CHAPTER 7

THE PUBLIC FINANCES

WHAT IT'S ALL ABOUT

- What the public finances are and their role in the economy
- Where the government gets it money from
- How government spending can help manage the economy
- What the budget deficit and national debt are
- How governments finance the deficit
- What the role of rating agencies is

WHAT ARE THE PUBLIC FINANCES?

Governments clearly have a big role to play in any economy, though the exact scale of their involvement can vary hugely across the world. They collect taxes. They build roads. They fund the police force and the army. They sometimes offer free healthcare and education. They typically pay benefits to the unemployed or the sick and elderly. Study of the public finances basically looks at all the ways in which governments bring in money and then spend it. These actions are collectively known as fiscal policy and in this chapter we will look at how that works and what effect it can have on an economy.

Up until the seventeenth century, governments would typically fund extra expenditure – wars were the greatest call on the public purse in those days – by levying new taxes. But by the late 1600s, governments had worked out they could also borrow money. They would have to pay interest but it gave them ready cash. And so the concept of a budget deficit was born and it continues to this day.

If revenues equal expenditure, the budget is in balance. But if spending outstrips the money coming in, the budget is in deficit. If revenues exceed expenditure, the budget is in surplus. Think about your own personal finances. If your take-home pay in one year is £50,000 but you spend £60,000, you'll need to borrow £10,000 to finance the extra expenditure – that's your deficit.

Alternatively, you might have only spent £40,000. In that case, you save £10,000 or are in surplus by that amount.

Most countries publish a monthly measure of their finances which records the size of all tax revenues minus government expenditure and any interest that has to be paid on existing debt. Totting up each month's deficit or surplus gives the budget balance for the year.

One common mistake is to confuse the deficit and the debt. The national debt as it is often called is the sum complete of surpluses and deficits over a long period of time and represents a country's complete obligations. So every year that a country runs a deficit, it adds to the national debt by that amount. Budget surpluses, however, can be used to pay down the debt.

While both the overall debt and annual budget balances are often expressed as cash figures, it may be better to look at them as a percentage of GDP. That is, as a proportion of the total economic output of the country. This makes both historical and international comparisons easier as obviously the bigger the economy, the bigger the deficit or debt might be in cash terms.

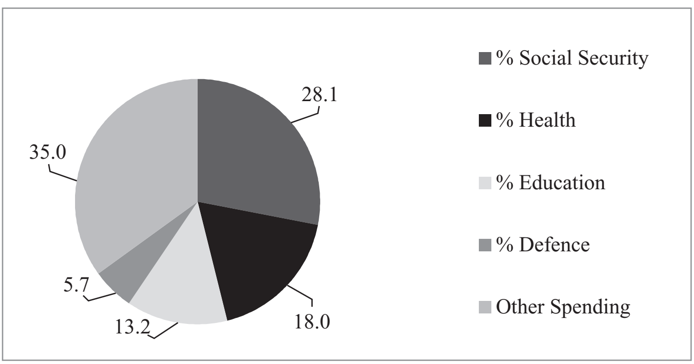
BALANCING THE BUDGET

So where does all the money go and where does it come from? Well, the revenue comes from mainly taxes. All the money you pay in income tax goes straight to the receipts side of the government finances. So does sales tax or the duty on a pack of cigarettes or a bottle of wine. Companies also have to pay corporation tax and there are all sorts of levies on various industries or transactions whether it's a tax on gambling or duty on fuel.

Spending, meanwhile, includes all the money the government has to shell out to keep services like hospitals and schools running. In the UK, for example, spending on the National Health Service (NHS) typically consumes close to 20% of total spending. Spending on social security is just under 30%.

Statisticians also like to differentiate between current and capital spending. The first is the spending that goes into welfare payments or salaries of public sector

The percentage breakdown of UK government spending



employees – the running costs of the country, if you like. The second is spending on infrastructure like new hospitals or roads – in other words, big one-off investments. Sometimes, economists talk about the primary balance. This is the budget balance excluding the cost of interest payments on existing debt.

Just like it makes sense to save up in good times so you have something tucked away for a rainy day, many economists advocate trying to balance a government's budget over the ups and downs of an economic cycle. There is no set timeframe for a cycle but think of it as a number of years which captures big variations in the speed at which economic output expands.

