BB Chapter 13: Monetary Policy Versus Fiscal Policy – Who’s Right?
BB Chapter 14: Government Deficits and Debts

Prelude: Discretion Versus Rules: Who’s Right?
This chapter is going to discuss whether we should, at the discretion of the government and the central bank, try to use monetary policy or fiscal policy to correct problems in the economy, but to be totally honest, there are a lot of folks out there who think that both of these ideas are bad. They advocate management of the economy through fixed rules for taxes, spending and growth of the money supply that should almost never be violated. They would say that due to information lags and other problems, the government should maintain a **cyclically balanced budget** (a budget with deficits in recessions and surpluses during full employment that cancel each other out over time) and should let the real money supply grow at a steady rate, no matter what. Basically, they argue that we don’t know enough to do these activist policies properly, so it is better if we don’t do them at all. Of course, you have as much chance of keeping the government and the central bank from tinkering with the economy as you have of keeping your spouse from constantly re-adjusting the thermostat.

Another View of How Monetary Policy Works: Velocity and the Equation of Exchange

- Concept of velocity – how many times a year does a typical dollar change hands
- \( V = \frac{YP}{M} \)
- velocity equals nominal GDP divided by the money supply
- Percent changes and the equation of exchange

\[ \%\Delta M + \%\Delta V = \%\Delta Y + \%\Delta P \]

where
- \( M \) is the money supply
- \( V \) is velocity
- \( Y \) is real GDP
- \( P \) is the price level

**Quantity Theory of Money**
The quantity theory of money consists of three parts:
1. Equation of exchange
2. Velocity is constant
3. Y doesn't change in response to a change in M
The result is that changes in the money supply only change price level.

**EX:** Imagine an economy where velocity is constant (so \( \Delta V = 0 \)), and real GDP grows at an average annual rate of 3\% (so \( \Delta Y = 3\% \)). Putting these numbers into the above equation gives us a relationship between the rate of growth of the money supply (\( \Delta M \)) and the inflation rate (\( \Delta P \))

\[
\Delta M + 0\% = 3\% + \Delta P
\]

So, if the money supply grows at 3\% each year, inflation should average 0\%. Increasing the money supply at a greater rate will, in this model, simply create inflation.

In fact, velocity is not constant, so this is sort of bogus.

Then again, maybe velocity is more or less constant. The calculation of velocity depends on the definition of the money supply.
- velocity based on M1 ranges from about 2.0 in 1945 to about 9.0 in 2000.
- velocity based on M2 was fairly steady at about 1.66 from 1950 to 1977.

**What Determines Velocity**
1. Financial innovations have reduced the amount of money that people need for daily transactions and have increased velocity.
2. Real interest rates – when they are higher, velocity increases
3. Expected inflation – when it is higher, velocity increases

**Monetarism**
Monetarism takes the equation of exchange \[ \% \Delta M + \% \Delta V = \% \Delta Y + \% \Delta P \] and the assumption that velocity is either constant or predictable and arrives at the conclusion that monetary policy can be used to drive nominal GDP.

This is in contrast with Keynesians who believe that fiscal policy drives GDP, or that monetary policy drives GDP only through its effect on interest rates and spending.

**Monetary Policy Versus Fiscal Policy – Who’s Right?**
This question comes down to a few basic issues.

1. Can the government respond to an economic problem correctly and in a timely manner? If so, fiscal policy might be all right, otherwise monetary policy is probably preferable.
2. What is the impact of government borrowing on interest rates and, thus, on aggregate expenditures? If government borrowing significantly increases the demand for loanable funds and raises interest rates a lot, it could crowd out private borrowing and investment. This argues for monetary policy. Which side is correct depends on the supply of loanable funds and on the demand for investment.

Monetarist View: Increased government borrowing drives up interest rates and crowds out private borrowing

Keynesian View: Increased government borrowing doesn't drive up interest rates and doesn't crowd out private borrowing

3. Will velocity change depending on changes in the growth rate of the money supply? If so, the Keynesian approach may be more dependable.

Epilogue: Rules Versus Discretion – Who’s Right?
The rules versus discretion issue might come down to the following points.
1. How fast does the automatic adjustment mechanism of the macroeconomy work? If wages adjust and shift aggregate supply quickly, this argues for adherence to rules. Otherwise, discretion might be worth the trouble.

2. How long are the lags in the economy’s response to either fiscal or monetary policy changes? Longer lags argue against discretionist or activist policies.

3. How accurate are information and forecasts? Better accuracy would support activism.

4. How destructive are uncertainties caused by discretionary policy changes? Economies work best when conditions are predictable. Discretionary policies introduce greater levels of uncertainty.

5. Do you want to have a political business cycle? That is, discretionary fiscal policy would let government alter spending according to its preferences, and that might suggest lower taxes and more spending (expansionary policy) just prior to elections, the so-called political business cycle.

