Appendix 1

SOMC Policy Recommendations

September 14, 1973

"A policy of gradually reducing inflation can be initiated by lowering the average growth rate of money to 5-1/2% for the next six months. In March, a further reduction in the growth rate may be appropriate. The amount of additional reduction will depend on the economic conditions prevailing in March and expected to prevail thereafter."

Minutes of the Meeting of the Shadow Open Market Committee, September 14, 1973.

March 8, 1974

"During the first half of 1973, the rate of monetary growth was moderated somewhat to a 7.4% annual rate, and in the second half, the rate was reduced further to approximately 5%. We recommend that a growth rate of 5% to 5.5% be maintained for the coming six months."

Policy Recommendation of the Shadow Open Market Committee, March 8, 1974.

September 6, 1974

"For the next six months the Committee recommends the objective of a 5 to 5-1/2% annual increase in money. It should be the goal of the Federal Reserve to attain that growth rate and reduce variability. This is the same short-term monetary policy that we recommended last March. A rate of growth of 5 to 5-1/2% would be appropriate as a step toward further reduction to an ultimate non-inflationary rate of about 4% a year."

Policy Recommendations of the Shadow Open Market Committee, September 6, 1974.

March 7, 1975

"We renew the recommendation made at our September meeting that the growth rate of money be held at 5-1/2 percent. However growth should not start at that rate from the current low level. We recommend that the money stock be brought to a level it would have reached in March 1975, if our policy had been followed. A one-time increase in money -- currency and demand deposits -- to $290 billion should be announced and provide by April 15. This increase would put the money growth back on the path leading the economy toward full employment at lower rates of inflation than in recent years."

Policy Recommendations of the Shadow Open Market Committee, March 7, 1975.

September 12, 1975

"Starting from the level of the money stock in August 1975, the Federal Reserve should maintain the growth rate of money at a steady 5.5 percent annual rate, so that the level in the first quarter of 1976 totals $304 billion. Such a growth rate will be adequate to support recovery but with a lower rate of inflation than more expansionary policy will produce."

Policy Recommendations of the Shadow Open Market Committee, September 12, 1975.

March 8, 1976

"The Committee recommends that the Federal Reserve maintain a 4.5% growth rate from March 1976 onward. This growth rate should start from a base of $300 billion in March 1976 or a first-quarter average of 297.5 billion. Such a rate would mean that the money stock would rise to $304 billion by the third quarter of 1976 and $311-billion by the first quarter of 1977. A 4.5% rate is below the rate we recommended in March and September 1975 but above the recent rate of monetary expansion. It essentially extends the annual average rate the Federal Reserve produced for 1975. The rate of monetary expansion for the near future that we recommend is above the long-term rate consistent with zero inflation. Further reductions will be required as the economy recovers and uses resources more fully."

Directive, Shadow Open Market Committee, March 8, 1976.

September 13, 1976

"The Committee concluded that the policy of gradually reducing the growth rate of the stock of money should be continued. A 4 percent annual rate of growth of money – currency and demand deposits – was recommended as appropriate policy for the next six months. A 4 percent rate of monetary growth would bring the stock of money to an average of $310 billion in the first quarter of 1977 and an average of $316 billion in the third quarter of 1977. Most importantly, 4 percent monetary growth would move the rate of monetary expansion closer to the range that permits sustained economic expansion without inflation."

Policy Statement, Shadow Open Market Committee, September 13, 1976.

March 7, 1977

"The Committee recommends that the growth rate of money – currency and demand deposits – be held in the range of 4 to 4-1/2% for the next year. A 4 to 4-1/2% rate of monetary growth would bring the stock of money to approximately $320 billion in the third quarter 1997 and to $326 billion in the first quarter 1978. These projections are made from the average $313 billion that would have prevailed in the first quarter 1977 if our previous recommendations had been followed. Currently, we anticipate an average

money stock of $315 billion for the first quarter, so the policy requires the Federal Reserve to offset the recent surge in money and then maintain a less inflationary policy."

Policy Statement, Shadow Open Market Committee, March 7, 1977.

September 19, 1977

"… [T]he Shadow Open Market Committee recommends that the summer bulge in money be removed by reducing the current level of the money stock by $4 billion, the reduction accompanied by an announcement that the step has been undertaken to return the money stock to the level it would have reached if the most recent error in monetary policy had not occurred. Subsequent to the correction, money growth should resume at a constant annual rate of 4-1/2%."

Policy Statement, Shadow Open Market Committee, September 19, 1977.

March 13, 1978

"One, the rate of monetary expansion in the past year was between 7% and 7.5%. We urge that the rate be maintained at 6% in 1978.

Two, we recommend reductions of 1% a year in the average rate of monetary expansion until a noninflationary rate of monetary expansion is achieved."

Policy Statement, Shadow Open Market Committee, March 13, 1978.

September 11, 1978

"One, the rate of monetary expansion in the past year has been 7.75%. We urge that the rate be reduced to an annual rate of 6% over the next year. The stock of M-1 – currency and demand deposits – will average $376 billion in the third quarter of 1979 if the 6% growth rate is attained.

Two, we recommend reduction in the average rate of monetary expansion by 1% a year until a noninflationary rate of monetary expansion is achieved."

Policy Statement, Shadow Open Market Committee, September 11, 1978.

March 12, 1979

"Two, the growth of the monetary base should be 8% for the year ending in August 1979. This is consistent with the recommendation of this Committee at our meeting in September 1978, when we selected the monetary base, as published by the Federal Reserve Bank of St. Louis, as the most reliable measure of monetary growth currently available in this period of uncertainty about the interpretation of growth rates of monetary aggregates . . ."

Three, we have urged repeatedly that the Federal Reserve adopt a five-year program to end inflation by reducing the growth rate of the monetary base by 1% a year for the next five years."

Policy Statement, Shadow Open Market Committee, March 12, 1979.

September 17, 1979

"To restore stability to the economy and permanently reduce inflation, the growth rate of the monetary base should now be reduced to an annual rate of 7% for the year ending August 1980."

Policy Statement, Shadow Open Market Committee, September 17, 1979.

February 4, 1980

"The SOMC favors an immediate return to the 6% growth rate for base money that was achieved in the first and second quarters of 1979. A 6% average rate of growth of the base in each quarter of 1980 will continue the policy we advocated at our September 1979 meeting. Base money by the end of the fourth quarter of 1980 will reach $162 billion if our recommendation is followed. The proposed policy is likely to be accompanied by a mild recession in 1980 and a slight reduction in the rate of inflation.

Large, permanent reductions in the rate of inflation can be achieved in 1981 and beyond only if there are further reductions in the growth rate of the base. We recommend reductions of one percentage point in 1981 and 1982, so the level of the base will reach $170 billion at the end of 1981 and $177 billion at the end of 1982."

Policy Statement, Shadow Open Market Committee, February 4, 1980.

September 22, 1980

"We favor an immediate end to the highly inflationary monetary policy of the past three to four months. We state our objectives in terms of the growth rate of the monetary base pending the prospective institutional change affecting the growth rates of other monetary aggregates. We urge the Federal Reserve to return the monetary base to the 6% growth rate reached in the second quarter of 1980 and to reduce the growth of the base to 5% in 1981 and to 4% in 1982."

Policy Statement, Shadow Open Market Committee, September 22, 1980.

March 16, 1981

"For 1981, we favor a 6% rate of increase in the monetary base, as computed by the Federal Reserve Bank of St. Louis. Current institutional changes have less effect on the

growth of the base than on most other aggregates, so we continue to specify targets for the base. A 6% rate of growth of the base would bring the level of the monetary base to $172 billion in the fourth quarter of 1981."

Policy Statement, Shadow Open Market Committee, March 16, 1981.

<u>September 14, 1981</u>

"For 1982, we urge the Federal Reserve to increase the monetary base, as reported by the Federal Reserve Bank of St. Louis, by no more than 5%. Our targets being the level of the monetary base of $171 billion in the fourth quarter of 1981 and $180 billion in the fourth quarter of 1982."

Policy Statement, Shadow Open Market Committee, September 14, 1981.

<u>March 15, 1982</u>

"We repeat our recommendation for monetary policy in 1982. The Federal Reserve should control the monetary base, return to a sustained 5% growth path, and aim for a target of $180 billion in the fourth quarter 1982, as we urged six months ago."

Policy Statement, Shadow Open Market Committee, March 15, 1982.

<u>September 13, 1982</u>

"We recommend that the Federal Reserve manage the monetary base so as to increase the money supply (M1) by 4% to 4.5% from the average of the fourth quarter of 1982 to the fourth quarter of 1983. For the balance of 1982, the money supply should remain in a 5% to 5.5% growth path."

<u>March 7, 1983</u>

"The current inflationary policy should end. The growth of money should return to a disinflationary path. We recommend an annual growth rate of money (M1) not to exceed 5-1/2% in the year ending fourth quarter 1983."

"Again, we urge the Federal Reserve to improve control procedures and we challenge them to produce some evidence to support their statements about the effects of deregulation on the monetary aggregates. Proposals to set targets for interest rates—real or nominal—would be destabilizing."

<u>September 19, 1983</u>

"We urge the Federal Reserve to hold the growth rate of the monetary base to 6% from fourth quarter 1983 to fourth quarter 1984. This will be consistent with a growth rate of M1 of 6-7%, and if followed by further deceleration, would prevent a renewed burst of

inflation and would help the economy to return to stable real growth with falling inflation in subsequent years."

March 11-12, 1984

"The alternative is to return monetary base growth to 6% this year. This is the path consistent with the Federal Reserve's target and our September recommendation. We urge but do not expect the Federal Reserve to implement this policy to avoid the resurgence of inflation and another prolonged recession."

October 1, 1984

"Money growth in 1985 should not exceed the mid-point of the Fed's 1984 target range (6%). Fears that further gradual reduction of money growth next year will lead to recession are unwarranted. The adjustment costs associated with sustaining a long-run disinflation would be minimized if the Fed announced and adhered to a multi-year policy of continually decreasing money growth."

March 25, 1985

"In order to eliminate 'base drift' and establish a coherent framework for steady progress towards lower money growth, the SOMC urges the federal Reserve to increase M1 in 1985 by 5% from the mid-point of the original target range for 1984. This policy would result in an increase for 1984 and 1985 taken together. In the event that money growth in 1985 exceeds this target, as we think highly likely, the target for 1986 would still be based on the target level for year-end 1985, rather than the actual level of fourth quarter 1985."

September 23, 1985

"We urge the Federal Reserve to achieve its targets, to stop rebasing and to return the money stock to a growth path of 5.5% from the second quarter of 1985 through the fourth quarter of 1986 as had been announced. The target for policy should be M1, and other monetary and credit aggregates should be discarded."

March 17, 1986

"We urge the Federal Reserve to announce – and achieve—a growth rate of the monetary base of 5% for the four quarters ending in the fourth quarter of 1986 and modest further reductions in subsequent years. This growth rate would be two and a half percentage points below the average rate of growth of the monetary base over the past five years."

September 21, 1986

"To avoid the coming inflation, the growth rate of the monetary base should be reduced to a rate consistent with price stability. Research prepared for this committee suggests

that that rate is in the neighborhood of 3% to 4%. This goal should be achieved by the end of the decade."

March 9, 1987

"To avoid another costly inflation and disinflation, we again urge the Federal Reserve to abandon its inflationary policy and set the growth rate of the monetary base on the path toward sustained lower inflation. We recommend that the rate of growth of the monetary base be reduced to 7 percent for the four quarters ending in December 1987 and further reduced each year until non-inflationary growth is achieved."

September 14, 1987

"You have inherited an inflation rate that has been reduced substantially since 1981. However, inflation remains at rates that are high by past standards. We urge you to adopt a policy of reducing the strategy of consistently lowering the annual growth rate of the monetary base and maintaining the fluctuating exchange rate system."

"A 6% growth rate of the monetary base in the next 12 months is a step in a program to achieve price stability. Others urge you in different directions. They talk about testing your opposition to inflation or your commitment to current exchange rates. It is a mistake to be driven by the changing views of day traders and speculators in the markets. You cannot prevent changes in the value of the dollar, you can only delay them. It is a mistake to try."

March 14, 1988

"In 1988, monetary policy should initiate a policy of gradual disinflation. The policy should continue until price stability is achieved. At our September 1987 meeting, we praised the Federal Reserve for reducing the growth rate of the monetary base from the very high rates of 1986. We recommended a growth rate of 6 percent for 1988. This rate of money growth is consistent with administration and Federal Reserve forecasts of real growth and inflation. We repeat the recommendation today."

September 19, 1988

"We urge the Federal Reserve to resist political pressures to do the impossible—namely, to attempt to alter levels of interest rates from what freely competitive financial markets would produce. The Federal Reserve should declare its intent to focus exclusively on quantitative measure of reserves and monetary growth, and allow the price of credit to be determined by private competition."

March 20, 1989

"The present acceleration of inflation stems from overly expansive monetary policy in 1985 and 1986. The Federal Reserve has announced target ranges for monetary growth in

1989. We believe that the midpoints of the announced target ranges—if achieved as part of a continuing, long-run program to reduce money growth- would result in a gradual reduction in inflation. We urge the Federal Reserve (1) to reject fine tuning; (2) to publicly disavow the Phillips curve and concerns about policy mix; (3) to achieve its announced targets for money growth. Growth of the monetary base should be maintained in the range of 5% to 6% this year."

September 18, 1989

"Restrictive monetary policy remains in effect. During the past year, the Federal Reserve has held the growth rate of the monetary base—bank reserves and currency- at the lowest level since the early 1960s. Relatively slow growth of the base and other monetary aggregates is part of a pattern of slower money growth that is now entering its third year."

"Continuation of this pattern will bring more than 20 years of inflation to an end. We urge the Federal Reserve to continue on the path toward stable prices. To remain on this path, growth of the monetary base should remain in the neighborhood of 4 percent in the year ahead."

