AUSTRIAN BUSINESS CYCLE THEORY or THE NATURAL UNEMPLOYMENT RATE HYPOTHESIS: THE ROLE OF MONETARY POLICY REVISITED

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Abstract

The paper summarizes an alternative approach that has policy implications very similar to the NUR, the Austrian approach to the trade cycle developed by von Mises and Hayek in the 1920s and 1930s. Nobel winner Hayek had, long before Friedman and the development of the natural rate model, provided a model of a monetary economy and the business cycle that contained an even stronger cautions about long term adverse effects of money and credit creation. After comparing Hayek's model with the natural rate and other new classical models, the authors' argue that to ensure sustainable economic growth, the cautionary warning of Friedman and Hayek, contra those who would abandon the NUR as a foundation of monetary policy, is an even more appropriate guide to monetary policy in today's global environment .

Introduction

In a December 1967 Presidential Address to the American Economic Association, Milton Friedman reminded the economics profession of the self-reversing nature of a monetary change by suggesting two limitations of monetary policy. Monetary policy cannot peg either interest rates or the rate of unemployment for more than "very limited periods" (Friedman 1968, 5). The arguments provided by Friedman were developed into the Natural Rate of Unemployment Model (or NAIRU–non-accelerating inflation rate of unemployment model). The development of the theory provided a needed warning to the profession about the efficacy of expansionary macroeconomic policies. The empirical work generated by Friedman's insights appeared successful. By the late 1980s Charles Freedman (1989, 2), Deputy Governor of The Bank of Canada, could write, "The model … is what I would call the mainstream central bank model of recent years – best characterized as a structural model with an aggregate demand equation, a money demand equation, and an augmented Phillips Curve equation with no tradeoff in the long run … ." However, the combination of low unemployment and low (and decelerating) inflation of the 1990s has caused some economists to question the foundations of this "mainstream central bank model".[1]There is an increasing sentiment in the profession that the cautionary emphasis of the natural rate model was never correct, overstated, or has been rendered obsolete by the changed structure of the economy[2].

[1] *The Wall Street Journal* (April 23, 1999, A14 and June 15, 1999, A18) has printed editorials attacking the use of "NAIRU" or the natural rate model as guide to monetary policy.
[2] See Gordon (1998) and Cross (1995).

It should be remembered that an alternative to the Friedman model, Austrian business cycle theory, was developed by von Mises and Hayek in the 1920s and 1930s. The Hayek/von Mises model of a monetary economy contained allof the policy relevant elements of these newer models[3] including an accelerationist hypothesis.[4] As summarized by Cochran and Glahe (1994, 80-81):

> A constant rate of increase in the effective quantity of money would, at first, stimulate the economy. However, the increased activity can not be sustained. Market adjustments would eventually reverse the initial effects of the monetary expansion. A crisis occurs even if the rate of increase in the money supply is not slowed. The increased activity could be maintained for a longer period only if credit (and the money supply) increased at a progressive rate, producing an accelerating rate of inflation. Employment created by expansionary monetary policies is highly unstable. Some of the implications of the Hayek-von Mises model about the effects of an expansionary policy duplicate the predictions about the ultimate effects of active policy in natural rate models.

The next section of this paper provides a summary Hayek's approach to the self-reversing nature of a monetary shock. A third section compares Hayek's model with the natural rate and other new classical models and provides conclusions.

Money and the Trade Cycle

Hayek's trade cycle theory incorporated four basic ideas.[5] First, in long run comparative statics monetary changes affect only nominal variables. Long run equilibrium relative prices are determined by real factors. The quantity theory may be accepted on this point. "I am even ready to concede that so far as it goes it is true …" (Hayek 1935, 3). Second, for dynamic analysis, quantity theory results are misleading. In the short run, monetary changes affect relative prices. Monetary changes cause relative prices to differ from the relative prices consistent with the real supplies and demands. Production guided by these relative prices will be mis-directed. The plans of producers will not be consistent with the plans of consumers. However, since real factors determine the long run equilibrium relative prices, the relative prices that are determined by monetary factors are unstable (Hayek 1941, 35). Errors in production plans will eventually be revealed as the real factors begin to re-assert themselves. The initial change in relative prices must eventually be reversed. Relative prices change towards the relative prices that are consistent with the underlying real factors. [6] Third, the way in which relative prices are changed initially depends on injection or Cantillon effects. Where money enters the system is important (Hayek 1935, 10-11). In a monetary economy with

[3] Coase (1982, 11) implies that these policy conclusions provided adequate grounds for many economists to originally reject Hayek's model.