When the economy is growing fast, government revenues tend to go up because more people are in work, earning more money and thus paying more taxes. At the same time, the government probably has to pay less on unemployment benefits. Hence, it should be easier for governments to run a surplus.

But when the economy is slowing, government revenues tend to fall because people lose their jobs or companies make lower profits. Government spending, meanwhile, may increase because of higher benefit payments. The result: it's easier to notch up a deficit.

Simple economics, therefore, suggests that governments should run up surpluses in the good times which can then be run down by deficits in the bad times.

This allows for variations in the budget over time. Let's look at an example closer to home to illustrate these concepts. Suppose you paid your home heating bill by the same monthly direct debit amount each month. In summer months, you may be paying too much, or running up a surplus on your account. But in winter months, you may be paying too little, running up a deficit. Over the whole year, however, your total monthly payments should be sufficient to cover your annual bill.

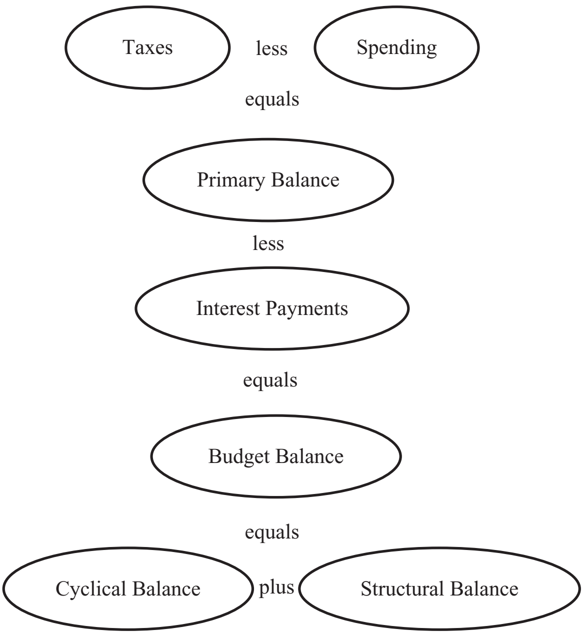
Just as you would expect to use more gas in winter and less in summer, budget surpluses or deficits are considered to be natural byproducts of the economy moving up and down a gear. Tax receipts will be high and the need for social security spending low when the economy is doing well and the reverse when the economy is doing poorly. These natural changes in the tax take and spending as the economy goes up and down are referred to as the automatic stabilisers.

The deficit or surplus that occurs as a result of the ups and downs of the economy is called the cyclical balance. Going back to our example of a home heating bill, the shortfall between what you pay for in winter and what you have actually used could be thought of as a cyclical deficit. It would then be made up by a cyclical surplus in the summer months.

But say your total monthly payments still leave you paying for less gas than you have actually consumed over the year, you would then be still left with a shortfall or deficit in what you owe that would have to be paid at some stage.

In the same way, the government could have a shortfall where the deficit in a recession is not paid off when the economy is booming. This would be an example of a structural budget deficit.

How the budget balance is made up



Just as you would then need to raise your monthly payments for a home heating bill, so the government would need either to change its spending plans or raise taxes to reduce the structural budget deficit.

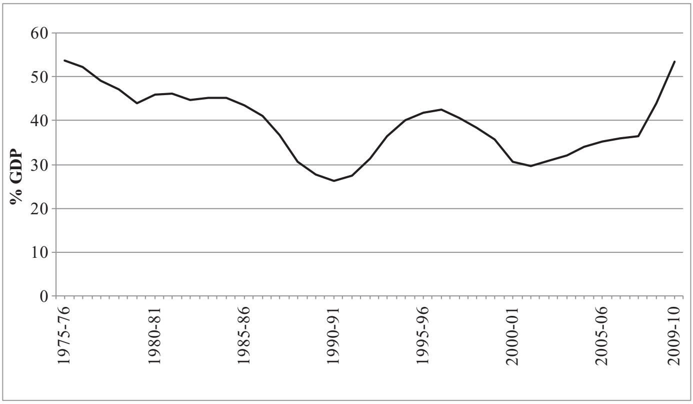
Such explicit policy changes are known as discretionary fiscal policy in contrast to the non-discretionary or automatic changes which result from the business cycle. For example, if the government had a structural surplus, it could cut VAT. Or if it was judged that the structural budget deficit was too high, a government could start cutting spending by, for example, reducing the size of the army or civil servants.