March 19, 1990

"The recent large increase in the base appears to be mainly a onetime increase in demand by foreigners for U.S. currency. For 1990, we recommend that the Federal Reserve keep the growth rate of the monetary base close to an annual rate of 4 percent measure from first quarter 1990. Due regard should be taken to accommodate continued foreign demand for currency."

October 1, 1990

"We urge the Federal Reserve to maintain the long-run policy that it has emphasized in the past three years. Money growth should be brought to a level consistent with sustained long-term growth of real output and stable prices. Currently, the Federal Reserve's announced target for growth of M2 has a midpoint of 5 percent for the four quarters ending fourth quarter 1990 and 4-1/2 percent for the four quarters of 1991. A 5 percent growth rate is consistent with the Federal Reserve's goal of reducing inflation. With the economy on the edge of recession, we urge that this target be maintained and achieved."

March 4, 1991

"We welcome the Federal Reserve's renewed attention to money growth. We urge officials to meet their announced targets for 1991. We caution however, that weekly or monthly rates of change in money supply are not reliable as weekly indicators of the thrust of monetary policy. What matters is whether moderate money growth is maintained for intervals of three to six months."

"Concern for recovery should not be allowed to cause a new round of rising inflation. A 4.5 percent rate would bring money growth back to the average rate since 1987. A 4.5 percent growth rate of M2 is consistent with recovery in the economy and a declining rate of inflation."

September 30, 1991

"To achieve sustained economic growth and stable prices, we urge the Federal Reserve to limit the growth rate of the monetary base to the range of 5 percent to 6 percent. The Federal Reserve should desist from making loans to failing banks. This practice only adds to the price that taxpayers must pay to protect depositors. The Treasury Department should overhaul bidding practices in the government securities market. However, an increase in regulation would be counterproductive. Proposals to bail out the Soviet economy would waste scarce resources. We reject them."

March 9, 1992

"The shift to slower money growth causes slower growth of output or a new recession. We urge the Federal Reserve now to slow the growth of the monetary base from the current 8 percent annual rate to a 5 to 6 percent range, even at the cost of a temporary rise in short-term interest rates."

"We believe that a 5 to 6 [percent] base growth rate will provide sufficient monetary stimulus for a durable expansion. Stable monetary growth can contribute to stable growth and stable prices. Money growth that is consistent with low inflation will increase economic efficiency."

September 14, 1992

"A reduced spread between long- and short-term rates can occur either because short-term rates rise or long-term rates fall. Since short-term rates, adjusted for inflation, are now zero, these rates are likely to rise. The Federal Reserve should lower long-term rates by reducing expectations of future inflation. The policy we urge the Federal Reserve to adopt 5-to 6-percent growth in the monetary base [which] would accomplish that result. It is consistent with economic recovery and lower inflation."

March 8, 1993

"We believe growth of the domestic base should be reduced in 1993. To achieve this reduction, growth of the reported base (as published including foreign holdings of currency) should be reduced to about 8% annual rate. The Federal Reserve should measure the domestic monetary base and release this information to the public."

September 13, 1993

"A prudent monetary policy requires slower growth of the monetary base. We urge the Federal Reserve to slow the growth of the monetary base by 3 percentage points to an annual rate of no more than 8%. That is the maximum rate of base growth currently consistent with the Federal Reserve's repeated statements that it seeks to hold annual inflation to 2% or less."

March 7, 1994

"We believe that excessive money growth, not real growth, brings inflation. More decisive action is required to restrict the growth of spending by slowing money growth enough to prevent a rise in inflation. Based on recent growth of output and average cash balances, growth of the monetary base should be reduced immediately by two percentage points. The monetary base should grow at no more than an 8% annualized rate."

September 12, 1994

"Since March, year-to-year growth of the monetary base—bank reserves and currency—has fallen from above 10-1/2 percent to about 9-1/4 percent. For the past six months the base has increase at an 8 percent annual rate. This is the maximum rate we recommended at our meetings in September 1993 and March 1994. We are now on a path that, if sustained, is consistent with inflation of 2 to 3 percent. Modest further reductions are necessary if price stability is to be achieved. Therefore, the Federal Reserve should reduce base growth to 7 percent in 1995."

"We continue to urge the Federal Reserve to control growth of monetary aggregates and to use the information about future inflation provided by sustained growth of the monetary aggregates."

March 6, 1995

"At our September meeting, we recommended that Federal Reserve officials reduce growth of the monetary base to 7 percent. We now recommend that they maintain a 7 percent growth rate of the base. The Federal funds rate should move up or down as needed to maintain this policy."

September 11, 1995

"The Federal Reserve should promptly reduce short-term interest rates until the monetary base grows at a 6 percent annual rate. A 6 percent growth of the base is the rate consistent with steady real growth without inflation. If the present growth of the base—4.5 percent for the past year—continues, the economy risks recession or deflation in 1996."

March 11, 1996

"Growth of the monetary base and money remain below the rate that our rule suggests is consistent with steady growth in output and price stability. We again urge the Federal

Reserve to lower its interest rate target until the monetary base grows at an annual rate of 4 percent. The Federal Reserve can, at last, achieve price stability with sustained economic growth. Current Federal Reserve policy will not do that."

<u>September 9, 1996</u>
"For five years, Federal Reserve policy has sustained expansion without increasing inflation. This is an historical achievement. There are few comparable periods in the eighty-two years of the Fed's existence."

"Price stability has not been achieved, however. Inflation has remained in the 2 percent to 3 percent range, a range that once was, and we believe should again be, regarded as too high. We believe that current policy, if maintained, will not substantially reduce inflation below current levels. We recommend that the Federal Reserve reduce the growth rates of the monetary base and other monetary aggregates to achieve zero inflation. Monetary acceleration of the past year should not be permitted to continue."

<u>March 3, 1997</u>

"At our last meeting, we urged the Federal Reserve to reduce the growth rates of the monetary base and other monetary aggregates to achieve zero inflation. We repeat that recommendation and add another: Reduce money growth both to prevent inflation from rising and to end inflation. Growth of the monetary base should not exceed 2 percent this year. This policy will require a near-term increase in the Federal fund rate target."

<u>September 1997 – No SOMC meeting.</u>

<u>March 15, 1998</u>

"We urge the Federal Reserve to reduce the growth rate of monetary aggregates by reducing the growth of the monetary base by two percentage points to an annual rate of 4 percent."

<u>September 14, 1998</u>

"We again urge the Federal Reserve to slow the growth of the monetary base to 4 percent per year, a rate consistent with steady long-term growth and a stable price level. We urge this policy though we are aware of the risks in the world economy. We believe that, in the event of a flight to liquidity, the Federal Reserve's overriding responsibility is to satisfy the demand for money by expanding the monetary base as much as required. At present, there is no evidence of a flight to money in the U.S. Stability of the U.S. economy should continue to be the Federal Reserve's primary goal."

<u>March 8, 1999</u>

The FOMC should act now to reduce growth of the monetary base. By the end of the year, base growth should be brought to 4 to 5 percent from the current 7 to 8 percent.

September 27, 1999

"To slow future inflation, the Federal Reserve should act promptly to bring the growth rate of the monetary base back to 4 percent. Base growth has fallen to 6 percent in the last few months, but we believe the decline is too small, and its duration is too short, to prevent the inflationary pressure of risking aggregate demand from increasing inflation."

The pages following this appendix are expanded versions of the graphs and charts presented within the papers' figures.