[4] The need to expand the money supply at an accelerating rate to maintain the initial output effects of an expansionary monetary policy had been part of the Austrian business cycle (Hayek-von Mises) theory long before the development of the natural rate model and the accelerationist hypothesis. See Hayek [1939b] 1975, 147 and von Mises [1940] 1998, 40. However, accelerating inflation will eventually bring on monetary collapse as "money ceases to be an adequate accounting basis" (Hayek [1969] 1978). Hayek ([1939a] 1975) also attempts to show why a monetary expansion begun, not at full employment, but during a recession leads to a cycle. To our knowledge no natural rate or equilibrium business cycle model has addressed this same issue.

[5] See Bellante and Garrison (1988, 219) for a list of common features in the approaches of Friedman and Hayek. According to Bellante and Garrison both theories "can be squared with the kernel of truth in the quantity theory of money", and involve market processes that are "self reversing".

[6] If comparative static distribution effects are ignored, the equilibrium relative prices will be the same both before and after the monetary change. But in reality, it is doubtful if "the position which would have existed without the monetary disturbance will – or even can – ever be fully restored. The losses and redistributions of incomes caused by the misdirection of production will naturally have a permanent effect – but an effect in a direction opposite to the impact effect of the monetary change" (Hayek 1941, 35fn.). Long run equilibrium relative prices are determined by the real factors and these relative prices will be different from the initial pattern of relative prices caused by a monetary disturbance.

developed credit markets and a fractional reserve banking system, new money enters the system through changes in the availability of credit. Monetary changes thus alter the market rate of interest relative to the equilibrium or natural rate.[7] Fourth, these money-induced changes in the rate of interest have predictable effects on the capital structure of the economy. Monetary expansion creates "forced savings": an "increase in capital creation at the cost of consumption, through the granting of additional credit, *without* voluntary action on the part of the individuals who forgo consumption, and without their deriving any immediate benefit" (Hayek [1933] 1966, 219).

The new situation develops because the monetary injection increases the proportion of the total spending stream available to entrepreneurs relative to the proportion used for current consumption spending. The spending stream increases, but the distribution of the spending stream is altered in favor of expenditure on capital goods.[8] This proportional increase in investment caused by a monetary injection, is inherently unstable. Resources are switched from production for the immediate future to production for the more remote future. The flow of consumers' goods will be temporarily diminished. "(R)elatively to every unit of input employed there is less output available" (Hayek 1941, 380). Money income, however, increases as entrepreneurs bid resources away from alternative uses. Factor owners with larger money incomes are now competing for a smaller quantity of consumers' goods. Full employment still exists but equilibrium does not.[9] Relative prices have been distorted. Proportional increases in all money prices will not restore equilibrium as long as the rate of interest (and inter-temporal price margins) is not at an equilibrium level.

The new time structure of production based on the money-induced change in the money expenditure flow can only be maintained if the flow of money expenditure can be maintained in the new proportions. The maintenance of the new expenditure flow pattern would require either a voluntary increase in savings (reduced time preference) by the owners of input or a further injection of newly created money credit. An injection of additional money credit through the banking system just postpones the need for adjustment. The additional increases in the effective quantity of money must be progressively larger if the new conditions are to be maintained and the crisis is to be postponed (see Table 1 for a numerical example).

If factor owners do not voluntarily increase savings, or if the effective quantity of money does not increase at a progressive rate, then the new pattern of proportional demands cannot be maintained. Consumption spending will increase relative to investment spending. Price signals will induce entrepreneurs to attempt to provide for the increased proportional demand for consumers' goods. A tendency will develop to shorten the structure of production. The demand for inputs for investment purposes declines. This tendency to shorten the structure of production is the onset of the crisis.

While Hayek (1939a, 6) does explain the end of the boom when "the rate of interest failed to act at all", it is more likely that the rate of interest will play a significant role that affects entrepreneurial decisions which end the expansion. As the boom progresses entrepreneurs will need progressively larger increases in the supply of money credit to maintain the new structure of production. This increased demand for credit needed to maintain the new proportions, the less liquid positions of banks, and/or a tighter monetary policy by a central bank fearful of the effects of inflation should cause the market rate of interest to increase. Hayek (1935, Lecture III) describes the process where the rate of interest increases. O'Driscoll and Rizzo (1985, 210) argue "that investment cycles typically end in a credit crunch, with a comparatively sudden and simultaneous financial 'crisis' for numerous firms."

