

## ifs Student Investor Challenge 2010/11 – Worksheet 1

### SAVINGS

How do you handle your money? Do you spend all of it, or do you save some? Different people make different choices about whether to **consume** (ie to spend now on goods and services), or to **save** for the future. The main factor affecting consumption is your **net pay**, or **disposable income**, which is the money that remains once taxes and National Insurance (NI) have been deducted from your salary. Once you receive your net pay you have to decide what to spend now and what to save for the future.

Saving is very important for your financial peace of mind, as it will determine how much **net worth**, or wealth you will have in the future. In order to save you need to organise yourself so that you can control your expenses based on the money you receive. The best way to do that is to have a **budget**, which involves planning your income and expenditure. Budgeting will help you determine priorities and identify expenses that can be cut without affecting your well-being. You will be able to organise and control your finances, set goals and achieve them, and decide how your money will work for you. It is very important in life to learn not only how to earn money but how to spend it wisely. To be financially successful you will have to respect your budget, stick to your planned expenditure and avoid compromising your future savings.

#### Activity 1.1

Jo is 19 years old and works as a gym instructor. She earns £250 per week in gross pay. If she pays 20% of her wages in income tax and another 11% in NI contributions, what is her weekly net pay?

Now let's take a look at Jo's monthly budget and her saving plans.

#### Jo's monthly budget

	£
Disposable income:	712.00
<b>Expenditure:</b>	
Rent (to mum)	250.00
Car (running costs)	200.00
Mobile phone contract	25.00
Clothes (average)	80.00
Going out	85.00
<b>Total income</b>	<b>712.00</b>
<b>Total expenditure</b>	<b>640.00</b>
<b>Income less expenditure</b>	<b>72.00</b>

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Jo wants to open a savings account as she is planning to give up her job and travel around the world in 18 months' time. How much do you think she could save each month? What percentage of her net pay would be consumed and what percentage would be saved? What costs could Jo cut in order to save more money? What are other alternative sources of income for Jo?

**Note** The figures in this activity have been simplified. For more detailed information on actual tax and NI rates, refer to [www.hmrc.gov.uk](http://www.hmrc.gov.uk).

### **Activity 1.2**

Keep track of your expenses for one month. Take a note of all the money you receive and everything you spend each day. This exercise requires commitment but it is also very empowering because it gives you a view on how your money flows. What monthly expenses surprised you? Were you aware of all your expenses?

**Tip** Even if you are not working, write down the money you receive from your parents, say, and how you spend it. Start recording it for one day, then for one week and finally for one month.

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### **Activity 1.3**

Work out your own budget for the next month. First write down your income. Then list all your expenses, from the most important to the least significant ones. Separate fixed costs (such as rent, mobile contract, bills) from variable costs (clothes, shoes, snacks, etc) and think about periodic payments (tuition fees, etc). Write down your priorities and see if you can cut the expenses that are not relevant. Are you able to plan your savings from your budget? What expenses can be minimised?

**Tip** Look back at your notes from activity 1.2 and think about how much money you spent yesterday, then how much you spent last week, and then last month.

### **Activity 1.4**

Let's say you decide to make monthly deposits to a savings account. Use the following website to choose the best savings account for you:

[www.moneymadeclear.org.uk/tables](http://www.moneymadeclear.org.uk/tables)

Find 'Savings Accounts' and choose 'Compare Savings Accounts'. Follow the instructions. You'll see that the choice of the best savings account depends on a number of factors: do you want to make regular deposits? Do you want interest earned to be tax free? How much notice are you prepared to give for withdrawals? And so on.

**Note** This website was established by The Financial Services Authority (FSA), the body that regulates the financial services industry in the UK. It was empowered by the Financial Services and Markets Act 2000 to 'promote efficient, orderly and fair markets and to help retail consumers achieve a fair deal'.

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Given your situation, what is the best choice of savings account for you? What is the annual equivalent rate (AER)?

### **Activity 1.5**

Compare the above choice of savings account with other sources of information. For example, go to:

[www.compareandsave.com](http://www.compareandsave.com)

Go to 'Savings Accounts' under 'Money'. Are the results the same as on the Money Made Clear website? What is the most important criterion when choosing the best savings account? What other conditions are relevant?

Now try the following site:

[www.find.co.uk](http://www.find.co.uk)

Look for 'Top 10s' then choose 'Savings Accounts Top10'. Is there additional information here that helps you choose your savings account? Is the ranking here also based on AER?

Based on the information you gathered from all of the above websites, what is the best savings account for you?