Figure 5a
Gradualist (SOMC) Six Percent Reduction in Money Growth

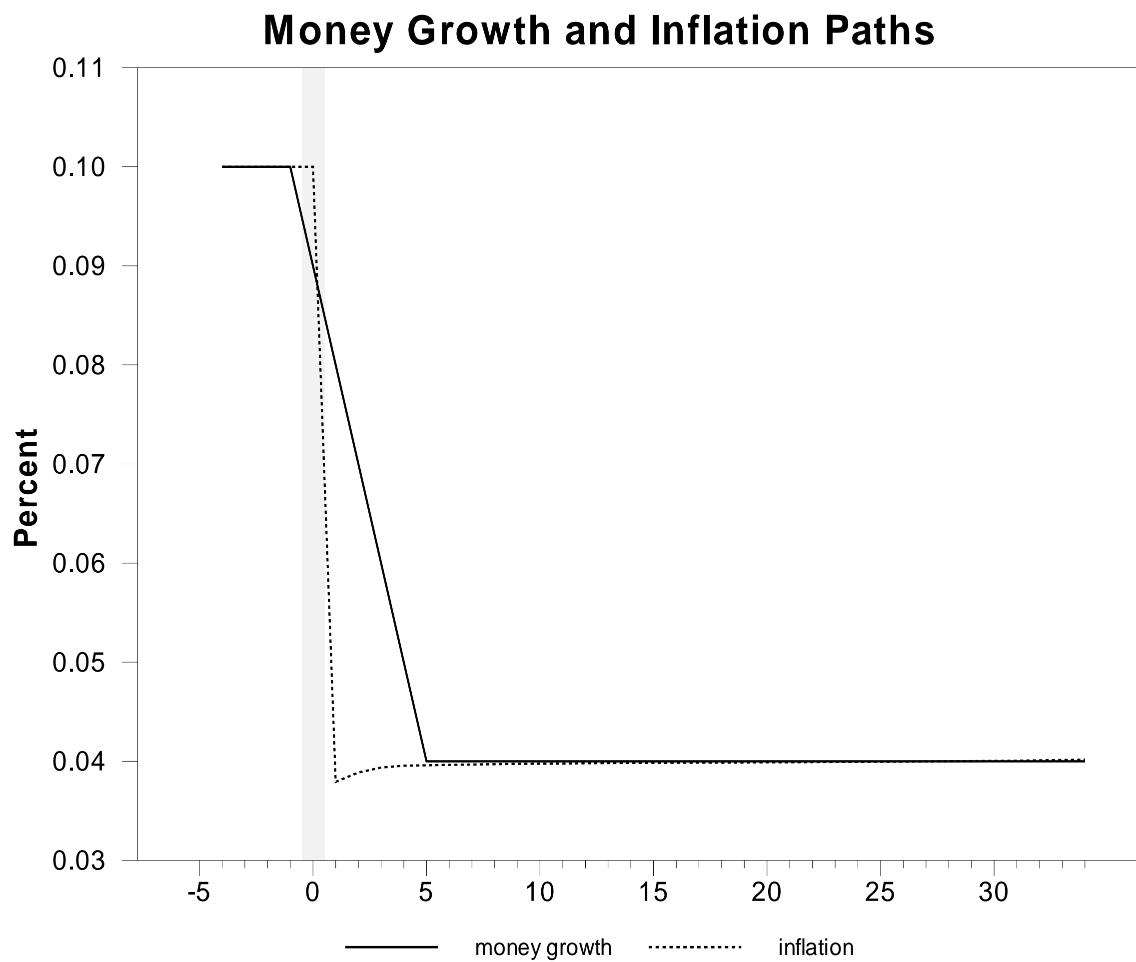

Figure 5b
Gradualist (SOMC) Six Percent Reduction in Money Growth

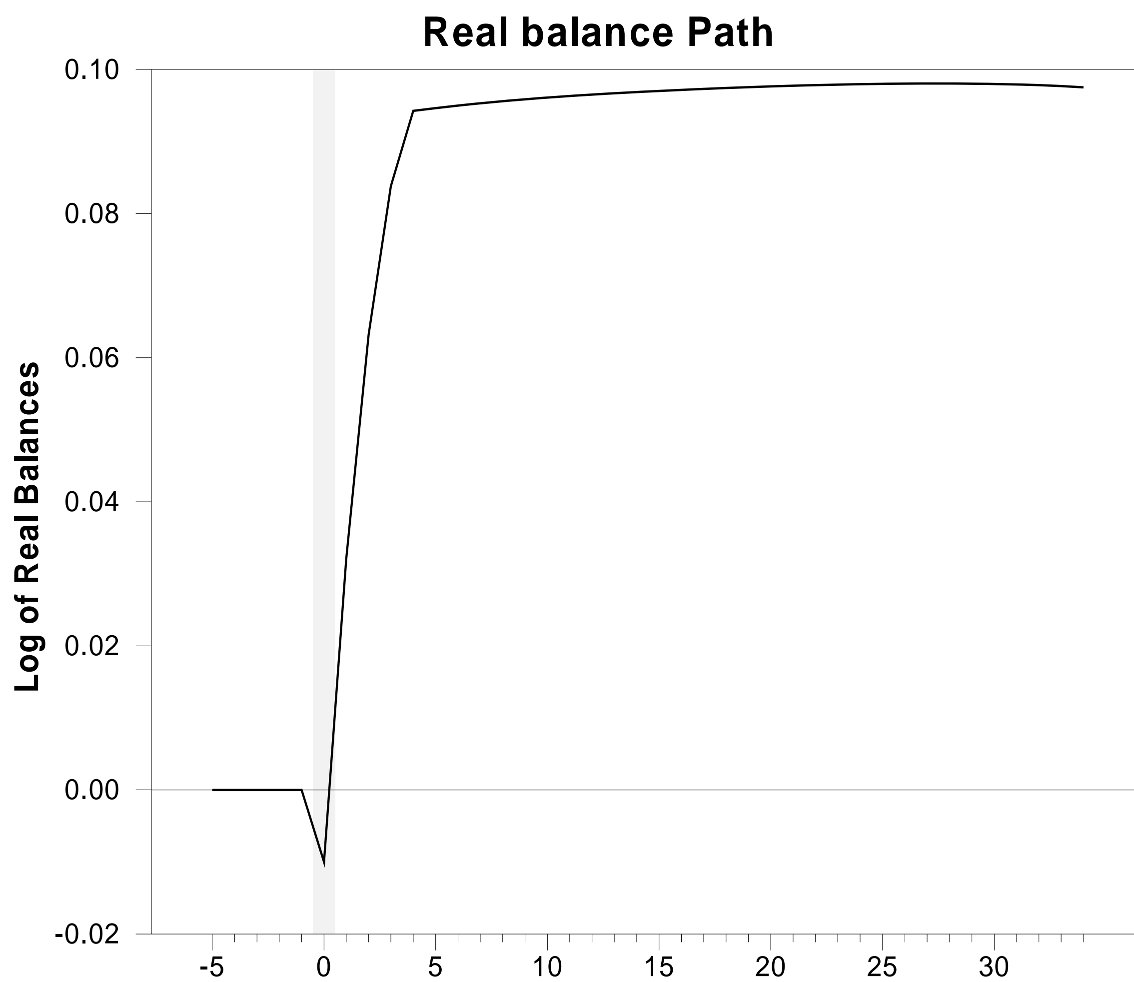

Figure 5c
Gradualist (SOMC) Six Percent Reduction in Money Growth

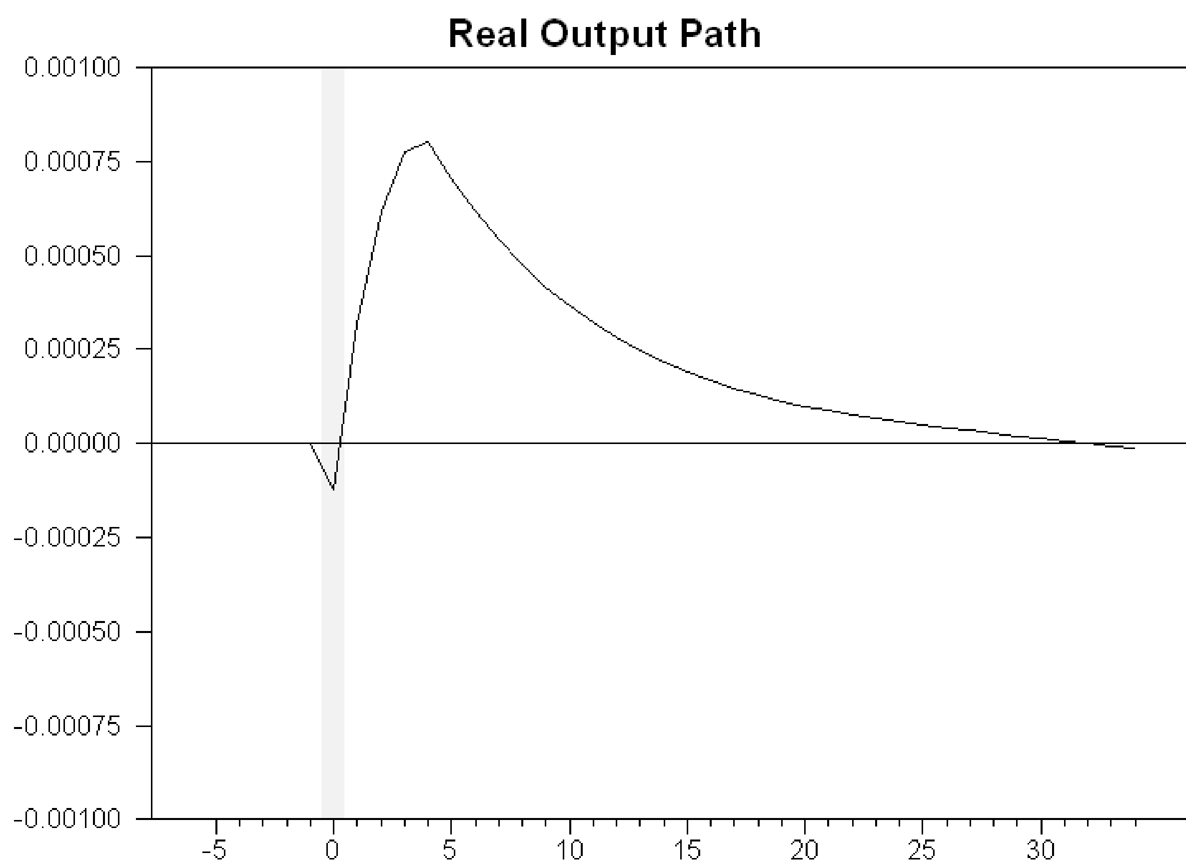

Figure 5d
Gradualist (SOMC) Six Percent Reduction in Money Growth

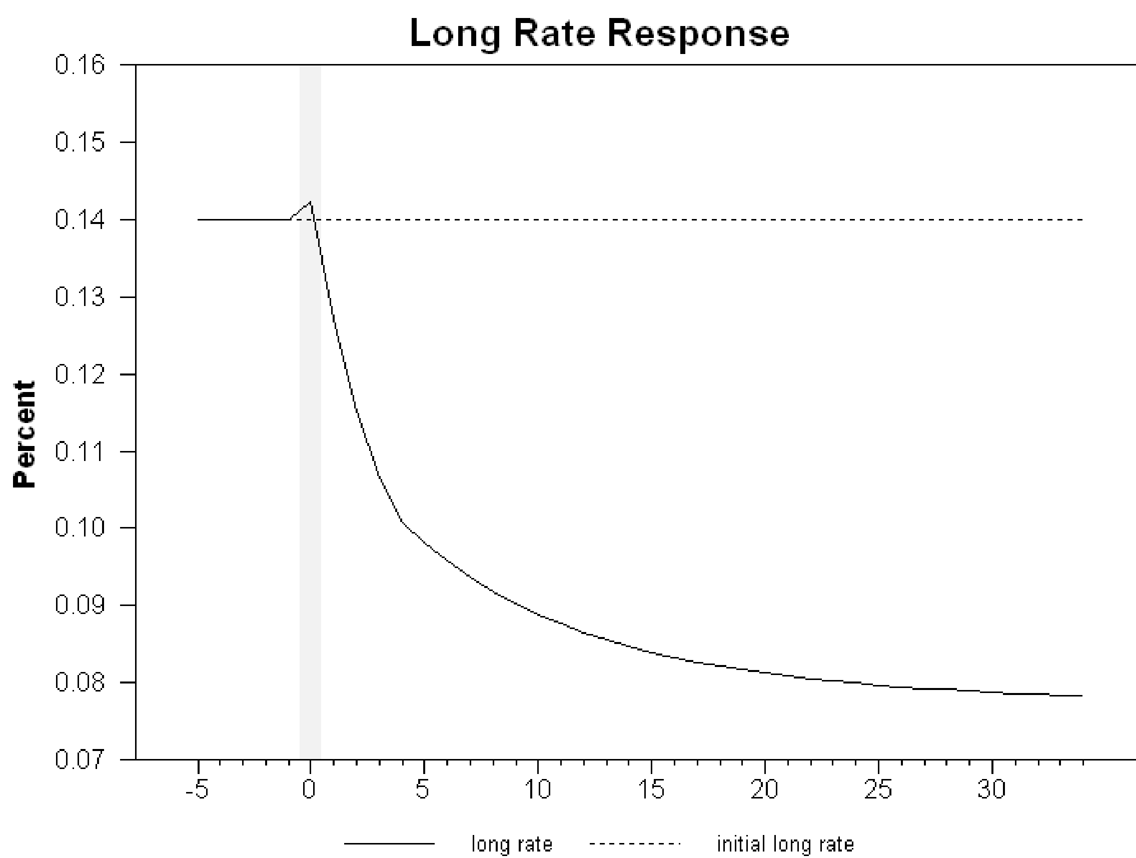

Figure 5e
Gradualist (SOMC) Six Percent Reduction in Money Growth

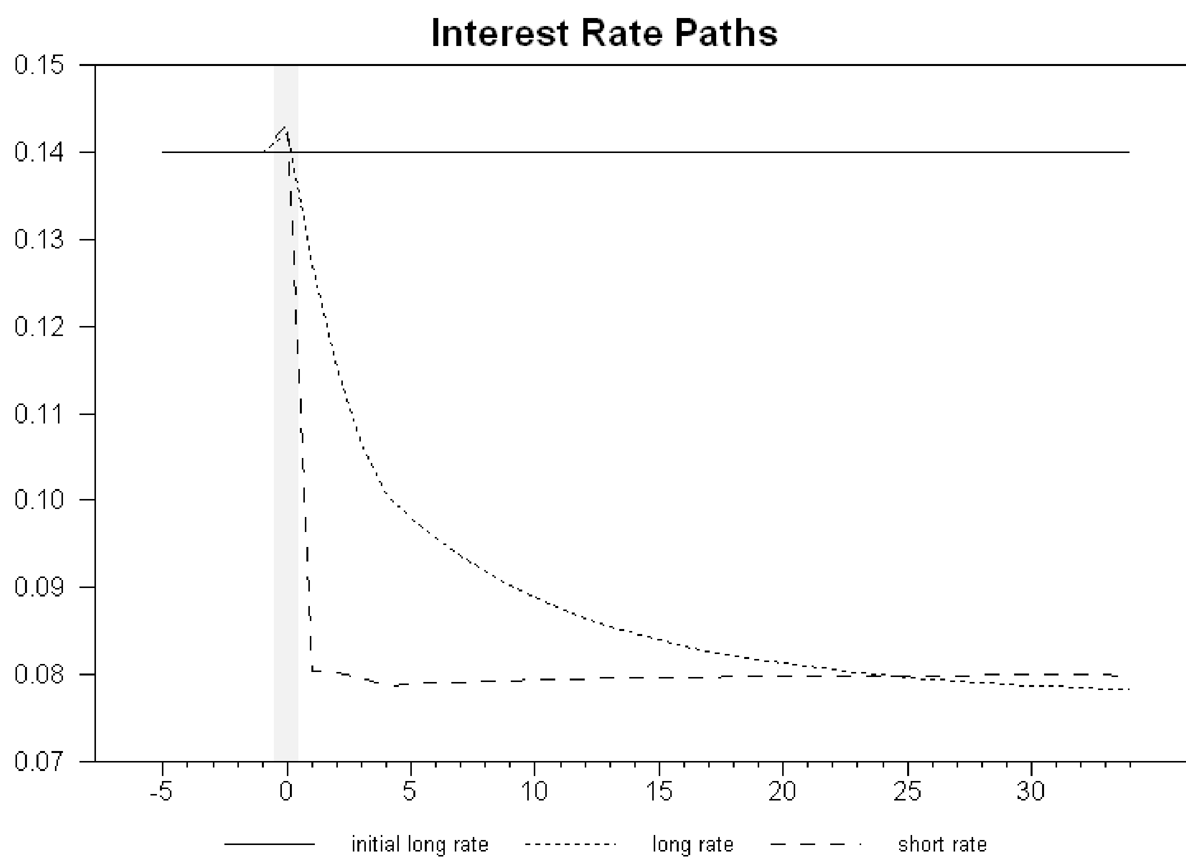

Figure 5f