[7] This is Leijonhufvud's (1981) 'Wicksell Connection". Zarnowitz (1999, 77) provides a recent discussion. See Cochran and Glahe (1999 Chapter 3), Mises ([1912], 1971), and Hayek (1935).
[8] The pattern of expenditure within the capital structure also changes. See Garrison 1996, Bellante and Garrison 1988, Hayek 1941, and Cochran and Glahe 1999.
[9] See Garrison 1996.

Table 1

Expenditure Flows and Monetary Injections

I. Initial Situation

MV = 100

Expenditure On:		% Of Total Expenditure
Consumers' Goods	30	30%
Producers' Goods	70	70%

A. The effective quantity of money increases by 10% to 110 units. The entire increase is lent to entrepreneurs for increased spending on capital goods.

MV = 110

Expenditure On:		% 0f Total Expenditure
Consumers' Goods	30	27%
Producers' Goods	80	73%

B. The injection of new money becomes proportionally distributed.

MV = 110

Expenditure On:		% 0f Total Expenditure
Consumers' Goods	33	30%
Producers' Goods	77	70%

II. Conditions which will allow the 73%/27% proportion to continue.

A. New monetary injections extend new credit to entrepreneurs.

MV = 122.22

MV increases by 12.22 or 11.1%. As the new money spreads through the system new progressively larger increases in the money supply will become necessary to maintain the new proportions between spending on producers' goods and spending on consumers' goods.

Expenditure On:		% 0f Total Expenditure
Consumers' Goods	33	27%
Producers' Goods	89.22	73%

B. New savings occurs so that a steady state or final equilibrium is established with:

Expenditure On:		% 0f Total Expenditure
Consumers' Goods	30	27%
Producers' Goods	80	73%

The proportions are based on Austrian capital theory and a time structure of production. See Hayek 1935, Skousen 1990, or Cochran and Glahe 1999 (chapter 8).

As interest rates increase both the form and quantity of investment will change. Investment will be made in shorter processes, less durable goods, and in less labor saving goods. Demand for inputs in these 'shorter' processes will intensify, but at the same time demands for inputs in longer, more durable, or more labor saving processes will decline. The net demand for inputs in investment industries will decrease (Hayek 1941, 387). Layoffs and idle capacity should develop in these industries.[10] Why should unemployment develop when the structure of production is shortened while a lengthening of the structure creates no such problems?

[10] This net decrease in demand for labor in investment industries as the malinvestments are discovered would be picked up in a real business cycle study as a negative productivity shock. The Austrian model argues that this productivity shock is the result of "unhealthy growth" that is the consequence of money and credit growth that was part of the banking response to a previous positive productivity shock. See Garrison 1996 and Cochran and Call 1999.

> It is here that the irreversibility of time which, at the beginning of this study we found to be the source of all the peculiar difficulties connected with capital, creates considerable differences between what seems to be very similar cases. The crux of the whole capital problem is that while it is almost always possible to postpone the use of things now ready or almost ready for consumption, it is in many cases impossible to anticipate returns which were intended to become available at a later date. The consequence is that the relative deficiency in the demand for consumers' goods compared with supply will cause only comparatively minor losses, a relative excess of this demand is apt to have much more serious effects. It will make it altogether impossible to use some of the resources which are destined to give a consumable return only in the more distant future but will do so only in collaboration with other resources which are now more profitably used to provide consumables in the more immediate future. (Hayek 1941, 345-46)

Time and the nature of capital goods make it impossible to transfer quickly all the resources no longer needed in longer processes to expanding shorter processes. Some resources cannot be transferred and will become idle. Some capital is specific.[11] It is not adaptable to other uses. The returns in terms of consumers' goods of such specific capital goods cannot be completely anticipated. Resources are complementary. The expected future returns can be realized only if these resources can be combined with other needed complimentary inputs. The available supply of free capital, capital goods available for new and renewed investment, is scarce. This supply of free capital cannot be quickly augmented. The amount currently available is primarily determined by decisions made in the past. The increased proportional demand for consumption goods creates a situation where non-specific resources (free capital and most labor) are more urgently needed for provision of goods ready for consumption in the more immediate future. Complementary resources needed in the earlier stages of production are available only in insufficient quantities and/or at higher prices.