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## INVESTMENTS

When you save money, you are effectively lending it to someone, through a bank or building society, who will pay the money back in the future with some **interest** added. Interest is the money you receive for lending money. **Investment** is the purchase of goods or services with the aim of creating more money in the future. The financial services industry has developed a number of products to meet the demands of customers who prefer to invest rather than save. Investors benefit from the price change of the investment. When you buy a **stock**, you buy a **share** of a company – you become a **shareholder** or **stockholder**. You expect the company to grow and produce additional income and profits, or earnings. The profits of a company might be distributed to its shareholders through **dividends**. Shareholders might also benefit from the price change of a stock. If a company grows, we expect its **share price** to increase so that shareholders earn the difference in the form of **capital gains**.

### Activity 2.1

What is the difference between investment and saving? What is interest? What are stocks and what are the benefits of owning them? What are dividends?

### Activity 2.2

Do you think that picking the ‘right’ shares to invest in is ‘pot luck’, or are some company shares more likely to grow than others? Which shares might you expect to have increased since London won the Olympics 2012 bid?

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### Activity 2.3

Let's say you put £1,000 in a savings account today. Assuming you don't withdraw any money, how much do you think you might have on the same date next year? Now let's assume you use the same amount of money to buy stocks. How much do you think you might have in one year's time? Which one is more predictable?

### Activity 2.4

Find out more about the different types of investment by visiting the following website:

[www.moneymadeclear.org.uk](http://www.moneymadeclear.org.uk)

Choose 'Savings & investments' from the top bar then under 'Product information' click on 'New to investments'. From the left-hand menu choose 'Types of investments' to find product definitions. Choose 'Pensions & retirement' from the top bar for information on pensions.

In the table below, match the five investment types to their correct definition by drawing a line between the investment type and its correct definition (the first one has been done for you).

Investment types		Definitions
Pension		A tax wrapper which means you pay less or no income tax or capital gains tax on the growth of the investments
Cash deposits		An individual can become a shareholder and be a part owner of a company. You can make a great deal of money but you can lose a great deal, too!
ISA		Where lots of people put their money into a fund which is then invested by a fund manager
Pooled investments		An account with a building society or bank is opened and an individual pays in regular or irregular amounts for as long as they wish
Shares		Everyone is advised to make sure they have enough money for when they retire by having one of these

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### **Activity 2.5**

Use the following link to learn about some further key investment terms:

<http://www.thisismoney.co.uk/investing-tips-and-guides> then choose Share School, 1 – The basics

Find out what the following terms mean and write definitions in the boxes:

Stock market

Shares

Share certificate

Capital growth

Use this space to make a note of any other interesting terms you came across:

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### Activity 2.6

Let's make some basic comparisons between saving and investment from September 2009 to September 2010.

— Tesco share  
----- Savings account



Source of Tesco share information: <http://uk.reuters.com>

At the beginning of September 2009 one stock of Tesco plc was priced at the London Stock Exchange at 377 pence. An investor could choose between buying one hundred Tesco shares for £377 and depositing the same amount in a savings account that pays 2.5% AER. He decides to buy the stock but then finds he needs the money back in April 2010. Has he made any profit on his investment? What would have happened if he had deposited the money in the savings account?

What if he did not need the money back until September 2010? Would he have made any profit from investing in the Tesco stock? Would he have achieved better returns if he had used the savings account?

### Activity 2.7

On 8th September 2010 the price of 100 Tesco shares was £414. What was the gain of an investor who bought the stock at the beginning of September one year before? If he had put the same amount of money (ie £377) in the savings account, how much would he have?

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**SHARES AND THE STOCK MARKET**

One financial benefit of being a shareholder is that a rise in the share price will increase the value of your holdings. Another benefit is that ‘public limited companies’ (plcs) reward shareholders by sharing some of the profits made – through a dividend payment. By becoming a shareholder you become a partner of the company and face all its risks. Companies that go public, selling their shares in the stock markets, have to disclose information about their activities, future plans, profits, operations, and so on. The investor decides whether to invest in a certain company based on the information disclosed. New information will impact prices – for example, whether or not the company is able to produce revenue and profits. A company’s growth, reflected in its increased revenue, is a fundamental driver of stock price. If a company is able to turn revenue growth into profits, then most likely its stock will become more valuable.

If you want to invest in stocks, you have to decide if you want to **buy, sell, or hold** the stocks, and most importantly **when** to do it. Past performance is a source of information but no guarantee of future performance. Stocks are risky investments because the price of a stock can fall, causing the investor to lose money. Because stocks have such variability, it is advisable to enter the stock market with a long-term investment horizon.

**Activity 3.1**

Let’s look at one company’s recent performance to see what we can learn from it.

