanent income is rather unlikely to change over the course of the business cycle, Friedman concluded that "the demand for

[38] Smith, D. *The Rise and Fall of Monetarism* (Penguin Books 1987) 170
[39] Vane, H. *Monetarism: Theory, Evidence and Policy* Halsted Press New York 1979, 11
[40] Smith, D. *The Rise and Fall of Monetarism* (Penguin Books 1987) 171
[41] Vane, H. *Monetarism: Theory, Evidence and Policy* Halsted Press New York 1979, 40
[42] http://cepa.newschool.edu/het/essays/monetarism/monetransmission.htm#quantity
[43] Steele, G. *Monetarism and the Demise of Keynesian Economics* (St. Martin's Press 1989) 67

money is highly stable – more stable than functions such as the consumption function that are offered as alternative key relationships,"[44] As there are numerous linkages between the demand for money and consumption, it follows that there is a strong and inherently stable relationship between the quantity of money in the economy and the general level of prices. Moreover, Friedman applied his stability postulate to the Hicksian IS-LM model and explained the complex path of the transmission mechanism from changes in the money stock in the economy to income and prices.

Friedman's revival of the quantity theory of money in the 1950s triggered an immense impetus for further academic research on monetary theory. In ensuing years, many contributions were made, but the most revealing theoretical developments were those which linked the Phillip's curve to monetary theory. Friedman (1968) and Phelps (1967) emphasized the role of expectations in economic analysis and concluded that when inflationary-expectations were incorporated into the Phillips curve, no permanent inflation-unemployment tradeoffs remained to be exploited. The expectations-augmented Philips curve can be expressed as the following:

$$\pi = h(U) + \beta\pi^e,$$

where the money wage inflation (π) depends inversely upon the rate of unemployment h(U) and positively upon the level of *expected* inflation (π^e) through the term $\beta > 0$.[45] Thus, for every given level of expectations there is a unique short-run Phillips curve which eventually breaks down whenever inflationary expectations begin to rise.[46] Based on his rational expectations theory, Friedman drew the conclusion that unanticipated rises in inflation, by lowering real wages, could stimulate employment and output only temporarily. In the long run, when increased inflation is fully perceived and incorporated

[44] Friedman, M. "The Quantity Theory of Money – a Restatement" In *Studies in the Quantity Theory of Money*, edited by M. Friedman Univ.Chicago Press, 1957 p.16
[45] http://cepa.newschool.edu/het/essays/monetarism/acceleration.htm#phillips
[46] Humphrey, T. "Changing Views of the Phillips Curve" *Monthly Review* July 1973

into nominal wages, real spending and unemployment return to their original *natural* levels, leaving inflation rate as the sole outcome. Therefore, the long-run Phillips curve is simply a straight vertical line passing through the point of "the natural rate of unemployment." These ideas are deeply rooted in the classical tradition and Friedman's rational expectations theory is fully in accordance with the classical notion that inflationary stimuli are temporary and never permanent.[47]

Monetarists' natural rate hypothesis, or the proposition that unemployment returns to its natural equilibrium level regardless of the inflation rate, has a plethora of policy implications. Most notably, it repudiates the Keynesian policy calls for discretionary fiscal demand management since such "stabilization policies" can only have short-run effects at best and in the long run will produce nothing but inflation. As an alternative, Friedman recommended a rigid rule whereby money supply grow at a fixed percentage rate corresponding roughly to the long-term growth rate of real output. Such a rule would produce a zero average inflation rate over time and would have positive effects on the real economy by making the monetary sphere highly predictable.[48]

Economists such as Karl Brunner, Allan Meltzer, and David Laidler contributed greatly in subsequent years to the development and refinement of monetary theory and policy. In the 1970s Brunner, Meltzer, Anderson and Jordan examined empirically the effects of various types of monetary policy on changes in nominal income. Based on their research, they proposed the controversial St. Louis Model, according to which monetary

[47] Humphrey, T. "Mercantilists and Classicals: Insights from Doctrinal History" *Federal Reserve Bank of Richmond Economic Quarterly* (Spring, 1999) 76
[48] Humphrey, T. "The Quantity Theory of Money: Its Historical Evolution and Role in Policy Debates" *Federal Reserve Bank of Richmond Economic Quarterly* (May, 1974) 113

policy provided the kind of demand-management outcomes once thought possible only through fiscal policy actions.[49]

Although monetarism reached its apogee of intellectual and political dominance in the 1970s and has been vanishing ever since, it has changed significantly the way we approach macroeconomic policy and analysis today. For instance, the explicit manner in which we analyze the limits on stabilization policies and the rationale for the common practice of monetary policy come from Friedman and the other monetarists.[50] As monetary theories were based on massive empirical research, Friedman and the other monetarists analyzed a large amount of data in building their economic models and perceived correctly that fluctuations in the rate of unemployment should be best analyzed as being about a natural trend rather than below potential. De Long concludes that in spite of monetarists' unpopularity, "the extent to which they [the major monetarist insights] are simply a part of the air that modern macroeconomists today believe is a good index of their intellectual hegemony."[51] Even though today very few economists would agree with all of Friedman's ideas, monetarism remains undoubtedly one of the major and most influential macroeconomic doctrines of the twentieth century and it has its proper place in the history of economic analysis.