Gradualist (SOMC) Six Percent Reduction in Money Growth

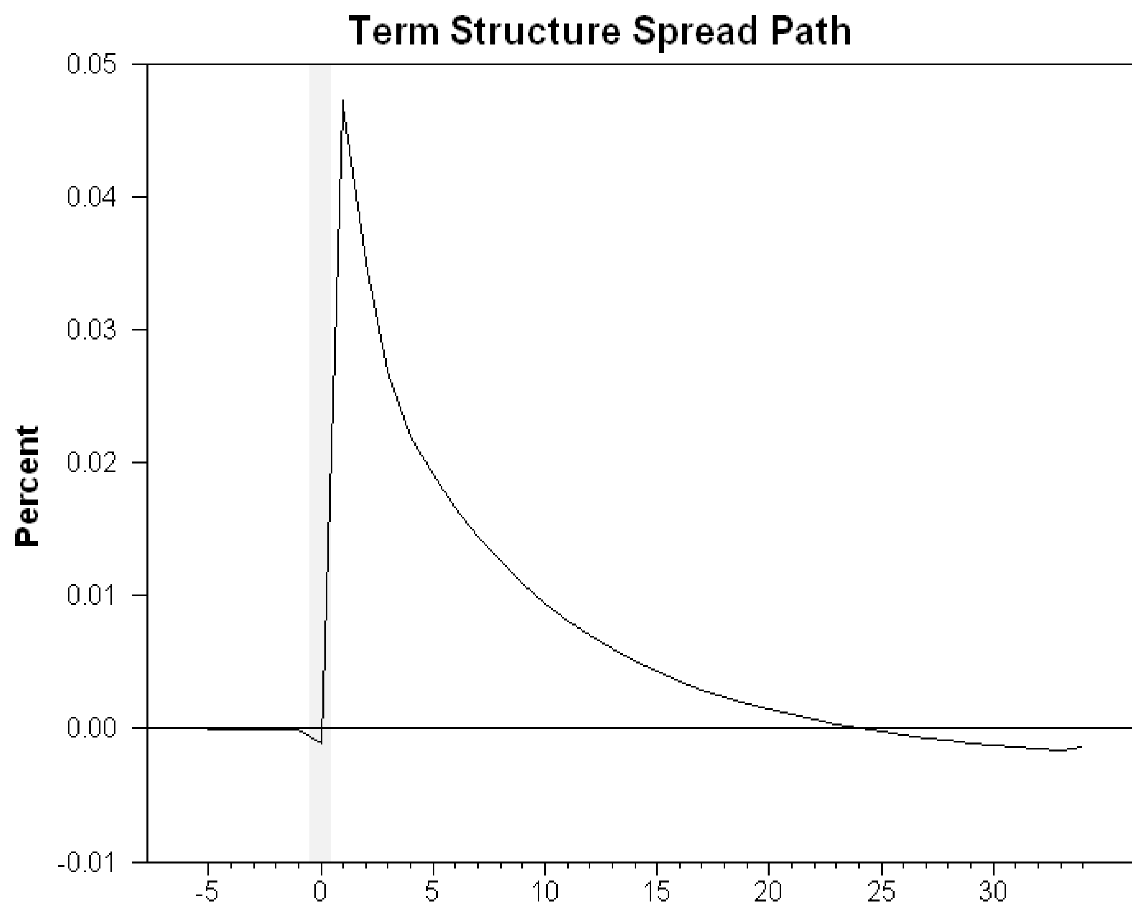

Figure 6a
Six Percent "Cold Turkey" Reduction in Money Growth

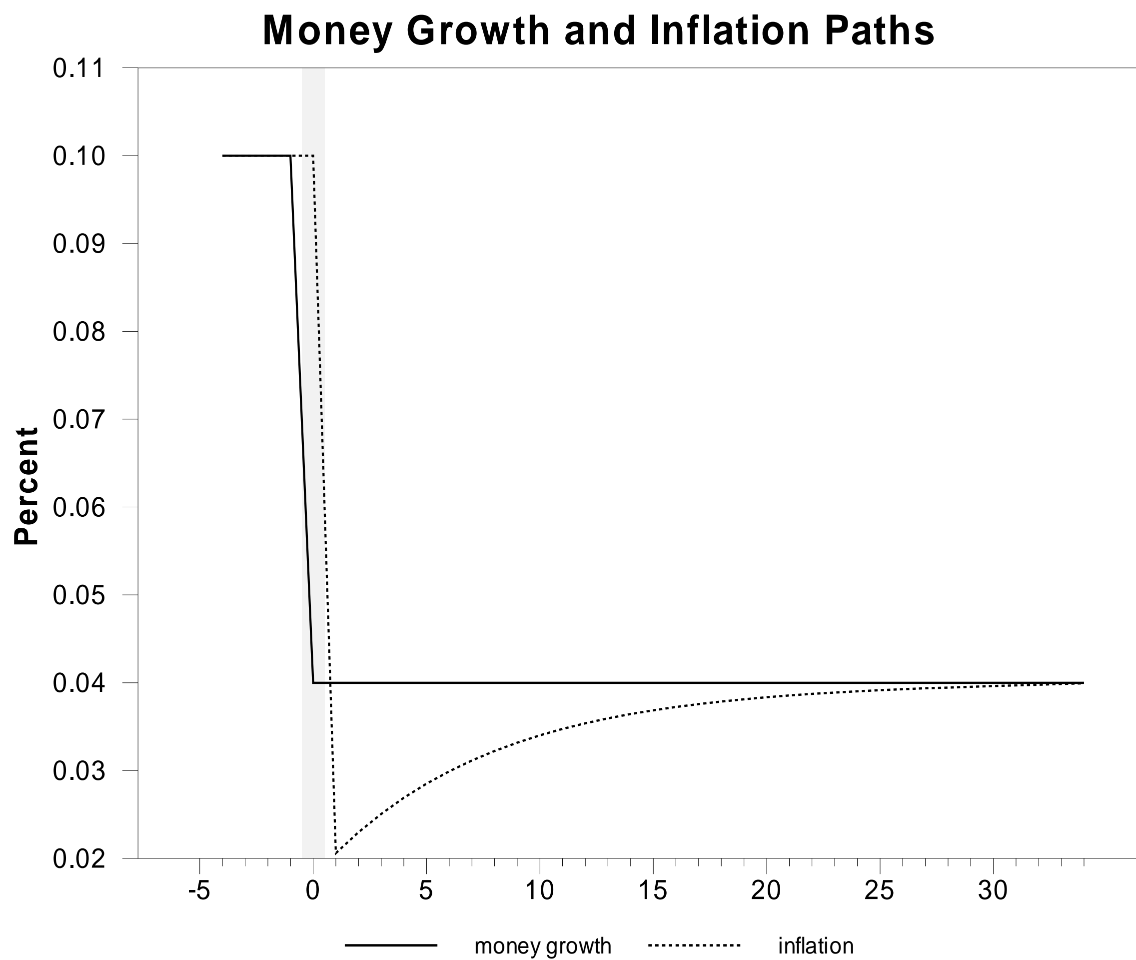

Figure 6b
Six Percent "Cold Turkey" Reduction in Money Growth

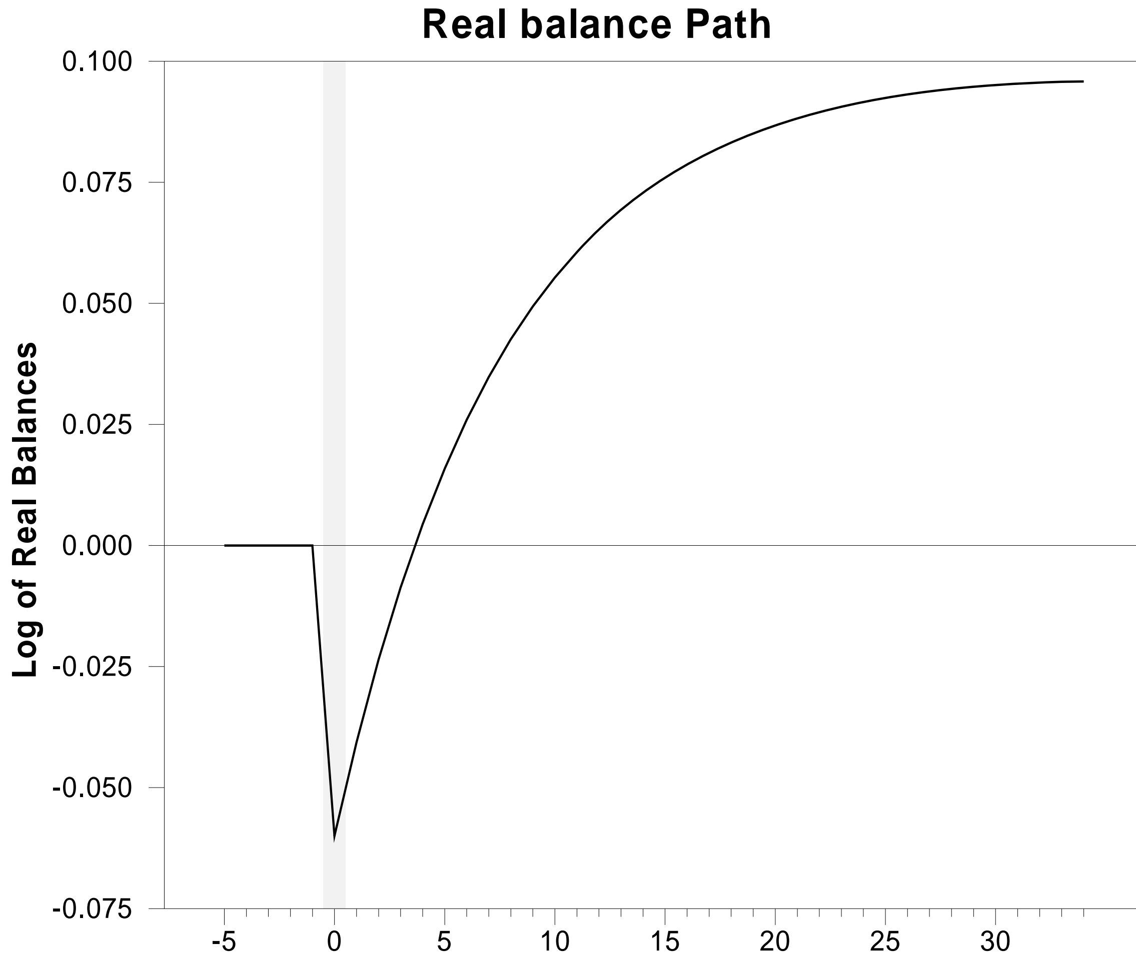

Figure 6c
Six Percent "Cold Turkey" Reduction in Money Growth

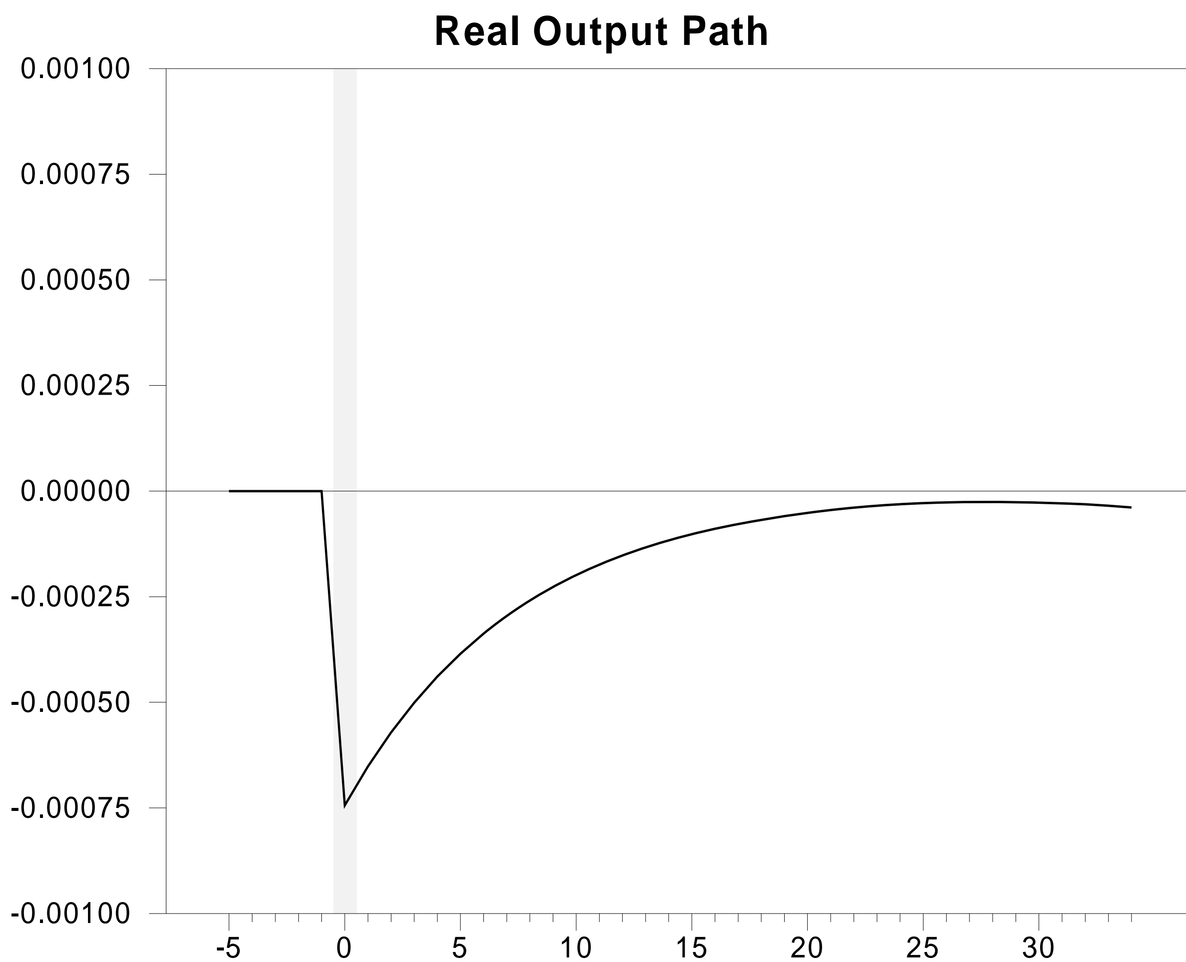

Figure 6d
Six Percent “Cold Turkey” Reduction in Money Growth

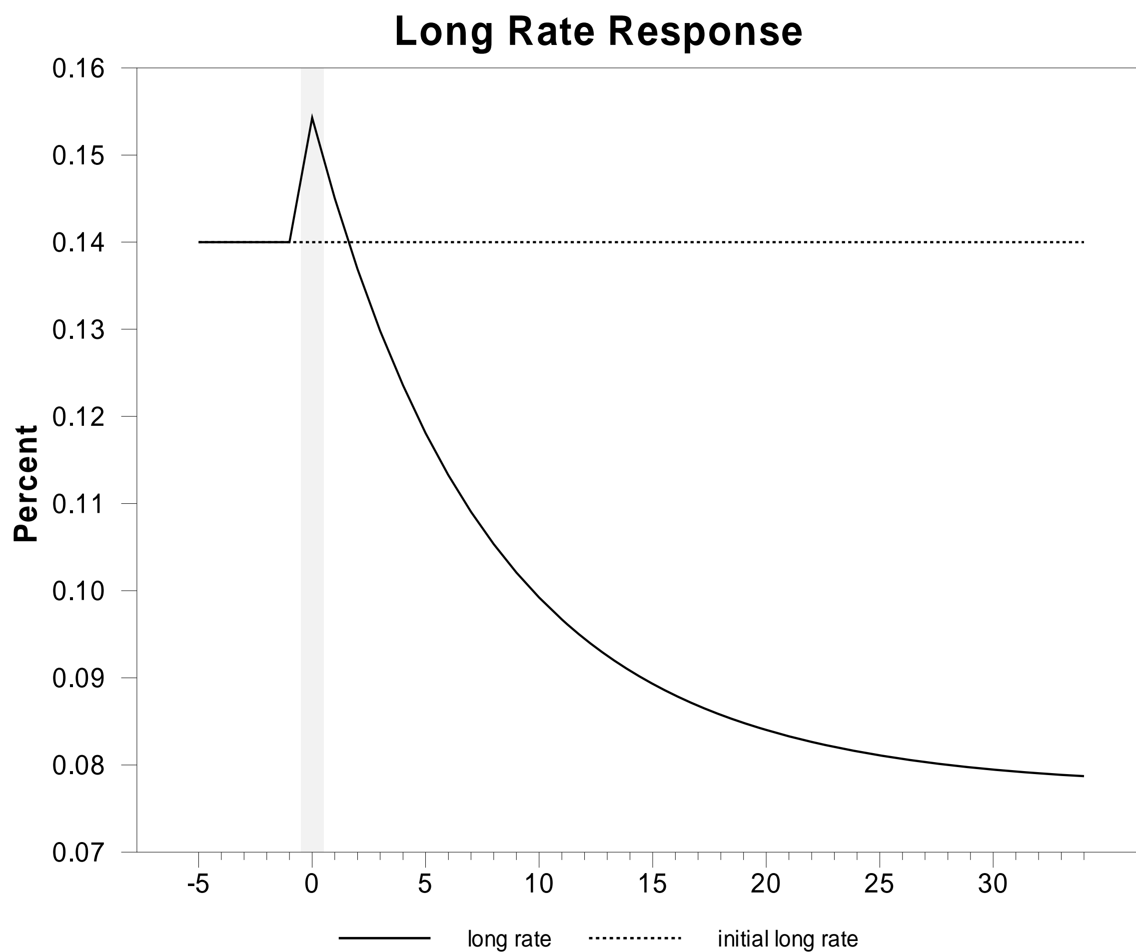

Figure 6e
Six Percent "Cold Turkey" Reduction in Money Growth