**Barclays Plc**  
**Share price movements September 2009 to September 2010**



Source: <http://uk.reuters.com>

What were the lowest and highest share prices of Barclays plc between September 2009 and September 2010?

Lowest Highest
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An investor bought £1,000 worth of Barclays plc stock on 5<sup>th</sup> March 2010. The price was 341 pence each stock. The investor did not want to lose money on this stock so he set up a **stop loss order**. A stop loss order is an order to sell shares when the share price falls to or below a specified **stop price**. The stop price for this investor was 300 pence, or a loss of around 12% (or  $41/341 \times 100$ ). The stop loss is used to cap the amount you are prepared to lose on a certain holding. Do you think this stop loss order was placed? When did the investor sell his holdings in Barclays plc?

### Activity 3.2

Earnings per share (EPS) is the total amount of earnings, or profits, over the number of outstanding shares, so it indicates the earnings of the company per unit share. Not all earnings are distributed to investors in the form of dividends. Using the information about the three companies given in the table below, answer the questions that follow.

Company (data from September 2010)	Earnings per share	Dividends per share	Dividend yield
Sainsbury's	92p	14p	3.8%
BT Group PLC	398p	7p	4.87%
Vodafone Group	182p	8p	5.2%

Source: <http://uk.reuters.com>

Please note that these figures are rounded to the nearest whole pence

What percentage do the dividends per share represent of the earnings per share for each of the three companies?

'Dividend yield' is the ratio between the dividends per share and the stock price. Calculate the price of each stock based on the dividend yield and the dividends per share. What do you deduce about the different percentages and each company's decision to pay dividends?

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### Activity 3.3

Compare Vodafone's revenue and profits/losses for 2006 to 2010, as given in the table below, and look for possible reasons why the share price fell between 2006 and 2007 and then rose between 2007 and 2010.

#### Vodafone Group Fundamentals

Year ending	Revenue (£m)	Pre-tax profit/loss (£m)	EPS	Dividend per share	Dividend yield	Share price (pence)
31/3/2006	29,350.00	-14,853	(27.66)p	6.0p	4.40%	137.71
31/3/2007	31,104.00	-2,383	(8.94)p	6.8p	5.00%	135.50
31/3/2008	35,478.00	9,001.00	12.6p	7.5p	5.03%	149.00
31/3/2009	41,017.00	4,189.00	5.8p	7.8p	5.70%	139.50
31/3/2010	44,472.00	8,674.00	16.44p	8.3p	5.50%	152.20

Source: [www.londonstockexchange.com](http://www.londonstockexchange.com)

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### **Activity 3.4**

Now that you have learned something about stocks, let's find out how you buy and sell them. Explore the following two websites and find out what sort of services stockbrokers provide and how to choose shares:

[www.thisismoney.co.uk/investing-tips-and-guides](http://www.thisismoney.co.uk/investing-tips-and-guides) See lessons 4 and 7  
[www.investopedia.com/university/stocks/stocks5.asp](http://www.investopedia.com/university/stocks/stocks5.asp)

Now take a look at the following website to find out what the London Stock Exchange does:

[www.londonstockexchange.com](http://www.londonstockexchange.com) and click on About us, Company overview at the bottom of the screen.

Use the information you have gathered so far to match the four types of market participant to their correct description in the table below, by drawing a line between the market participant and its correct description.

<b>Types of market participant</b>		<b>Descriptions</b>
Investor		Its shares can be bought and sold on a stock exchange
Stockbroker		Buys and sells shares on behalf of the investor
Listed company		Facilitates the trading of shares between all parties involved
London Stock Exchange		Buys shares through stockbrokers

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### SHARE PRICES

Quoted company share prices rise and fall for many reasons, including internal and external factors. Prices traded on the market are influenced by factors such as expected profits, new product development, economic growth and economic fundamentals. Put simply, the price of a share is reflected in the buyers' and sellers' **confidence** in the company, the stock market and the economy. When the shareholders are feeling positive, then the general rule is that share prices increase and the stock market rises. The opposite is true when there is uncertainty in the market or about a specific company. Stock prices fluctuate so that it can generate profits for one investor and losses for others. Take Barclays plc: on 4th January 2010 its share price was 278.50p, on 14<sup>th</sup> April 2010 it achieved a high of 374.40p and on 30<sup>th</sup> June 2010 it had fallen to 262.45p. If you had bought the shares at 374.40p per share and sold them at 262.45p, you would have lost money. But if you had bought them at 278.50p and sold them for 374.40p, you would have made a good profit. The important decision is when to buy and when to sell shares.