While having a balanced budget over the economic cycle may be considered desirable, a big problem for economists is we can never be sure exactly where we are in the cycle. It can often take years before a full picture of where the economy is in the cycle emerges.

As a result, some economists have suggested the distinction between structural and cyclical budget balances is not that useful and have put forward the notion of a fiscal gap. This looks at the difference between spending and receipts over a long period of time and tries to account for future commitments and revenue streams.

For example, better living standards and healthcare mean many developed economies have an increasing number of elderly people in the population claiming state benefits like pensions. At the same time, there is a smaller proportion of younger people in jobs and paying taxes. This higher dependency ratio will result in bigger budget deficits or gaps in future years as there will be less money coming in and more money going out.

The UK's debt as a percentage of GDP



So economists calculating the fiscal gap would look at the deficit right now but also include an estimate for how much spending is likely to exceed revenues in the future because of the change in population trends.

THE ROLE OF GOVERNMENT

So government spending tends to rise and tax revenues tend to fall automatically in economic downturns and the reverse is true in the upswing just by nature of the business cycle – effects, as you will remember, we call the automatic stabilizers. But it is governments that decide tax rates and make spending decisions – what is known as discretionary fiscal policy.

What role the state should play in the economy is the subject of much debate and positions often divide along political lines. One view common in many advanced economies is the doctrine of *laissez-faire*, literally French for 'let do' or rather leave them to it. According to this view, governments should interfere little and let the private sector drive growth.

On the opposite side of the spectrum are those who call for a more interventionalist approach. They argue that the government should have the dominant role, controlling major industries and providing services. The truth is most developed economies are somewhere between these two extremes.

Most people agree the state has a clear role in providing what are called public and merit goods. Public goods have two key characteristics: they are non-excludable – you can't stop people using them; and they are non-rivalrous – one person using them does not diminish their use by another. Street lighting is a classic example because you can't exclude people from benefiting from it and one person going under the light doesn't make it any less bright.

In addition, there are also merit goods. Healthcare is a good example. It can and is provided privately. But there may not be enough health provision for everyone who needs it under a purely private system. It may be considered desirable, therefore, for people to have access to basic or even more advanced healthcare, which is where the state can step in.

Government spending as a percentage of national income in G7 countries

	2000	2010
France	51.6	55.9
UK	36.6	52.5
Italy	46.1	51.6
Germany	45.1	47.9
Canada	42.0	43.2
United States	33.9	41.6
Japan	39.0	40.8

You can see from the chart above just how much government spending in the UK rose as a proportion of GDP, from well below 40% in 2000 to above 50% by 2010. This reflects the choices that governments have over how much to tax and spend in an economy – in other words, how much of a role that the state plays in every day life.

THE KEYNESIAN APPROACH

The twentieth century economist John Maynard Keynes also advocated an active role for government to help smooth out the peaks and troughs of the economic cycle.

But how can government action actually do that? Well, fiscal policy can be used both directly and indirectly to affect demand. Spending decisions affect the economy directly and taxes indirectly.

First of all, imagine that an economy is in recession and demand is weak. A government can choose to expand fiscal policy – in others words, cut taxes or increase spending. Cutting taxes would put more money in people's pockets and so they would be able to go out and spend more, thereby providing an indirect boost to aggregate demand. Tax rises would do the reverse and could be used to dampen demand.

State spending, on the other hand, can have a direct effect on the economy as the extra money buys goods & services there was no demand for before. But according to Keynesian economists, the effect of extra government spending or tax cuts does not just end there. It has a knock-on effect which boosts the economy further.

Suppose the government cuts taxes and every family were to get an extra £50 each month which it then spends. The owners of the stores where they spend their windfall make more money and in turn they order more goods from factory owners who make more money themselves. This concept is referred to as the fiscal multiplier.

So if the government increases spending by a total of £1 billion but the knock-on effects from higher expenditure lead to overall GDP rising by £2 billion, then we say the multiplier is 2.