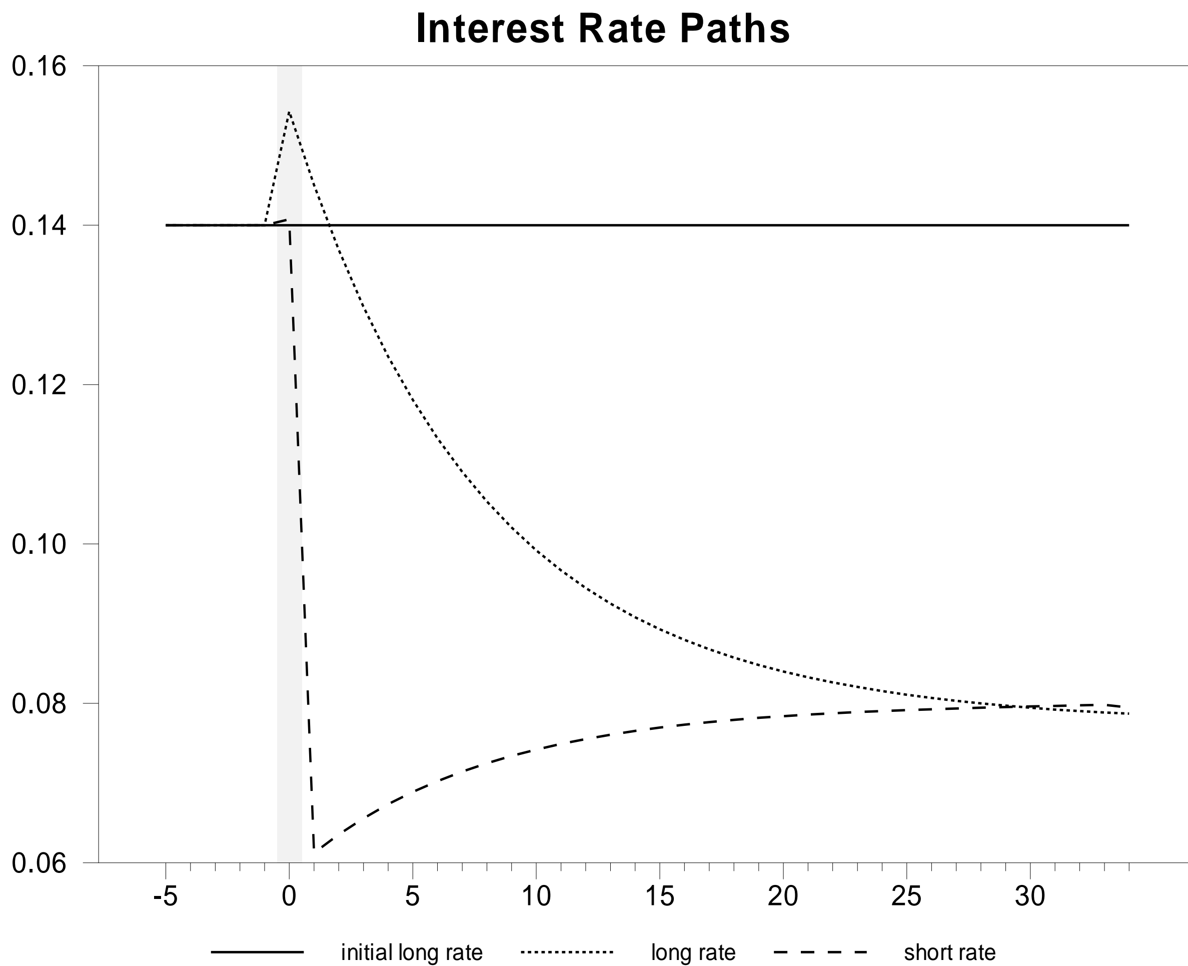

Figure 6f
Six Percent “Cold Turkey” Reduction in Money Growth

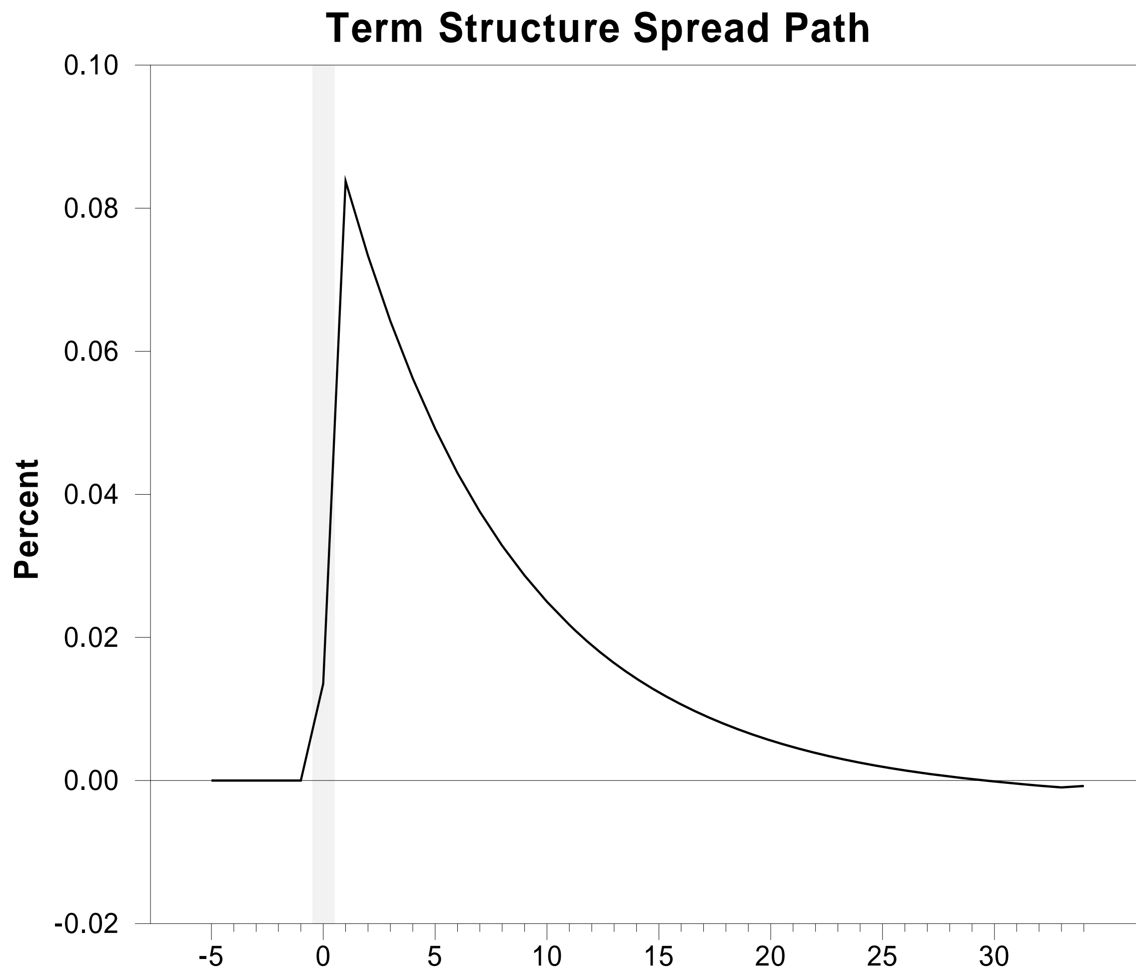

Figure 7a
Sensitivity of Responses to Linearization of Model

Six Percent "Cold Turkey" Reduction in Money Growth

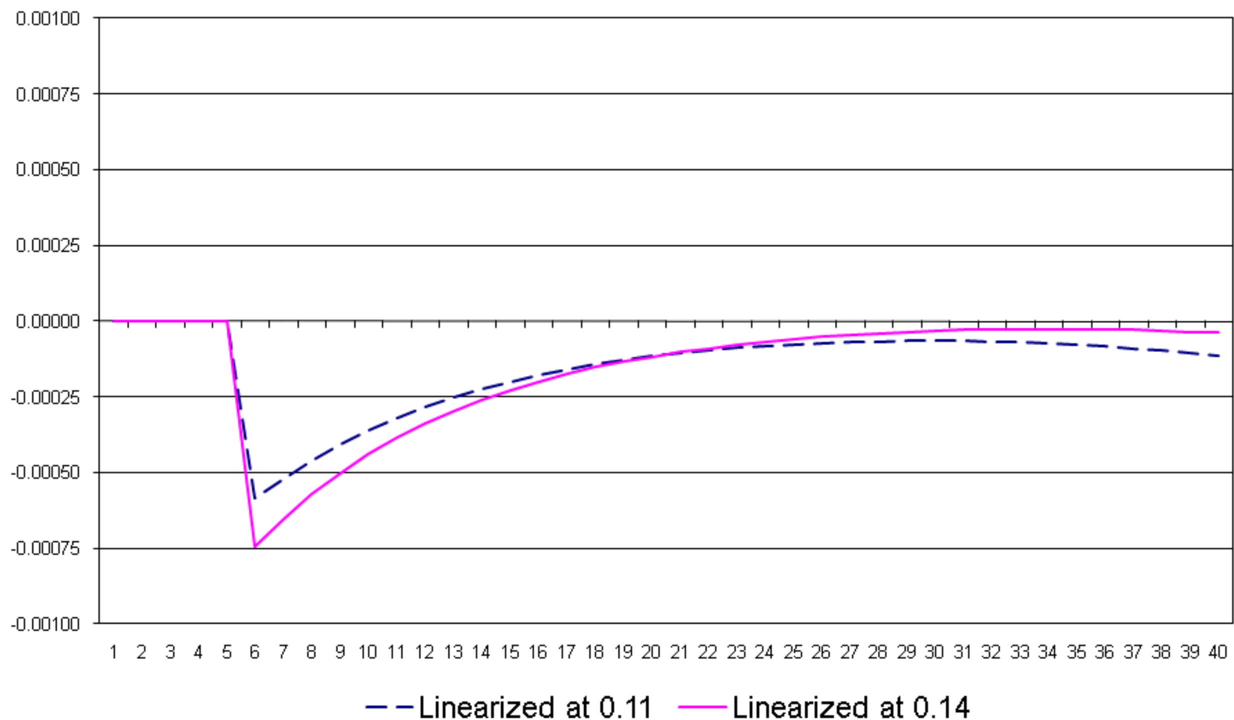

Figure 7b
Sensitivity of Responses to Linearization of Model

Gradualist Six Percent Reduction in Money Growth

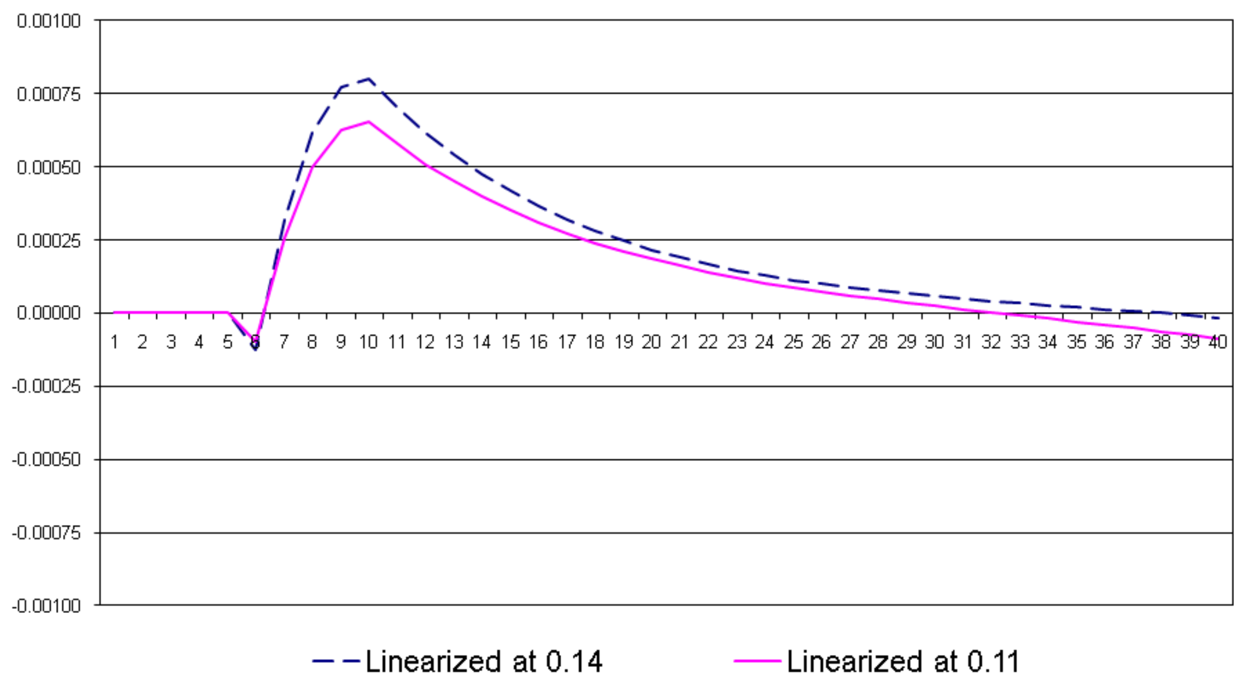

Figure 7c
Sensitivity of Responses to Linearization of Model

Six Percent "Cold Turkey" Reduction in Money Growth

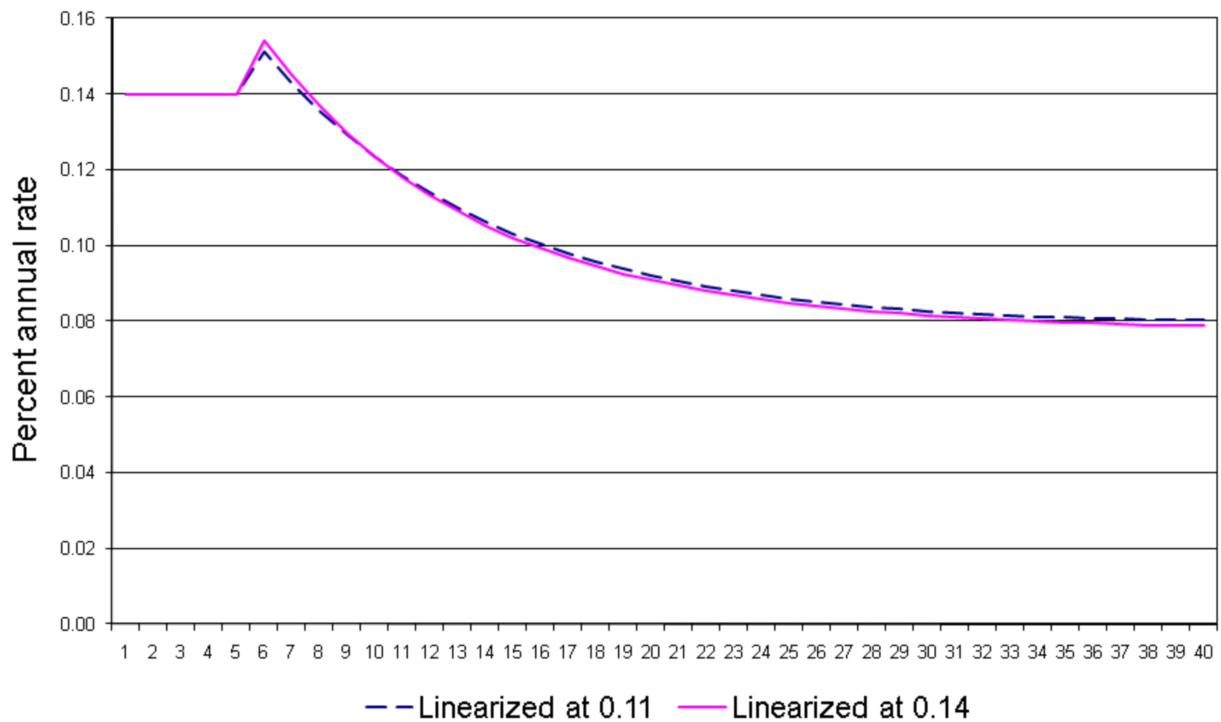