#### Activity 4.1

If you had bought 500 shares in each of the three companies in the table below at their highest price in 2009/2010 and sold them all on 10<sup>th</sup> September 2010, work out the total loss or gain on those shares.

Company	Highest price	Lowest price	Price on 10/09/2010
First Choice (TUI Travel Plc)	309.80p	189.40p	220.10p
Imperial Tobacco Group	2,159.00p	1,743.00p	1,927.00p
BT Group	150.40p	108.40p	141.10p

Source: [www.londonstockexchange.com](http://www.londonstockexchange.com)

If you had bought 800 shares each in all three companies at their lowest price in 2009/2010, and sold 50% of them on 10th September 2010, what would your total loss or gain be? Calculate the lowest price as a percentage of the highest price for each of the companies.

What conclusions can you make about these three companies? Based on the information provided here, would you be tempted to invest in any of them?

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**Activity 4.2**

Look at the following share price charts of two companies quoted on the stock market: ITV (television) and TUI Travel (which includes the brand name First Choice). ITV shares are listed under the 'Media' category and TUI Travel shares are listed under the 'Leisure' category in newspapers such as *The Times*, *Daily Telegraph*, and so on.

**ITV share prices September 2009 to September 2010**



**TUI Travel share prices September 2009 to September 2010**



Source of both charts: <http://uk.reuters.com>

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Using your new knowledge of shares and performance, analyse these two charts and make some basic judgements about when would have been a good time to buy the shares in the period shown. When would you have sold them? Would you have sold all of them, sold some of them, or not sold at all and held onto the shares?

**Tip** Look at different time periods. Were the share prices going up or down?

**Activity 4.3**

On 4<sup>th</sup> January 2010 you invested £1,000 in each of the three stocks below. Calculate the number of shares you bought based on the share price on 4<sup>th</sup> January. On 9<sup>th</sup> September 2010 the stock prices had changed. Based on the number of shares you bought, what is your total wealth on 9<sup>th</sup> September?

Company	Share price (4/1/2010)	Number of shares acquired	Share price (9/9/2010)	Total value of shares (9/9/2010)
Vodafone	143.60p		159.60p	
Old Mutual plc	109.50p		134.30p	
ITV plc	52.70p		56.10p	

Source of share price information: [www.londonstockexchange.com](http://www.londonstockexchange.com)

**Tip** The number of shares acquired is the total amount invested (£1,000) expressed in pence divided by the price of each share. Work out the number to the nearest integer (whole number). The total value of shares is the number of shares acquired multiplied by the share price on 9<sup>th</sup> September.

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### **Activity 4.4**

**Share clubs** are groups of investors, often friends or family, who pool their money together to invest in shares. Find out about some of the advantages and disadvantages of share clubs by exploring the following website:

[www.proshareclubs.co.uk](http://www.proshareclubs.co.uk)

Go to 'Start A Club' and then 'Why Start A Club'.

### **Activity 4.5**

There are some interesting benefits of investing in share clubs, related to tax exemption. Go to the following website and find out about the tax benefits of investment clubs:

[www.hmrc.gov.uk/cgt/investment\\_clubsfaqs.htm](http://www.hmrc.gov.uk/cgt/investment_clubsfaqs.htm)

### **Activity 4.6**

Another benefit of investment clubs is the diversification they offer. Because clubs buy portfolios of stocks, the risk of a price change is not concentrated on one single stock. Let's explore this a little further by looking at the following website:

[www.bloomberg.com](http://www.bloomberg.com)

Go to 'Market Data', then 'Stocks' then 'Movers by Index', then 'FTSE 100'. The FTSE 100 is an index comprising the 100 biggest companies traded on the London Stock Exchange, based on market capitalisation. You will see a list of the FTSE 100 Index Members. Click on 'Volume' until the screen ranks the companies with the largest number of trades at the top.

What are the ten most traded stocks? Are these stocks from the same sector? What is the most traded stock?

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## INVESTMENT STRATEGIES

Some investors make investment decisions purely on intuition or gut reaction. Others use a scientific approach – for example, using share **charts** or rules based on **ratios** or mathematical models. Neither will guarantee you success, so a mix of both is recommended for the Student Investor Challenge – it only costs a little more time! The more research you do, the more likely you will perform well because prices are based on **information** about markets and companies.