Firms in these earlier stages contract activity or even shut down. Plant and equipment becomes idle because the needed complementary resources are not available at prices that justify continued production. Some capital becomes redundant because the current supply of other capital goods (and perhaps labor or other original factors of production) is not sufficient to meet the needs for current consumption demands and still allow the completion of some longer processes of production.[12] Labor and other complementary resources are released, laid off, and the amount released is in excess of the rate at which these resources can be absorbed in other expanding industries. Unemployment and idle capacity increase beyond what can be regarded as frictional levels.[13]

The self-reversing effects of a money/credit injection exist even if the monetary increase occurs when unemployed resources already exist. The final outcome of the process may be delayed but does not change. An increased supply of money credit granted to entrepreneurs will initially stimulate investment and the idle resources may be absorbed temporally. The short-run effects of the expansion appear beneficial. If there are available stocks of all resources including consumers' goods, the process may continue unimpeded for some time. Costs need not rise since newly employed resources do not have to be bid away from alternative uses. The increased money incomes of the owners of input need not cause the price of consumers' goods to increase if the additional consumers' goods can be supplied from stocks. The Keynesian multiplier process may reasonably describe the initial phases of such an expansion. This process, however, essentially describes a process where no real scarcities exist, an "economics of

[11] Specific capital is not necessarily identical with the concept of fixed capital. A perfectly specific capital good has no alternative uses. Such goods may also be fixed capital such as a existing plant that is useful in only one process for producing one type of output. However variable inputs may also be specific if these inputs have no alternative uses.

[12] See Cwik 1998 (88), "the boom is always brought to an end due to a shortage of real resources."

[13] Once unemployed resources develop, a "secondary deflation" (Hayek 1939c, 176) or Keynesian type collapse is likely. Or as summarized by O'Driscoll and Rizzo (1985, 210-11), "How will the rest of the decline look? It will appear to be 'Keynesian.' … Unemployment spreads because of an income-constrained process." The Keynesian process, however, begins in the middle of the decline.

abundance" (Hayek 1941, 369-74). But when scarcities reassert themselves, bottlenecks develop.[14] The increased incomes generated from increased investment due to credit expansion eventually lead to a relative scarcity of consumers' goods and the crisis will again be upon the economy. Employment created by monetary expansion is inherently unstable. Policy activism can temporarily increase employment. Attempts to take advantage of this policy option in the short run will create a situation where further interventions will become needed more and more.[15]

Hayek's conclusions were highly controversial. In the short run monetary changes are not neutral. Monetary expansions can and will cause investment booms. However, in the long run, the same monetary expansion causes the crisis. A constant rate of increase in the effective quantity of money would, at first, stimulate the economy. However, the increased activity generated by credit creation is not sustainable (Garrison 1997a). Market adjustments will eventually reverse the initial effects of the monetary expansion. A crisis can occur even if the rate of increase is not slowed. Postponing the crisis requires an increase in the rate of growth in the money supply, accelerating inflation[16] (Hayek 1939b, 147). Employment created by expansionary policies is temporary. The implications of this model about the effects of an expansionary policy parallel the policy predictions of the natural rate (NAIRU) model. The time to prevent a crisis is during the boom. Extensive malinvestment needs to be prevented if persistently high unemployment is to be prevented. The way to avoid extensive malinvestment is to avoid money and credit creation.

The recession is the corrective phase of the cycle; market forces have begun to reassert themselves. Once a crisis has begun, policy makers must walk a fine line. If market processes are not interfered with by price rigidities, the recession that follows the crisis should be a procedure that eliminates and corrects the past errors and malinvestments.[17] Expansionary policies in this phase of the cycle may be contra-productive in the long run. Stable full employment will only be restored when the structure of production again becomes adjusted to the plans of consumers.

The process of adjustment to the initial decline in employment may, however, start a deflationary process.[18] Price rigidities increase the possibility that the initial unemployment may cause additional unemployment. Secondary deflations of this type create potential complications and perhaps a warranted role for policy (Hayek 1939c, 176-7).