Keynes' views gained particular momentum after the Second World War when the massive military effort and forced reconstruction provided a sizable boost to the world economy. It was the mainstream economic view for much of the 1950s and 1960s with most governments accepting that they should try solve problems in the short run rather than let market forces handle them in the long run. But Keynes did not advocate loose fiscal policy all the time. Policy should only be loose to counter downturns. He also believed contractionary policy was needed when the economy was booming to quell inflation.

WHO SAID IT

"In the long run, we're all dead."
– John Maynard Keynes

Keynesian thinking came under fire in the 1970s with many economists questioning whether fiscal policy could have such a big impact because the extra spending had to be paid for at some stage. One argument against the use of fiscal policy to prop up demand is that people will just think they will have to pay for it in later years. According to this view, tax cuts will not fuel greater consumption because people understand they will push up the deficit which will then require tax rises in the future.

This concept is referred to as Ricardian Equivalence after the nineteenth century economist David Ricardo. It was later elaborated on by the economist Robert Barro in the 1970s.

The theory depends on several assumptions which many economists question. The first is that it assumes people make rational decisions about the future. Critics of this theory question whether people really think of tax cuts now in terms of tax rises later – surely they will just spend the money? The theory also assumes that people behave as if they're going to live forever. Many people might not care that higher deficits now will mean a higher tax burden for future generations.

Many economists argue that too much government spending can actually harm the economy because it stops the private sector from operating at its full potential. This is a concept that is known as crowding out. According to the theory, higher borrowing pushes up interest rates. This makes it more expensive for private businesses to invest and so curtails their growth. Some people also talk about crowding out when they see the state providing goods or services that otherwise could be provided by business. The assumption, of course, is that the private sector would provide these goods or services more efficiently.

WHO YOU NEED TO KNOW

Richard F. Kahn

Born in London to a German father, Kahn studied under Keynes at Cambridge University where he became a Fellow of Kings College in 1930. He went on to become a professor in 1951. He also worked for one of the leading figures who opposed the Keynesian interventionist approach becoming too distilled by those who saw markets balancing themselves. He also worked at times for the British Government and the United Nations.

Kahn is known for developing the concept of the multiplier in 1931 which then dominated Keynesian thinking. According to Kahn's employment multiplier, government action to raise public sector employment by 100 jobs would actually raise employment by a multiple of that. This is because thee newly employed people in the public sector would spend more money, buying more goods which would require more production, and thus more jobs.

Keynes later used this notion for his own multiplier which shows total output in the economy rising by a multiple of a set increase in government spending.

He believed the multiplier for the US economy in the 1930s was as great as 2.5. That is to say for every dollar spent by the government, there would be $2.50 boost to the economy. So he argued the best way out of the Great Depression was for the government to raise borrowing and go on a spending spree.

Economists Carmen Reinhart and Kenneth Rogoff have suggested that countries with big public debts relative to the size of economic output tend to grow more slowly. The two economists argue that for advanced economic countries, those with public debt above 90% of GDP could have annual growth two percentage points lower than those with debt below 30% of GDP.

TAXES

We've already said that the main way the government earns money is through taxation. But how does it go about deciding what to tax and by how much? Again, this is a subject of much debate and principles can vary around the world depending on politics. Traditionally, more right-wing politicians argue for much lower taxes while the more left of centre prefer a system which is more redistributive to spread wealth in a society around.

The Scottish economist Adam Smith proposed four 'canons' or principles of taxation which most economists still hold to be true today. First of all, the cost of collection must be low relative to the amount being collected. Second, the timing and the amount to be paid should be certain to the payer. Third, the means and timing of payment should be convenient to the payer. Finally, taxes should be levied depending on the ability to pay.

Nowadays, economists also add another three principles. Any tax should involve the least loss of efficiency – that is it should not change people's behaviour. It should also be compatible with foreign tax systems and it should automatically adjust to changes in inflation.

The main types of taxation include: income tax, which applies to a person's earnings; corporation tax, which applies to a company's profits; VAT or sales tax which is levied on purchases; wealth tax, which can be exercised on a person's asset holdings – property is an example; and excise duty, which is an additional sales tax on items like cigarettes, alcohol or fuel.