[49] Hafer, R. "What Remains of Monetarism" *Federal Reserve Bank of Atlanta ECONOMIC REVIEW* (Fourth Quarter 2001):17
[50] De Long, J. "The Triumph of Monetarism?" *Journal of Economic Perspectives* 14 (1:2000) 85
[51] Ibid. 92

Bibliography and General Sources of Information

1) ***Cantillon***, ***R***. "Essay on the nature of commerce" Part II Ch.6 URL: www.ehcweb.ehc.edu/faculty/balove/inweb/courses/ 225/cantillon'sessay2chapter6.pdf

2) ***Chrystal, K. Alec*** "Monetarism" Edward Elgar Pub 1990

3) ***De Long, B. J.*** "The Triumph of Monetarism?" *The Journal of Economic Perspectives*, Vol. 14, No. 1 (Winter, 1998), 83-94

4) ***Fisher, Irving*** "The Purchasing Power of Money" New York. Macmillan 1911

5) ***Friedman, M.*** "A Theoretical Framework for Monetary Analysis" *The Journal of Political Economy*, Vol. 78, No 2, 193-238

6) ***Friedman, M.*** "The Quantity Theory of Money – a Restatement" In *Studies in the Quantity Theory of Money*, edited by M. Friedman Univ.Chicago Press, 1957

7) ***Hafer, R.*** "What Remains of Monetarism?" *Federal Reserve Bank of Atlanta ECONOMIC REVIEW* Fourth Quarter 2001

8) ***Humphrey, T. "***Essays on Inflation" Federal Reserve Bank of Richmond, 1980

9) ***Humphrey, T.*** "Mercantilists and Classicals: Insights from Doctrinal History" *Federal Reserve Bank of Richmond Economic Quarterly* (Spring, 1999) 55-83

10) ***Humphrey, T***. "The Quantity Theory of Money: Its Historical Evolution and Role in Policy Debates" *Federal Reserve Bank of Richmond Economic Quarterly* (May, 1974) 101-17

11) ***Laidler, D.*** "Monetarism: An Interpretation and an Assessment" *The Economic Journal*, Vol.91, No.361 (March, 1981), 1-28

12) ***Mason, Will Edwin*** "Classical Versus Neoclassical Monetary Theories: The Roots, Ruts, and Resilience of Monetarism and Keynesianism" Kluwer Academic Publishers 1996

13) ***Mayer, T.*** "David Hume and Monetarism" *The Quarterly Journal of Economics*, Vol. 95, No. 1 (Aug., 1980), 89-101

14) ***Mayer, T.*** "The Structure of Monetarism" New York: Norton 1978

15) ***Modigliani, F***. "The Monetarist Controversy, Or Should We Forsake Stabilization Policies" *The American Economic Review*, Vol. 67, No. 2. (Mar., 1977)

16) ***Nobay, Johnson*** "Monetarism A Historic-Theoretic Perspective" *Journal of Economic Literature* 15:2 (June 1977), 470-485

17) ***Patinkin, D.*** "The Chicago Tradition, The Quantity Theory and Friedman" *Journal of Money, Credit and Banking*, 1969:1, February 46-70

18) ***Smith, David*** "The Rise and Fall of Monetarism" Penguin Books 1987

19) ***Steele, D***. "Birth and rebirth of monetarism" *The Journal of the Libertarian Alliance* Vol.1: No. 4 (Winter 1980)

20) ***Steele, G.*** "Monetarism and the Demise of Keynesian Economics" St. Martin's Press New York, 1989

21) ***Stein, Jerome L.*** ed. "Monetarism" North –Holland Publishing Company, INC 1976

22) ***Tavlas, G***. "Chicago, Harvard, and the Doctrinal Foundations of Monetary Economics" *The Journal of Political Economy*, Vol. 105, No 1, 153-177

23) ***Tavlas, G.*** "Retrospective: Was the Monetarist Tradition Invented?" *The Journal of Economic Perspectives*, Vol. 12, No. 4 (Autumn, 1998), 211-222

24) ***Tobin, J.*** "The Monetarist Counter-Revolution Today – An Appraisal" *The Economic Journal*, Vol. 91, No. 361 (Mar., 1981), 29-42

25) ***Vane, H.*** "Monetarism: Theory, Evidence and Policy" Halsted Press, New York 1979

I have neither given nor received any unauthorized aid, nor have I witnessed a violation of the Honor Code.

11/16/2003 Nikolay Doskov