Figure 7d
Sensitivity of Responses to Linearization of Model

Gradualist Six Percent Reduction in Money Growth

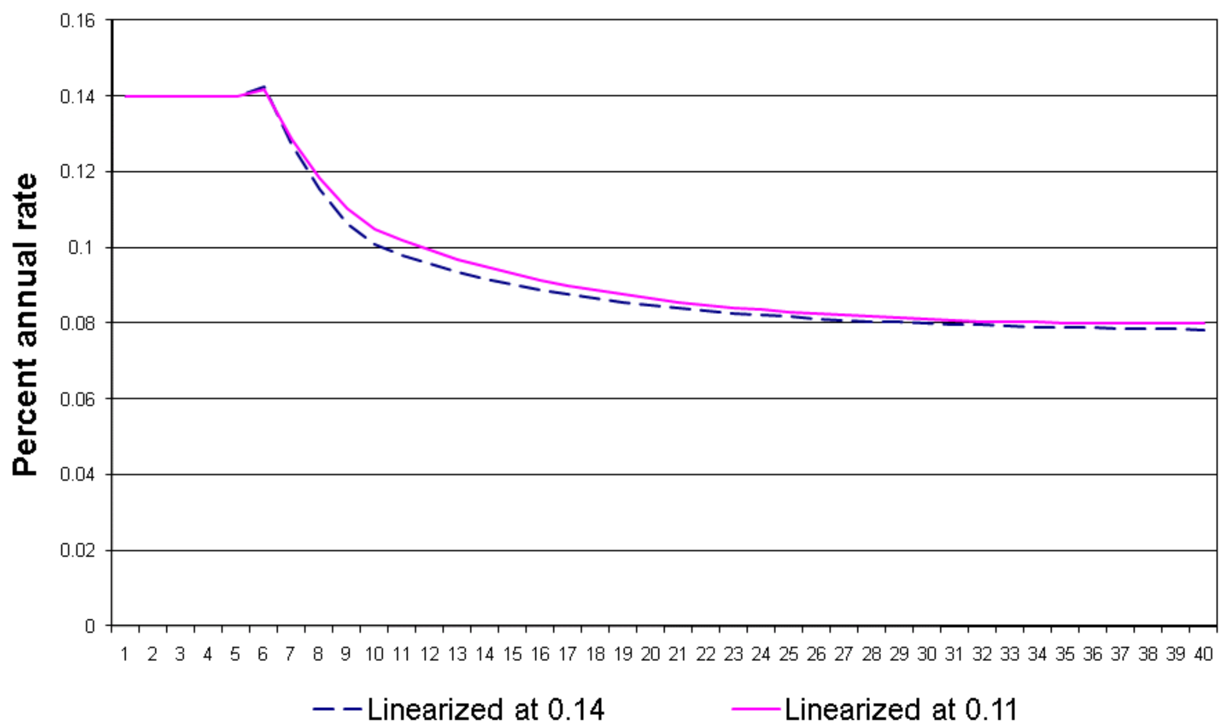

Figure 7e
Sensitivity of Responses to Linearization of Model

Six Percent "Cold Turkey" Reduction in Money Growth

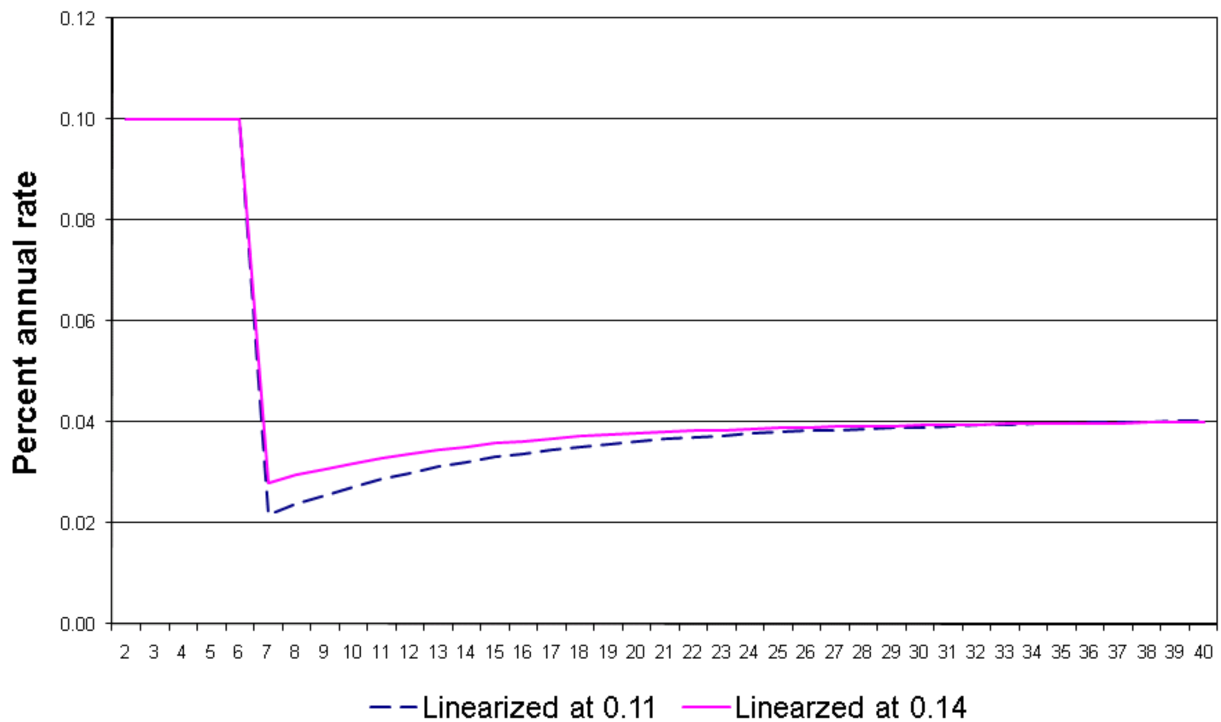

Figure 7f
Sensitivity of Responses to Linearization of Model

Gradualist Six Percent Reduction in Money Growth

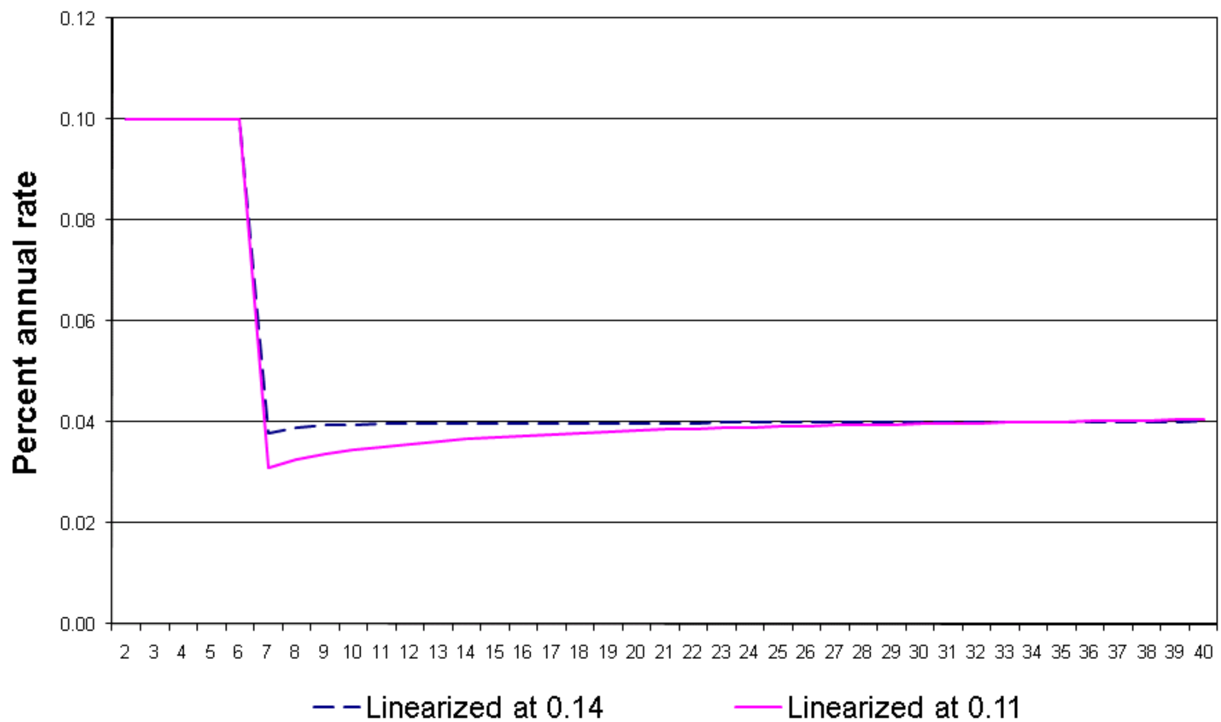

Figure 8a
Response to a Transitory Deviation from Target Money Growth Path
(No Base Drift)