In addition, economists distinguish between direct and indirect taxes. Income tax falls into the first category because it is applied to your own earnings and paid directly to the government. VAT on the other hand is an indirect tax because it is charged on goods or services that you pay to the vendor who then pays it to the government.

Economists also like to distinguish between progressive, regressive and proportional taxes. A progressive tax is one which the proportion paid increases as the amount being taxed goes up. This is common of most income tax systems in developed countries where people on higher incomes pay higher rates of tax. Typically, income tax involves a tax-free threshold under which the individual pays nothing. Anything above that then might be taxed at a basic rate, say 20%. Earnings above a particular level after that then might be taxed at an even higher rate, say 40%. This would mean those on higher income pay proportionately more and is in keeping with a view to the tax system being used to redistribute wealth.

A proportional tax is one where the percentage paid in taxation stays the same as income increases. This is often referred to as a flat tax as everyone, whatever their income, would pay the same rate of tax. A number of eastern European economies like Estonia and Lithuania have a flat tax regime.

Regressive taxes, on the other hand, are where the percentage paid in tax decreases as income increases. Common examples would be VAT or excise duties which are applied to the goods being taxed. While the rate as a percentage of the price of a good or service may be the same for everyone, it will take up a bigger slice of poorer people's incomes.

WHO SAID IT

"In this world nothing can be certain, except death and taxes."
– Benjamin Franklin

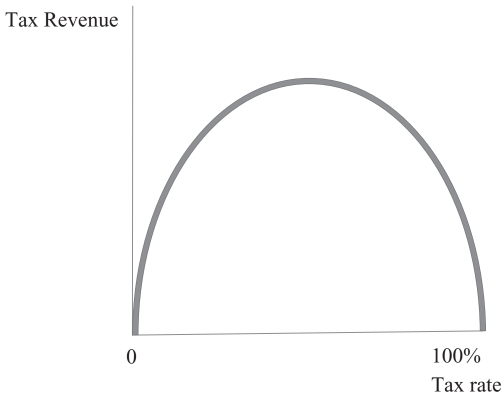
Economists also want tax systems to take account of inflation. So ideally they would want thresholds to rise in line with price rises in the economy. Governments also need to think about what the right level of taxation is because in some cases setting rates too high might actually be self-defeating. For example, many people still travel to continental Europe from Britain for so-called 'booze cruises' to stock up on alcohol to benefit from lower taxes in France. The UK government has to balance any decision to raise duty on alcohol at home against how many more people might start buying their drinks abroad.

Similarly, raising income or corporation tax too far might lead to people or businesses relocating abroad, or it could encourage people to find ways to escape tax altogether through loopholes and avoidance measures. Taxes that are too high may also discourage people from working more and instead opt to do nothing.

The Laffer curve, named after the US economist Arthur Laffer, tries to show what the relationship between government revenue and tax rates might look like. Laffer noted that if there were no taxes at all – that is the tax rate was zero – then the government would get no tax revenue. But if the tax rate was 100% – that is the government took everything you earned – then there would also be no tax revenue as there would be no reason for anyone to work (everything they earned would go in tax).

Therefore, he said that if you plotted a graph of tax revenue against tax rates, you would get a curve which showed that both zero and 100% tax rates produced no revenue. As tax rates rose above zero, so too did government revenue but at some point tax revenues would decline as the rate neared 100%.

The Laffer curve



WHO YOU NEED TO KNOW

Paul Samuelson

Paul Samuelson was a US economist who more than anyone popularised Keynesian economics around the world through his hugely influential textbook *Economics – An Introductory Analysis.* First published in 1948, the book has notched up 19 editions and sold more than four million copies, making it the biggest-selling economics textbook of all time.

He won the Nobel Prize for economics in 1970 and is credited with being the founder of what is known as the neo-classical synthesis – the marriage of interventionist Keynesian economics with the neo-classical tradition of individuals acting in their own interest. This combination of schools forms the bedrock of modern mainstream economic thinking.

His book, *Foundations of Economic Analysis,* argued that agents or participants in the economy try to get the best out of any situation whether by maximising their happiness or their profits.