6. Can the central bank and the government coordinate their activities? Should they? If the discretionary approach to the economy is to be most effective, the central bank and the government should coordinate their activities to be either expansionary or contractionary at the same time. It is entirely possible that the two could counteract each other. However, if one side is wrong about what needs to be done, this might be all right.

**Deficits and Debts**

First some important definitions:

- **Government budget deficit** is the amount by which government spending exceeds tax revenue in a year.
- **Government debt** is the accumulation of all previous deficits.

Put slightly differently, the deficit is the annual change in the debt.

When the government runs a deficit, the debt increases. If the government runs a surplus, the debt decreases.

- **Gross government debt** is the total amount owed by the government. This is roughly 60% of GDP for the U.S.
- **Net government debt** is the gross debt minus debts that one part of the government owe to another part. This is roughly 40% of GDP for the U.S.
- **External government debt** is what is owed to foreigners. This is roughly 8% of GDP for the U.S.
This is federal debt held by the public other than the Federal Reserve System. Data from the Concord Coalition: http://www.concordcoalition.org/federal_budget/charts/federaldebt.htm

Basically, right now we’re looking at a federal budget deficit that is about 40% of GDP. This isn’t necessarily a problem. The problem is that there’s no end in sight to future budget deficits, so the debt is likely to keep growing and, in the long run, growth of the debt as a percentage of GDP is unsustainable.

An International Comparison for the Year 2000

<table>
<thead>
<tr>
<th>Country</th>
<th>Gross government Debt As a % of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>112.8</td>
</tr>
<tr>
<td>United States</td>
<td>60.2</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>49.7</td>
</tr>
<tr>
<td>Germany</td>
<td>63.5</td>
</tr>
<tr>
<td>France</td>
<td>63.9</td>
</tr>
<tr>
<td>Italy</td>
<td>112.9</td>
</tr>
<tr>
<td>Canada</td>
<td>85.1</td>
</tr>
</tbody>
</table>

Large national debts cause a couple of problems.
1. The large amount of borrowing that the government must do as a result of the debt increases the demand for loanable funds, potentially increasing interest rates and crowding out private borrowing. This is more likely with large countries than small countries as larger government may have more of an impact on international credit markets.
2. As debt as a percentage of GDP rises, the likelihood of default on the debt increases, leading to lenders demanding higher and higher interest rates for loans to the government. This leads to higher and higher percentages of tax revenues going to pay interest on the debt rather than being used for other government activities. This is also a wealth transfer from taxpayers to debtholders.

3. Because U.S. government debt is expressed in U.S. dollars, as debt as a percentage of GDP rises, there is an increasing incentive for the government to simply print enough dollars to pay off the debt. This would be seriously inflationary and would also kill any future possibility of anyone lending to our government in our currency, so the possibility of it happening will erode confidence in and the value of our currency.

A deficit may be divided into two parts.
1. The **structural deficit** is the deficit that would occur if the economy were at full employment.
2. The **cyclical deficit** is a deficit that occurs specifically because an economy is operating below full employment.
Cyclical deficits aren’t really a problem, but structural deficits are.

**Measures of the debt’s severity**
1. Nominal debt (an actual number: bad measure)
2. Real debt (also not too good)
3. Per capita debt (varies from country to country)
4. Debt as a percentage of GNP (a good measure... what does it mean?)
5. Interest paid as a percentage of GNP (reflects importance of interest rates)
6. Interest paid to foreigners as a percentage of GNP

**Eliminating Debts without Eliminating Deficits, Some Examples**
EX: Reducing the real debt with a positive deficit and surprise inflation

Year 0: Nom. Debt = 100
   PL = 100
   Real debt = 100
   Interest rate on debt= 5%
   Inflation = 20%  (This has to be surprise inflation)
   Deficit = 5

Year 1: Nominal debt = 100 + 100(0.05) + 5 = 110
   PL = 120
   Real debt = 110/120 < 100.

EX: Reducing the per GNP debt through growth despite a positive deficit
Year 0: Nom. Debt = 100
\[
\begin{align*}
\text{PL} &= 100 \\
\text{Real debt} &= 100 \\
\text{Real GNP} &= 100 \\
\text{Debt as a }\%\text{ of GNP} &= 100\% \\
\text{Interest rate on debt} &= 5\% \\
\text{Inflation} &= 3\% \\
\text{Real GNP Growth} &= 5\% \\
\text{Deficit} &= 2 \\
\end{align*}
\]

Year 1: Nominal debt = 100 + 100(0.05) + 2 = 107

\[
\begin{align*}
\text{PL} &= 103 \\
\text{Real debt} &= 107/103 \\
\text{Real GNP} &= 105 \\
\text{Debt as a }\%\text{ of GNP} &= (107/103)/105 < 100. \\
\end{align*}
\]

Realistically, the only way to reduce the debt is to eliminate deficits
1. Reduce G (yeah, sure)
2. Increase T... but should the tax rate, t, increase or decrease?