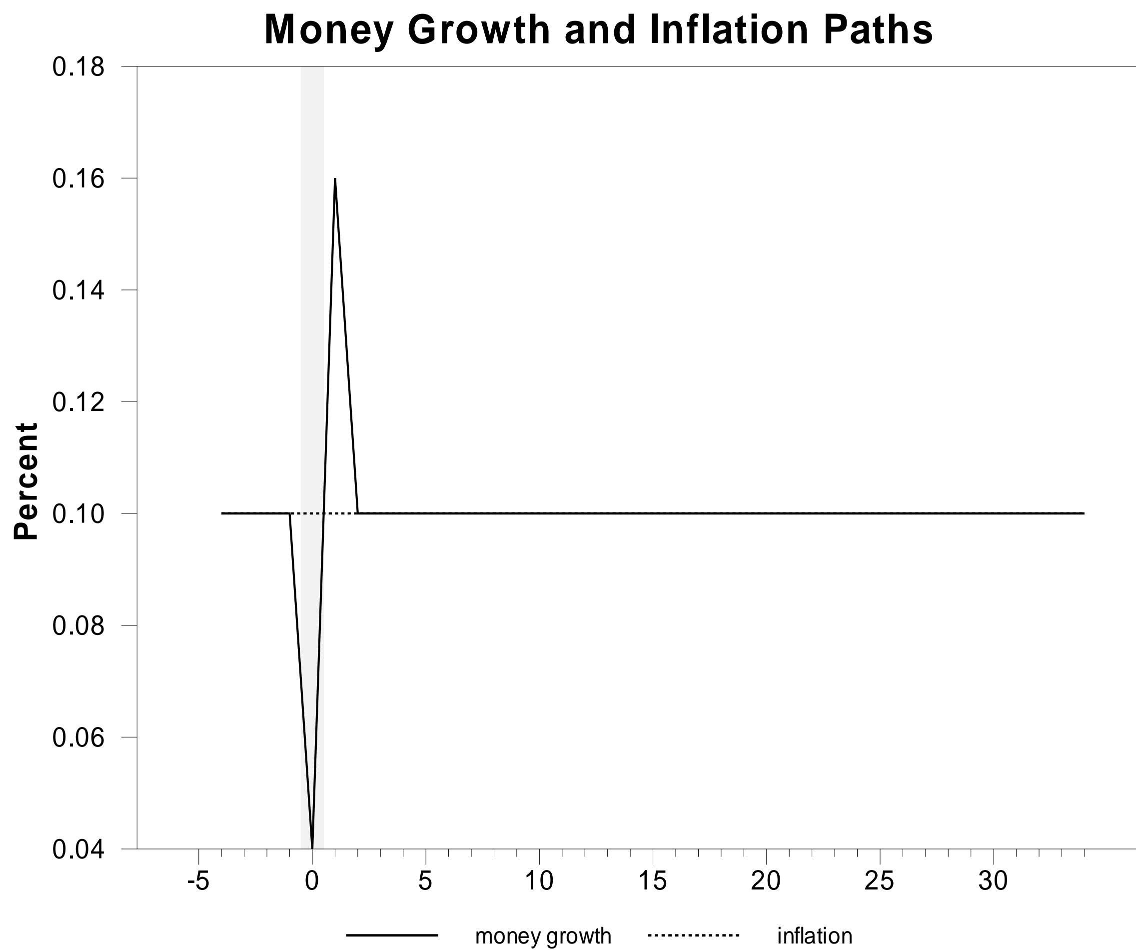

Figure 8b
Response to a Transitory Deviation from Target Money Growth Path
(No Base Drift)

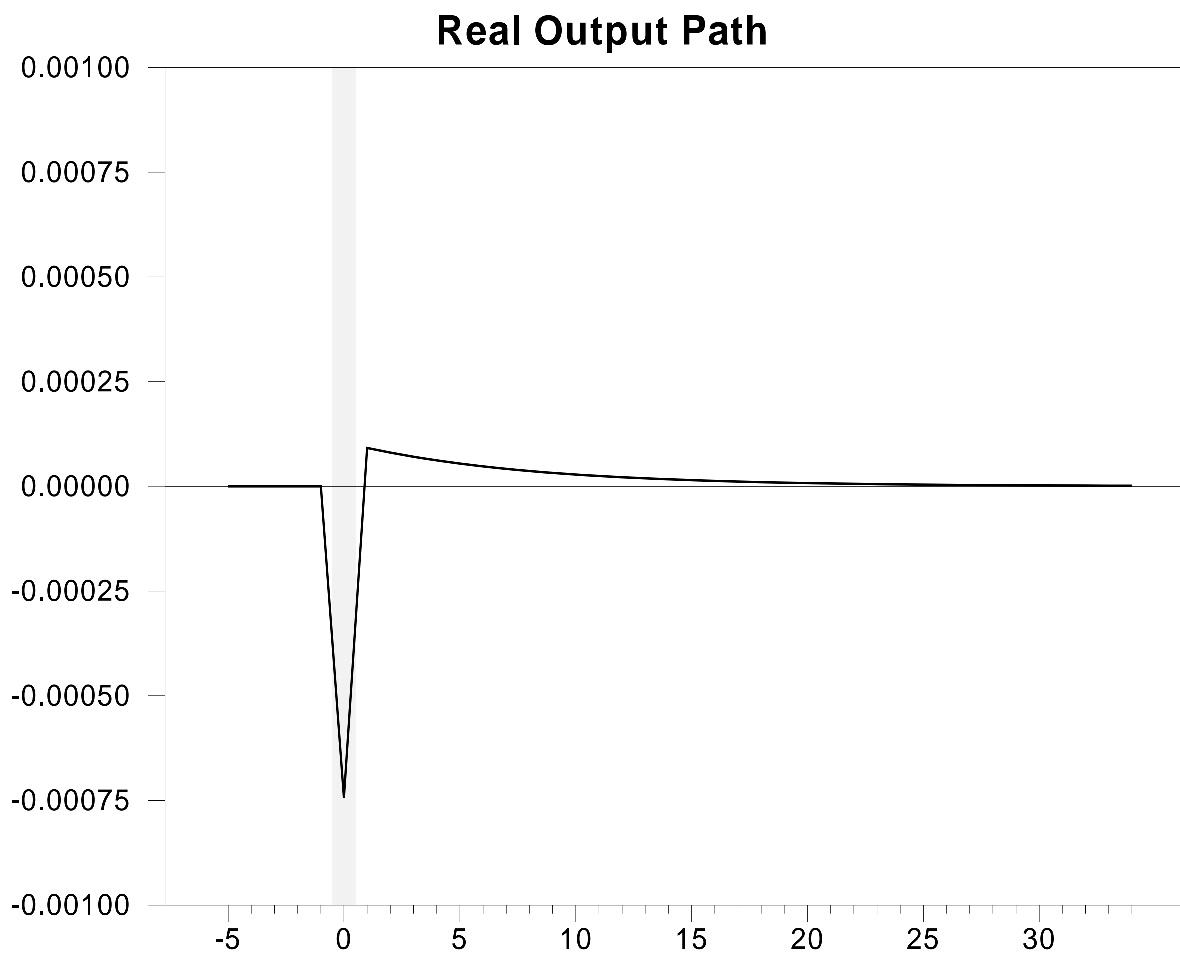

Figure 8c
Response to a Transitory Deviation from Target Money Growth Path
(No Base Drift)

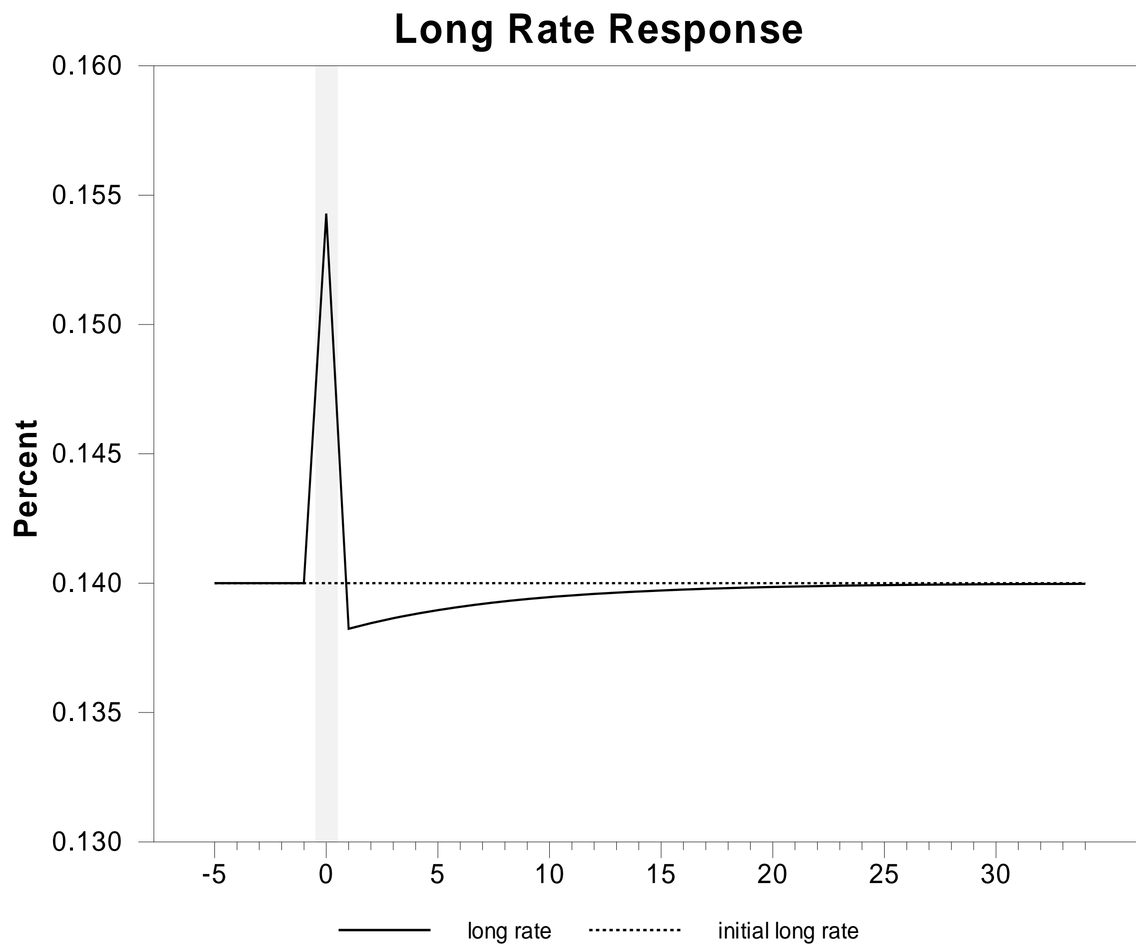

Figure 9a
Response to a Permanent Change in the Level of the Money Stock
(Base Drift)

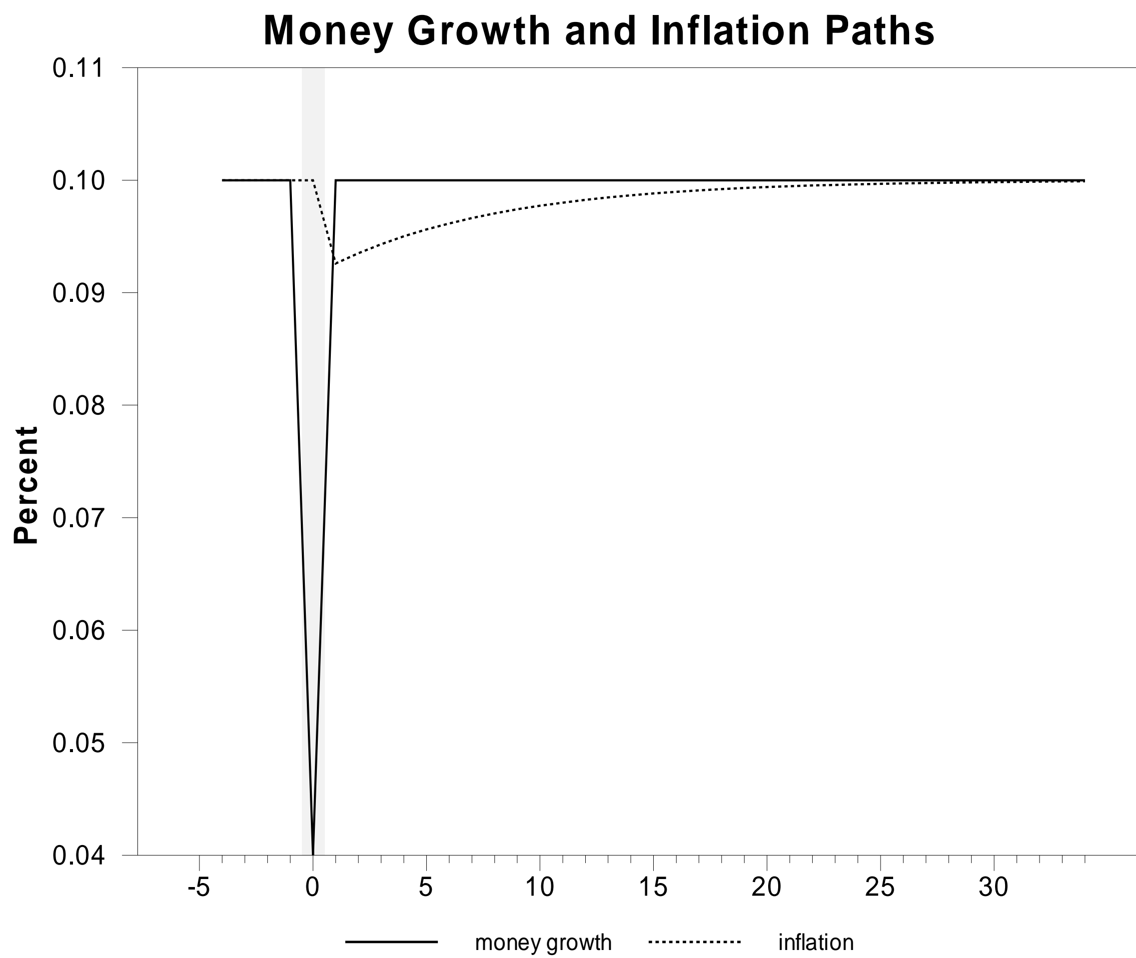

Figure 9b
Response to a Permanent Change in the Level of the Money Stock
(Base Drift)