Certain ratios, like the **price-earnings (P/E) ratio**, are informative and can be used for stock selection. The P/E ratio is the ratio between the stock price and the earnings per share. While earnings per share is a ratio that will inform you about the profitability of the company, the price-earnings ratio informs you about how much you would pay for each unit of earnings. High P/E ratios suggest that investors are expecting earnings growth. What does a P/E ratio of 15.00 mean? Generally it means that investors are currently paying the equivalent of 15 years' worth of earnings to own a share of that company. If the P/E ratio is too high, it means either that investors are expecting profits to grow a lot, or that the stock is too expensive (that is, it will take too many years to recover the investment). However, it is important not to rely on one indicator alone but rather take into account several sources of information.

### Activity 5.1

Calculate the P/E ratio for the companies below:

Company	Share price	Earnings per share	P/E ratio
Schroders	1,421.00p	54.00p	
WH Smith	431.80p	42.70p	
Next	2,037.00p	188.50p	

Source: [www.londonstockexchange.com](http://www.londonstockexchange.com)

Interpret the P/E ratio. Which company is expensive and why?

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### Activity 5.2

A P/E ratio between 10 and 15 might be seen as acceptable by investors – but it's a subjective test. It's just another way of comparing the performance of one share against another. Now let's compare the P/E ratio of companies from the same sector. The relative P/E is the P/E of the company divided by the average P/E of the market.

Company	P/E ratio	Relative P/E
BT	10.37	0.864
Inmarsat	26.23	2.185
Vodafone	9.748	0.812
Sector average	12	1

Source: <http://uk.reuters.com>

Based on the above table, what company would you buy? If you had all the companies in your portfolio, would you sell any company? Why? What other information would you consider important to decide if a P/E ratio is high or low?

### Activity 5.3

Based on the table below, which gives data for Sainsbury's (J) Plc (the supermarket chain), what can you say about the share price?

Year ending	EPS	P/E	Share price
24/3/2007	14.70p	37.40	
22/3/2008	19.60p	17.00	
21/3/2009	21.20p	14.80	
20/3/2010	23.90p	13.90	

Source: [www.londonstockexchange.com](http://www.londonstockexchange.com)

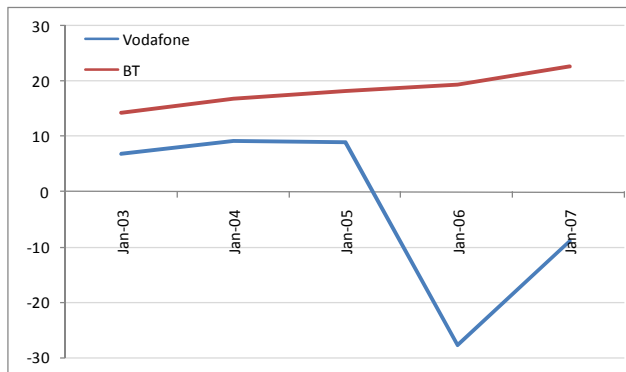
**Tip** Calculate the share price for each year and compare the changes in EPS, P/E ratios and share prices from 2007 to 2010.

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### Activity 5.4

In the graph below you can see the evolution of the EPS of Vodafone and BT, two companies in the telecommunications sector.



What can you say about the companies? What can you say about the profitability of Vodafone?

Go to [www.bloomberg.com](http://www.bloomberg.com), type 'VOD:LN' into the quote box. This will give you an up-to-date share price for Vodafone Group PLC on the London Stock Market. Check what the highest and lowest prices have been for these shares over the last year ('52-Week Range'). Then find the latest Price/Earnings ratio (on the same screen under the banner 'Earnings').

Would you buy a share of either of the two companies? Why?

### Activity 5.5

Click on:

<http://uk.reuters.com>

Find the P/E ratio of HSBC Holdings Plc by entering 'HSBA.L' in the 'Search' box. Click on 'View Full Quote' then look at Financials on the right of the screen to find out what the P/E ratio is for this stock. How does it compare with the industry P/E ratio?

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### **Activity 5.6**

A gilt is a bond issued by the UK government that promises to pay you a fixed interest rate. If the price of a gilt is £100, and the return is 4%, we can calculate the P/E ratio of a gilt to be 25 (that is,  $100/0.04$ ). We know that gilts are risk-free securities and stocks are risky securities. Would you buy a stock with a higher P/E ratio than 25? Why?

### **Activity 5.7**

Go to <http://www.thisismoney.co.uk/investing-tips-and-guides> and choose Share School lesson 2 – The financial pages for more information on price/earnings ratios and earnings per share.

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## INVESTMENT RISK

All investments involve some **risks** because the future is unknown. Some investments are riskier than others and you will only buy a riskier investment if it also gives you the possibility of **higher returns**. High risk means you can lose a lot but also that you have the possibility of higher return. Some people are more willing to take risks than others. Some people are very risk averse so they prefer to earn less from their investments to try and avoid surprises. Your **risk aversion** will determine what type of investment you will choose.