He is also credited with coming up with the concept of comparative statics – which allows us to measure how changing something like tax rates can affect the whole economy.

Samuelson started his studies at the University of Chicago during the Great Depression and went on to Harvard before becoming a professor at the Massachusetts Institute of Technology, which he helped turn into a world-class school boasting several Nobel Prize winners. He also advised Presidents John F. Kennedy and Lyndon B. Johnson. His nephew Larry Summers is also a famous economist and former US Treasury Secretary.

While there is little empirical evidence to show just what that rate might be, the Laffer curve has been used widely by free-market economists to justify tax cuts when rates are high.

DEBT AND BOND MARKETS

So we've established the budget deficit is how much the government overspends versus the amount of revenue it collects from taxes. But where does this extra money come from? The answer to that for most modern economies is from the bond markets.

As we learnt in Chapter 5, bonds are essentially IOUs from governments or companies that issue them. Government bonds issued by the United States are known as US Treasuries and make up the largest bond market in the world. In the UK, they're called gilt-edged securities or gilts. In Germany, they're called bunds and Japanese government bonds are referred to as JGBs.

A government sells or issues bonds to raise money in international financial markets. For this, it pays a fixed rate of interest. This is why they are also known as fixed-income securities. The timeframe over which the initial value of the bond is paid back is known as its maturity. For example a government can issue a billion pounds worth of five-year bonds where at the end of that period it would have to pay the full billion pounds back as well as any interest along the way.

The interest rate that the government has to pay depends on the prevailing interest rate at the time, inflation and the perceived creditworthiness of the borrower government. So if a country were deemed to be less likely to be able to pay back their debt in future, investors would demand a higher interest rate to compensate them for the risk. The interest rate is known as the coupon of the bond. This is because bonds were historically issued as bearer certificates and several coupons were printed on them. The bearer of the bond would clip a coupon each time an interest payment was due and present it to the issuer government in exchange for cash.

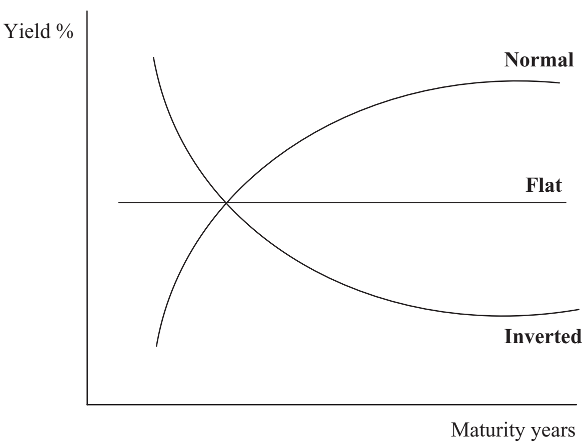
Suppose that the coupon or interest rate on the £1 billion of five-year bonds is 3%. What this means is that the government would pay interest of 3% every year on the 1 billion pounds of bonds issued plus it would pay back the full amount at the end of five years. Alternatively, you can think of it like the investor or the buyer of the bond will get a 3% return every year on the face value of the bond and then get the entire principal back at the end of five years.

Bonds can have all sorts of maturities from a matter of a few days to 50 years or more. If they are to be paid back within a year, they are usually referred to as bills. The longer the maturity the higher the interest rate is likely to be as it means higher risk for investors who have to be compensated for locking their funds up for longer. The higher the interest rate, the more expensive it is for the government to finance its debt.

Economists and bond market practitioners often talk about the yield curve. This shows the relationship between the interest rate and the maturity of the bond. As you can see from the diagram below, a normal yield curve is upward-sloping as borrowers are likely to extract higher interest rates for longer-dated debt.

Sometimes, however, you might see a yield curve that is inverted or downward-sloping. In this scenario, bonds with shorter maturities will attract a higher interest rate. The UK has witnessed this phenomenon in the past

The shape of the yield curve



because of heavy pension fund demand for longer-dated bonds. But it could also occur because investors expect an economic slowdown which will lead to falling interest rates in the future. Highly inverted yield curves could be a signal the market expects a depression.

A flat yield curve is exactly that – there is little difference in the interest rates at varying maturities and this may happen in the transition period between normal and inverted yield curves.