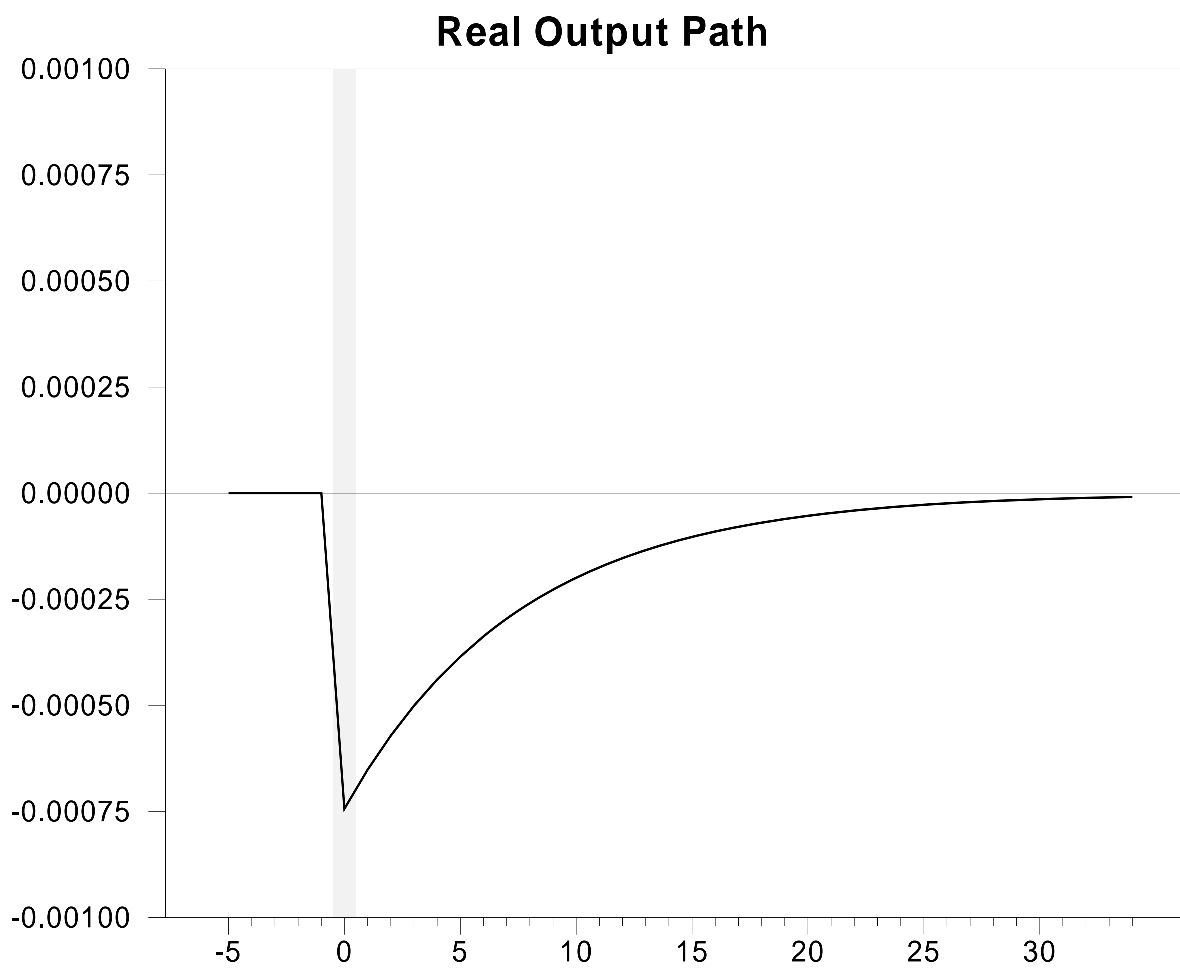

Figure 9c
Response to a Permanent Change in the Level of the Money Stock
(Base Drift)

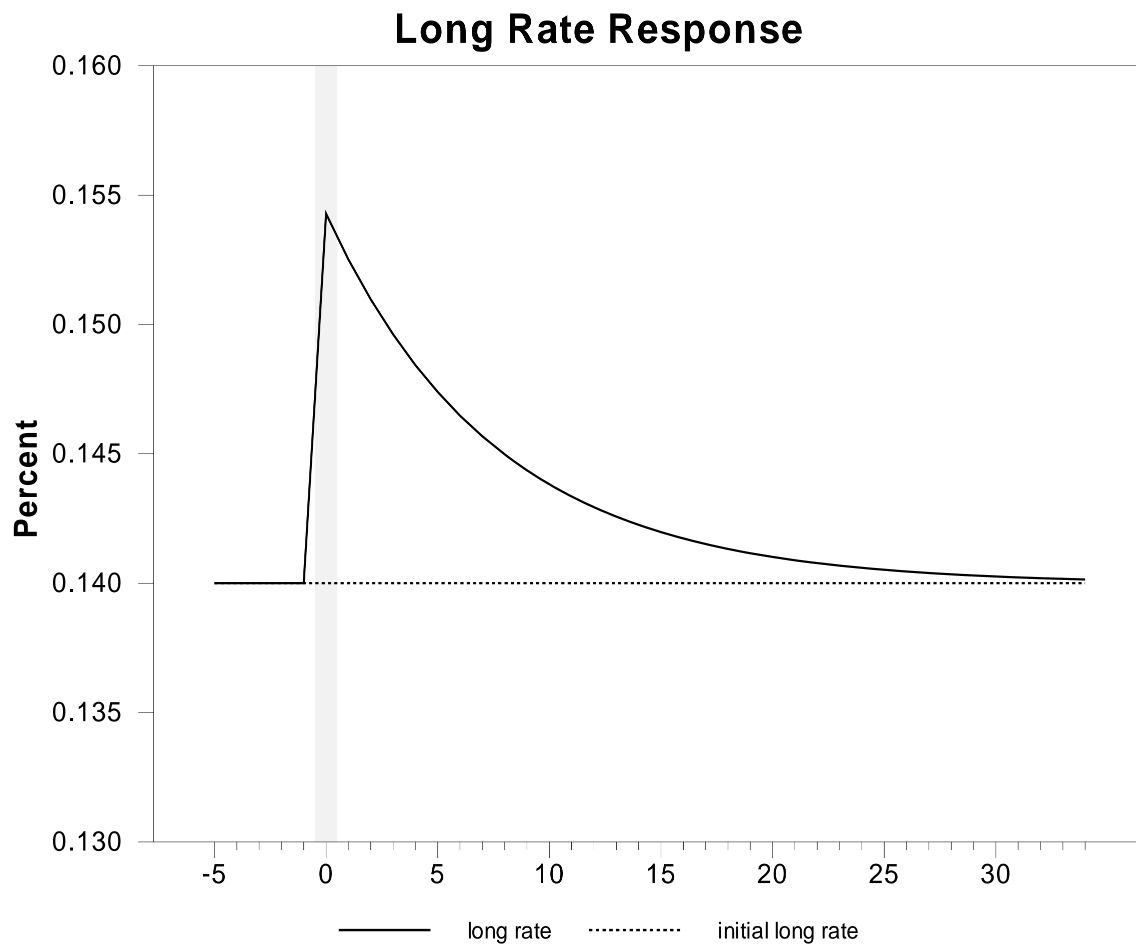

Figure 10a
Response to a Persistent Change in the Level of the Money Stock
(Base Drift decays at 50% per period)

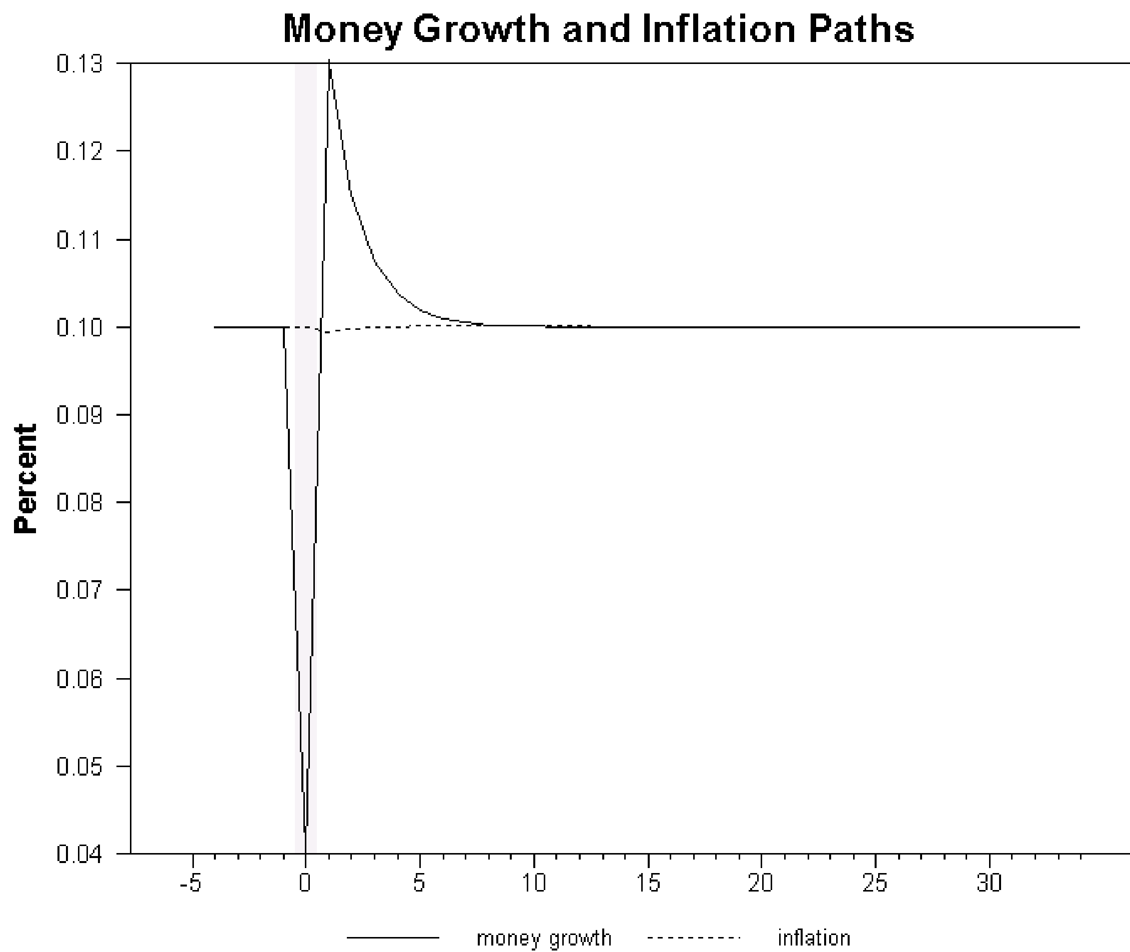

Figure 10b
Response to a Persistent Change in the Level of the Money Stock
(Base Drift decays at 50% per period)

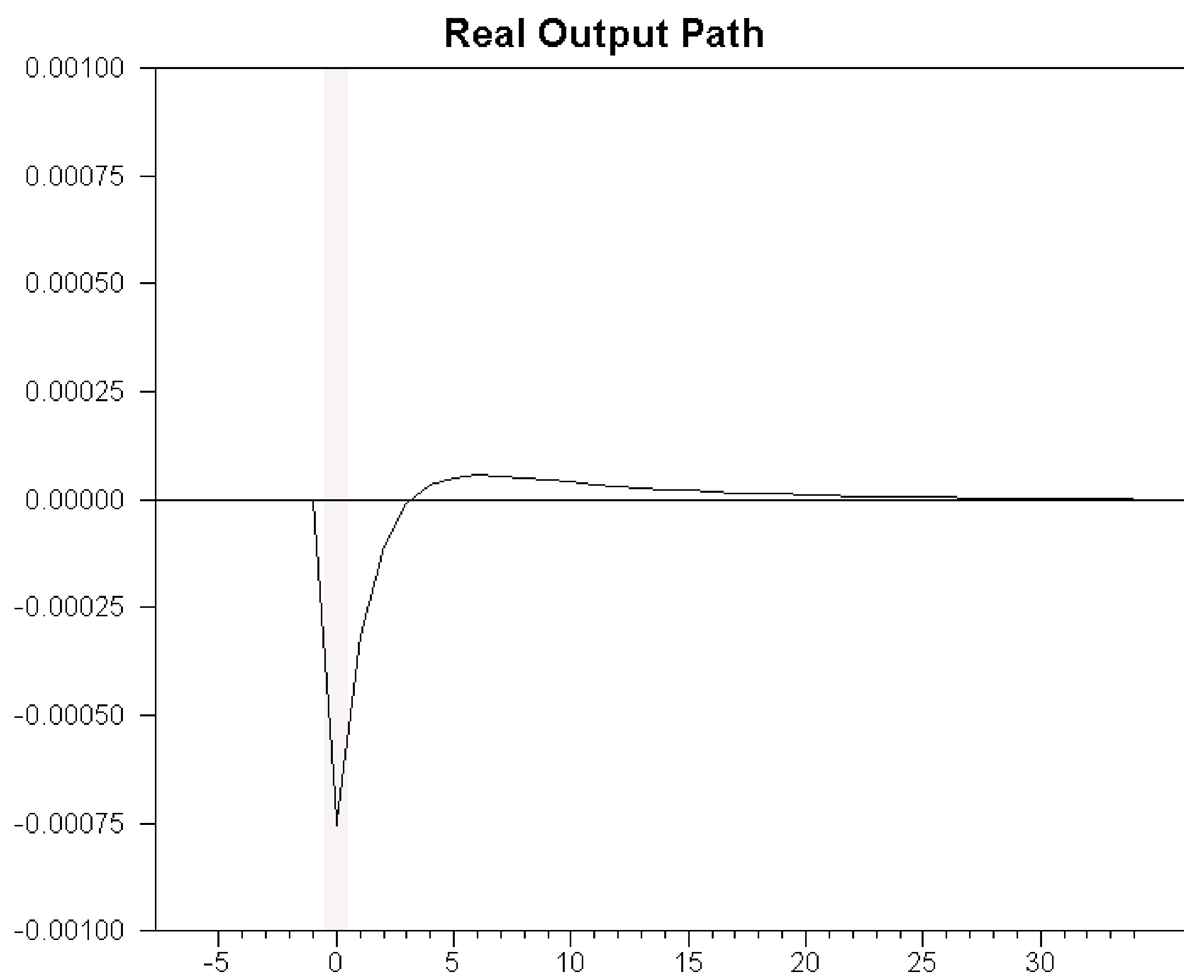

Figure 10c
Response to a Persistent Change in the Level of the Money Stock
(Base Drift decays at 50% per period)