A stock is a very risky investment because you may lose some of your money when the stock price falls, or possibly all your money if the company goes bankrupt. When you buy a stock you become a partner of that business for good or bad. If you make an investment with low risk, you will receive a low predictable reward. Taking a high investment risk means that *potentially* you can receive a high reward. Stocks are risky investments and for this reason they also may provide much higher returns than a savings account. It is important that you assess what types of risk you are willing to face in exchange for the possibility of higher return. Some shares might be riskier than others. Big solid companies that have a stable stream of income have lower risks than new companies with lower market capitalisation and unstable profits. Some companies do not produce profits and their stock prices are based on forecasted future income.

### Activity 6.1

Do this quick personal check by ticking the most relevant choice to each question.

Question	Yes	No	Maybe
1 I would lend my best friend £5 for a few days			
2 I would lend my best friend £50 until their next pay day			
3 If I won £500 I would prefer to put it in a savings account			
4 If I won £500 I would put £250 in a savings account and invest the rest in shares			
5 If I won £500 I would invest it all in shares			

Depending on your answers (check them with the person next to you, or a friend, or your teacher) you could be 'risk averse', meaning you have a cautious attitude, or a 'risk taker', meaning you have an appetite for risk.

One is not 'better' than the other, but your type influences your personal investment decisions.

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### Activity 6.2

The graph below shows a comparison of the movements in share prices for BP, the oil giant; Lloyds Banking Group, the financial services company; and easyJet, the low-cost airline company over the 12 months from September 2009 to September 2010.



Source: <http://uk.reuters.com>

Which company do you think is the riskier one? Why? Imagine that you were deciding to invest in September 2009. What would have happened if you had bought easyJet? And what would have happened if you bought Lloyds Banking Group or BP? Bearing in mind your personal approach to risk, which company would you be most likely to buy based on this information?

**Tip** Compare the performance of each stock on a monthly basis.

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### Activity 6.3

BAE Systems is the UK's biggest defence company and a world leader in the arms, military defence and aviation markets. It supplies a wide range of services covering all sectors, from military defence (air, land, sea and aerospace) to the civil aviation market.

**BAE Systems Share Price  
September 2009 to September 2010**



Source: <http://uk.reuters.com>

What are the risks of investing in BAE Systems? What would have happened if you invested in BAE Systems in March 2010?

Now look at the following article:

<http://www.bbc.co.uk/news/uk-england-humber-11244219>

How does political news impact on share prices?

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### **Activity 6.4**

ICI is a large, international company. Traditionally, investors have considered it to be a safe company in which to buy shares. Click on this web link, read the brief article and then answer the questions that follow:

<http://news.bbc.co.uk/1/hi/business/2883653.stm>

What were the consequences for investors on 25 March 2003? What were the causes of the share price crash?

Click on the following web link to see what happened on 29 July 2004:

<http://news.bbc.co.uk/1/hi/business/3935971.stm>

And what happened in January 2008:

<http://news.bbc.co.uk/1/hi/business/7168348.stm>

What deal did the ICI shareholders get?

### **Activity 6.5**

Go to the websites below and find out what 'risk-return trade-off' means:

[www.investopedia.com/terms/r/riskreturntradeoff.asp](http://www.investopedia.com/terms/r/riskreturntradeoff.asp)  
[www.investopedia.com/university/concepts/concepts1.asp](http://www.investopedia.com/university/concepts/concepts1.asp)

### **Activity 6.6**

Finally, here's another look at your attitude to risk. Click on:

[http://money.cnn.com/magazines/moneymag/moneymag\\_archive/2002/06/01/323344/index.htm](http://money.cnn.com/magazines/moneymag/moneymag_archive/2002/06/01/323344/index.htm)

Try the quiz on 'What Kind of Investor Are You?' Did you come to the same conclusion as when you did activity 6.1?

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## ifs Student Investor Challenge 2010/11 – Worksheet 7

### MANAGING RISK

You can **diversify** your risk if you buy a basket of shares, following a ‘risk-spreading’ strategy. A group of different companies’ shares that an investor might own is called a **portfolio**. Portfolio performance is a result of how well the stocks perform collectively (measured by the price you bought them at compared with the current market price). The benefit of buying a diversified portfolio is that losses on a certain stock can be diluted or compensated by gains in other stocks that comprise the portfolio. **Professional managers** make investment decisions about each portfolio and you can participate in such portfolios by investing in a **collective investment scheme**. There are several types of collective investment scheme to choose from, including:

- unit trusts;
- investment trusts;
- tracker funds (for example, exchange-traded funds).