Governments need to keep paying interest on their debt. If financial markets get a whiff that some country will not be able to meet its obligations of interest payments or redemptions (the repayment of the loan), then that state will likely see the interest rates it has to pay to finance or refinance its debt rise.

WHO SAID IT?

"I used to think that if there was reincarnation, I wanted to come back as the president or the pope or as a .400 baseball hitter. But now I would like to come back as the bond market. You can intimidate everybody."
– James Carville

Many economists argue that paying interest is essentially a waste of resources and that if borrowing becomes too high then more and more of a government's budget will be swallowed up by the costs of financing the debt alone, rather than being spent on goods & services. Another argument against running up too much debt is that it imposes a burden on future generations.

Investors can judge how safe any government bonds are by looking at their credit ratings. The three biggest rating agencies are Standard & Poor's, Moody's and Fitch. Just as a credit card company might look at your past record of repayments and income to give you a score of credit-worthiness, so rating agencies look at a country's history and future borrowing plans to give it a rating. Big economies like the United States, Germany and Britain have the highest rating – triple A – because it is assumed there is little chance they will not be able to repay their debts.

Explaining debt ratings

RATING	WHAT THAT MEANS
AAA	Highest rating given to countries like US, almost no chance of default
AA	Very strong ability to meet any financial commitments
A	Good ability to meet commitments but could be affected by shocks

RATING	WHAT THAT MEANS
BBB	Adequate ability to meet commitments but bad economic conditions could become a problem
BBB–	Slightly more susceptible to bad economic conditions, the lowest investment grade rating which is the minimum that banks can invest in
BB+	Fine in the near-term but longer term issues could make it susceptible to bad economic conditions
B	More vulnerable to bad economic conditions but currently can repay obligations
CCC	Currently vulnerable and dependent on favourable economic conditions
CC	Highly vulnerable
C	Very highly vulnerable
D	Default

SOVEREIGN DEFAULTS

But what happens if a country can't pay? This is known as a sovereign default. While there are no courts that can chase a country for its debt, sovereign defaulters will likely find it hard to raise any new finance.

Sovereign defaults can also have big implications for international financial markets and policymakers are anxious to avoid domino effects where one country going bankrupt can trigger a chain reaction that triggers a wave of selling and losses.

What usually happens is that the International Monetary Fund assists in restructuring a country's debt so that bondholders get at least something back. For example, Argentina defaulted on its debt in 2002 and came up with a plan to swap $95 billion worth of government bonds paying 15% interest for longer-term securities paying much less.

In early 2010, there was a lot of concern that Greece would be unable to meet its debt obligations. Panic spread through financial markets as any default would hit banks holding Greek debt hard and the crisis started spreading through the euro area. As a result European governments clubbed together to produce a bailout fund for Greece in an attempt to stave off any default.

The panic served as a reminder to governments that they can't go on running up deficits indefinitely. At some point, markets will start demanding the money is paid back if it appears that a country's public finances are on an unsustainable path. This just goes to show how important it is for governments to balance decisions on how much they want to spend against how much they can raise in tax.

WHAT YOU NEED TO READ

- The Institute of Fiscal Studies has an excellent website which provides analysis and details of fiscal policy in the UK: *www.ifs.org.uk/*.
- For a look at what is happening in the United States, try the Congressional Budget Office website *www.cbo.gov/*.
- There is a history and explanation of the budget process in which the government sets fiscal policy in the UK available on the Treasury's website at *www.hm-treasury.gov.uk/about_budget.htm*.
- A good book on how deficits and debt can affect economic growth is *This Time Is Different: Eight Centuries of Financial Folly* by Carmen M. Reinhart & Kenneth S. Rogoff, Princeton University Press, 2010.
- For what is probably the definitive story of economist John Maynard Keynes's life and thinking, have a look at the abridged version of Robert Skidelsky's biography *John Maynard Keynes: 1883–1946: Economist, Philosopher, Statesman*, Pan Abridged Edition, 2004.

IF YOU ONLY REMEMBER ONE THING

Governments collect money through taxes and spend it on goods & services like roads and police forces. The difference between what the government collects and spends is the budget balance. Any shortfall is called a deficit and has to be financed through borrowing.