> It does not follow that we should not endeavor to stop a real deflation when it threatens to set in. Although I do not regard deflation as the original cause of a decline in business

[14] "Bottlenecks" are really nothing but the adjustment to the presence of goods with varying degrees of scarcity (Hayek, 1941, 374).

[15] According to von Mises ([1940] 1998, 40), "But the boom cannot continue indefinitely. There are two alternatives. Either the banks continue the credit expansion without restriction and thus cause constantly mounting price increases and an ever growing orgy of speculation, which, as in all other cases of unlimited inflation, ends in a 'crack-up boom' and in a collapse of the money and credit system. Or the banks stop before this point is reached, voluntarily renounce further credit expansion and thus bring about the crisis. The depression follows in both instances.

[16] Inflation as used here implies an increase in the effective quantity of money or flow of money expenditure on goods and services.

[17] See Vedder and Gallaway (1993 or 1997) and Benjamin M. Anderson (1949) for a comparison of the 1920-21 crisis that fits the recovery without interference model and the Great Depression which is interpreted as a crisis followed by significant interference in the pricing system. See also Rothbard 1975. More recently Cole and Ohanian (1999) and Prescott (1999, 29) have looked at the Great Depression from the perspective of neoclassical growth theory and come to similar conclusions; employment remained low because "labor market institutions and industrial policies changed in a way that lowered normal employment."

[18] Deflation as used here implies a decrease in the effective quantity of money or flow of money expenditure on goods and services.

> activity, a disappointment of expectations unquestionably tends to induce a process of deflation – what I more than forty years age called a "secondary deflation." Its effect may be worse (and in the 1930s certainly was worse) than warranted by the original cause of the reaction, moreover it performs no steering function. (Hayek 1979, 15)

Conclusions

The natural unemployment rate hypothesis and its later developments in rational expectations forms showed that any fully anticipated monetary policy would be ineffective. Gordon (1976, 192) argued the natural rate theory was "novel, not by associating money with inflation, but rather in its claim that changes in the rate of monetary growth would not cause the rate of unemployment to permanently diverge from its 'natural rate' without a continuously accelerating inflation or deflation." [19] The central feature of the discussion is not credit creation and interest rates, but the Phillips curve and the natural rate of unemployment hypothesis.

The natural rate model and the rational expectations hypothesis has led over time to the development of three distinct types of new classical models. The adjustment processes developed in these models are in the form of causal relationships between broad aggregates. The explanations of the observed correlation between changes in money and changes in output provided by these new classical models could easily have been written years ago (contrast Gordon 1976, 202 with Warburton [1946] 1951, 299) or involve reverse causation and endogenous money. [20]

The first type, as developed by Friedman, is natural rate monetary disequilibrium model in which the disturbance and the maladjustment are both nominal (Leijonhufvud 1983). Monetary disturbances coupled with rigidities in the system create maladjustments between the absolute price level and the level of money wages. Disequilibrium continues until prices and wages both fully adjust to the monetary change. Monetary expansion (unanticipated) at a constant rate leads to an initial expansion and a consequent contraction. A recession, however, is usually explained by an adjustment of the economy to a reduction (unanticipated or anticipated but not credible, i.e. not believable) in the rate of growth in the money supply (Friedman 1993). Equilibrium business cycle models soon followed. In an equilibrium business cycle model unanticipated monetary changes alter anticipated real rates of return. The shock is nominal but the maladjustment is real. Cycles are explained as equilibrium responses to unanticipated changes in monetary variables.[21] More recently, real business cycle models have been developed where shocks are real and no maladjustments occur. Fluctuations occur as the economy responds to continuous shocks. The cycle, as in as in earlier equilibrium business cycle models, represents equilibrium adjustments. Correlation between money and real activity is usually explained by reverse causation. Money is endogenous and has no causal influence on real activity in either the short run or the long run.

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[19] This was not however novel. As shown earlier, both Hayek and von Mises had already made similar arguments.

[20] Economists, since at least the 1930s, have recognized that classical-type models with long run monetary neutrality properties must in some way explain what Hayek (1935, 1) and Warburton ([1946] 1951, 297) regarded as an accepted fact; namely, that monetary fluctuations played "a dominant role" in fluctuations in business activity. Barro (1990, 3) argued that originally the difficulty for new classical economists "seemed to be to reconcile equilibrium models, which tend to generate close approximations to monetary neutrality, with a strong role for monetary disturbances in business cycles." Real business cycle research is still groping with this issue. Plosser (1989) argues that the role of money in RBC models is little understood and remains an "open issue".