Such schemes are also known as **pooled investments**, where many people put in different amounts of money and the total amount is invested in different assets or asset classes and managed by a professional asset manager.

#### Activity 7.1

The table below presents the value of four stocks on 4<sup>th</sup> January 2010 and 9<sup>th</sup> September 2010.

Company	4/1/2010	9/9/2010
BAE	362p	321 p
Lloyds	51 p	73p
Easyjet	356p	378p
Barclays	278p	310p

Source: [www.londonstockexchange.com](http://www.londonstockexchange.com)

Let’s say you bought 100 stocks of each company. What is the total value of your portfolio on 4<sup>th</sup> January? What is the value of your portfolio on 9<sup>th</sup> September?

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### Activity 7.2

A stock market index is a representation of a portfolio of stocks in a certain market. FTSE 100 is the stock index of the UK market and it comprises the 100 largest UK blue-chip companies based on size and liquidity. Funds usually use stock indices as a benchmark, or reference, for their performance. Indices have their value not in price but using a points system. The points change corresponds to a change in price of the stocks composing the index portfolio. As you can see in the following graph, from mid July 2010 Vodafone Group Plc has performed better than the performance of the FTSE index.

**Comparison: FTSE 100 index and Vodafone Group Plc  
September 2009 to September 2010**



— FTSE 100 Index  
— Vodafone Group Plc

Source: <http://uk.reuters.com>

Which one do you think presents higher variability? Why?

**Tip** Look at the highest and lowest prices. Which line on the graph varies the most?

### Activity 7.3

Let's look at some other indices. Click on:

[www.bloomberg.com](http://www.bloomberg.com)

Go to 'Market Data' and find out what the following indices are by clicking on the names: Dow Jones Industrial Average, S&P 500, Nasdaq Composite Index, CAC 40 Index, DAX Index and Nikkei 225.

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### **Activity 7.4**

The table below presents the value of the main stock indices on 13<sup>th</sup> September 2010.

<b>Index</b>	<b>Value</b>	<b>Last change</b>	<b>% change</b>
S&P 500	1,109.55	5.37	
NASDAQ	2,242.48	6.28	
FTSE 100	5,559.45	57.81	
CAC 40	3,767.49	41.67	
DAX	6,271.23	56.46	

Source: [www.londonstockexchange.com](http://www.londonstockexchange.com)

Calculate the daily percentage change of each index. Which index had the biggest change?

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## **ifs Student Investor Challenge 2010/11 – Worksheet 7**

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### **Activity 7.5**

Click on this web link to find out more about pooled investments:

[http://www.moneymadeclear.org.uk/products/investments/types/pooled\\_investments.html](http://www.moneymadeclear.org.uk/products/investments/types/pooled_investments.html)

What are the main benefits of pooled investments?

### **Activity 7.6**

Click on this web link to find out more about the asset management industry:

[www.investmentuk.org](http://www.investmentuk.org)

Go to 'Investors', then 'Glossary'. Find out what the following are: unit trusts, investment trusts and index tracking funds.

### **Activity 7.7**

Click on this web link to find out more about stock indices:

[www.ftse.com](http://www.ftse.com)

Go to 'About us'. What is the FTSE Group and what are their indices used for?

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## SAVINGS AND INVESTMENTS

There are many different types of savings and investments. Each investment has a short, medium or long-term prospect, or an optimal investment horizon, which is the length of time the money is expected to be invested. The investment horizon depends on how much money is available and when it will be needed. Choosing the best investment strategy depends on understanding your investment horizon. In general, the shorter your horizon, the less risk you should be willing to accept. Here are six financial services products:

- pensions;
- shares;
- current account;
- unit trusts;
- savings account;
- insurance policies.

Each financial product has characteristics that will meet specific investors' needs. Pension plans are designed to provide for the retirement of the investor. Shares present a high risk/return profile. Current accounts often have no or little interest paid on positive balances as they are designed for managing your day-to-day money and depositing your spare cash. Unit trusts are pooled investments. Deposit and savings accounts are designed for the short to medium term because they provide a low risk return alternative. Insurance policies are products designed to cover the risks of losses from certain predetermined events.

### Activity 8.1

Which of the products listed above do you believe you will purchase in the next year? Twenty years? Forty years? Sixty years? Eighty years?

- Savings accounts are for short-term savings.
- Current accounts are safe and convenient places to hold your spare cash, but are not investment products.
- Shares and unit trusts tend to be for medium- to long-term investors.
- Pensions and insurance policies are for the long term – that is, for the later stages in your life, when you retire and need a mixture of capital and income.

