the private sector. Advanced studies have shown that a Ricardian Equivalence does exist that offsets at a rate of around 40-50%. Imperfect Ricardian Equivalence implies that temporary tax cuts have moderate impact on aggregate demand and that households understand to some extent that lower taxes now, keeping G constant, will lead to higher taxes in the future. Some households will save the additional income while others that are credit constrained or myopic may spend the additional income implying that the multiplier of a tax decrease is somewhere between 0 and 1, keeping i constant.

Temporarily higher government spending, financed by borrowing, increases aggregate demand in the short run while the offsetting effect of higher debt on consumption (higher taxes in the future) is spread over an entire lifetime. Thus, the multiplier of spending on output in greater than 1 when keeping the interest rate constant. Recent studies suggest that the spending multiplier is approximately 1 , the investment multiplier is 1.5 and the tax & transfer multipliers are around 0.6-0.7.

Fiscal Policy and the Business Cycle:

One of the biggest problems when trying to implement effective fiscal policy is the existence of time lags. There are four main ones: Information lag, Decision lag, Implementation lag and Effect lag. Information lag refers to the imperfect knowledge we have about the economy and how the information that we do have often refers to a period a few months or years in the past. The decision lag is the delay that occurs due to the decision making process, for example once the prime minister has decided that he wants to act he must pass legislation through parliament to approve his actions. The implementation lag refers to the amount of time that it takes for policy to be implemented after the decision is taken, for tax rates this can often be as much as a year as the government gives businesses and consumers time to adapt to the changes. The effect lag is the delay between the implementation of the policy and it having an effect on the real economy and can often be quite long for monetary policy while being relatively immediate for fiscal policy.

Automatic Stabilisers:

- Changes in the primary balance that occur without the government making discretionary budgetary decisions.
- Tax revenue falls and transfer payments increase during recessions.
- If GDP increases by 1%, the budget improves by approximately 0.5% of GDP (average tax rates are around 50% of GDP). Although this may ignore the effect of people moving in to higher tax bands.
- The effect of automatic stabilisers is higher in countries with large government sectors that have high marginal tax rates.

The Structural (or cyclically adjusted) budget:

- This figure strips out the effect of automatic stabilisers.
- It is the deficit a country would have had, had its output gap been zero.
- Assume that GDP is 4% below the potential level and the deficit is 8% of GDP. Had GDP been 4% higher, the deficit would have been 2% smaller (0.5x4) that is, 6% of GDP.
- In practice it is hard to calculate the structural budget deficit when we do not know the natural production level.

Do governments stabilise the real economy? By running large deficits during recessions the government can help to stabilise the economy but by running small deficits during expansionary