[21] Turning points in a cycle can be explained in both of these forms in terms of the adjustment of the economy to a single shock. Both forms provide an "economic" explanation of a cycle, a cycle caused by a single shock not by a series of shocks (Hayek [1933] 1966). Neither Hayek-von Mises nor these forms of new classical theory preclude fluctuations caused by continuous changes in the data as in real business cycle thoery.

Hayek's criticisms of the old classical approach also apply to the new classical approach. In the new classical as well as the in older classical models, the price effects of the policy change influence all lines of production, the effect analyzed is "upon the volume of production in general."[22] The effects of monetary changes on the distribution of the money spending stream and the structure of production are ignored. If monetary changes are analyzed as if they were "helicopter" drops, the analysis can present a very misleading picture of the short run adjustment process. Economists in either classical tradition (old or new) tend to downplay the importance of the transmission process and the role of monetary institutions.

The new classical models and the Hayek/von Mises model imply policy ineffectiveness. Monetary policy has three effects: 1. Short-run changes are self-reversing (except in real business cycle models where neutrality is maintained by reverse causation). A monetary expansion at a constant rate will cause first an expansion then a contraction of the economy. 2. Monetary policy is ineffective in the long run. 3. The increased employment initially caused by a monetary expansion can only be maintained if the money supply continues to increase at a progressive rate.[23]

In contrast to the new classical view Hayek's predictions depend on the monetary change affecting different sectors unequally. The path of the economy following a monetary disturbance is a disequilibrium path, not an equilibrium path.[24] According to Hayek, the distribution of the money expenditure flow is altered from the equilibrium distribution determined by the underlying real factors by the monetary disturbance. This is true whether the disturbance is the result of a deliberate policy change (exogenous money) or whether the monetary change is a passive response of the banking system to some real shock (endogenous money).[25] This initial alteration of the spending pattern in the economy will affect relative prices and should redirect the employment of resources into directions consistent with the new unsustainable pattern of spending. However, the relative price changes brought about by the monetary factors are not equilibrium relative prices; the prices are not consistent with the underlying real factors. As economic agents discover that plans are not coordinated, real forces will reassert themselves. The real effects of the monetary disturbance are reversed as entrepreneurial errors caused by the false prices are discovered and reversed.[26]

The Hayekian model does provide a model that is complement to the Friedman based "main stream central bank" model (Bellante and Garrison 1988). The Austrian model avoids the empirical problems associated with the labor market model based on Friedman. This empirical problems and misapplication of the policy implications of the model have made it easier for critics to question the model. The "kernel of truth" provides needed restraint on discretionary monetary and should not be abandoned. A capital-based macroeconomics (Garrison 1997b) provides an alternative that avoids some of these pitfalls while providing similar policy recommendations. Given the malinvestment associated with the U.S. savings

[22] Hayek (1935, 6). See Cochran and Glahe (1999) for a detailed discussion of Hayek's criticism of the quantity theory as a tool of economic analysis. Bellante and Garrison (1988) base their comparison of Friedman and Hayek on this lower level of aggregation

[23] In the natural rate and new classical models points 1 and 3 apply only to unanticipated monetary changes. Only point 2 would apply to fully anticipated policy changes.

[24] See Cochran and Glahe 1992.

[25] See Cochran and Glahe (1999, 95-101) and Hayek ([1933] 1966).

[26] Proponents of Austrian (Hayek-von Mises) cycle theory who emphasize the relative price changes and downplay the capital theory aspects of the Hayek-von Mises model leave the theory open to criticisms similar to Haberler (1938, 67). Why doesn't the original change in relative prices cause disruption of production and unemployment or why if resources flow smoothly into the expanding industries as relative prices changes don't the resources flow smoothly back to the original industries when the relative price change reverses itself? Paul Krugman has recently raised the issue again. See Garrison (1999b) for another response based on Hayek's arguments. Cochran and Call (1998) provide a summary of the important ways in which Austrian monetary theory differs from traditional analysis.

and loan crisis and the current Asian debt crisis, it may be appropriate to consider more closely the role of money, interest, and the capital structure in healthy economic growth. Policy should accommodate sustainable growth, not generate endogenous instabilities.

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