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## ifs Student Investor Challenge 2010/11 – Worksheet 8

### Activity 8.2

Jenny is 25 years old. Jenny and her mother, who is 55 years old, inherited £100k each and they do not know what to do with the money. They ask a finance expert for advice. Do you think he would suggest the same type of investments for Jenny and for her mother? Why? What do you think he would suggest Jenny should do with the money? What about her mother? The adviser concluded that the best allocation for them would be:

Investment product	Jenny	Jenny's mother
Pensions	5%	10%
Shares	30%	5%
Current account	5%	3%
Unit trusts	30%	25%
Savings account	25%	27%
Insurance policies	5%	30%

Do you agree with this allocation? Why should Jenny's allocation be different from her mother's? What other information do you think is important to help define their investment strategies?

**Tip** Discuss with family members or friends what would be their choice of investment if they received an unexpected amount of money. Compare individual choices to see who is willing to take more risks.

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## **ifs Student Investor Challenge 2010/11 – Worksheet 8**

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### **Activity 8.3**

Find out more about insurance by exploring this website:

[www.uknetguide.co.uk](http://www.uknetguide.co.uk)

Go to 'Insurance'. What types of insurance are available in the comparison menu? Click on each to find out what they insure against.

Click on:

[www.moneysupermarket.com](http://www.moneysupermarket.com)

Go to 'Insurance', then 'Life'. Go to the 'Life Insurance Guide' and investigate what endowment life insurance products offer an investor. What advice does the site give for 'Risks and exclusions' and 'Saving money on your life insurance policy'?

### **Activity 8.4**

Click here to find out more about open-ended funds:

[www.trustnet.com](http://www.trustnet.com)

Go to 'Education', then 'Education Guides', and then 'Unit Trusts & OEICs'. What are open-ended funds? What are the differences between unit trusts and OEICs?

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## **ifs Student Investor Challenge 2010/11 – Worksheet 8**

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### **Activity 8.5**

Click on:

<http://www.moneymadeclear.org.uk>

Click the 'Savings & investments' tab. Then select Investment funds from the Product information list.

What are the benefits of investing in investment funds?

### **Activity 8.6**

For some basic background on pensions, go to:

[www.moneymadeclear.org.uk/](http://www.moneymadeclear.org.uk/)

Go to 'Pensions & retirement'. How do pensions work and what are the benefits of a pension fund?

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## ifs Student Investor Challenge 2010/11 – Worksheet 9

### PENSION FUNDS

Pension funds are financial instruments designed to provide acceptable capital and income for retirement. Individuals make monthly payments into a pension fund over a number of years, hoping that the investment is 'safe' and will grow in value. Pension funds are major investors on the stock market. When the investor retires, they receive a monthly income that is determined by how successful the pension fund has been and the amount contributed by the investor. Investment performance is very important to pension fund managers because it determines the ability to pay the fund's liabilities, which are the pensioner incomes.

#### Activity 9.1

Karen, a 45-year-old teacher, has been paying into a private pension fund for ten years. Her payments are pooled with many others in the fund, which is managed by fund managers – investment experts. When she took out this pension she had the choice of a high-, medium- or low-risk fund – she chose a medium-risk fund. The company she chose in 1997 has 23 separate funds:

- 10 high risk;
- 7 medium risk;
- 3 low risk.

Here's a table summarising five of the funds between 2003 and 2007:

Fund	Invests in	June 2007	June 2006	June 2005	June 2004	June 2003	Average % growth over 5 years
Emerging markets	Shares in emerging market economies	42%	28.8%	7.3%	-6.4%	1.55	13.3%
Japan	Japanese shares	-3.2%	27.9%	-24.6%	-21.5%	-26.9%	-11.7%
UK capital growth	UK shares excluding FTSE 100	11.7%	24%	-7	-16.8%	-12.4%	-1.3%
Property	Commercial property	11.8%	11%	7.7%	7.8%	4.1%	8.4%
UK capital protected	Bank deposits and FTSE 100	6%	1.7%	0.2%	2.3%	-0.2%	2%

The funds can be classified according to their risk:

- emerging markets – high;
- Japan – high;
- UK capital growth – medium;
- property – medium/low;
- UK capital protected – low.

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## **ifs Student Investor Challenge 2010/11 – Worksheet 9**

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Karen was advised in 1997 that her pension fund was expected to grow at a rate of 7% per year. Have any of these funds performed that well? Imagine that Karen has asked your opinion about how well these five pension funds have performed over the last two and five years. What would you say to her?

### **Activity 9.2**

The table below gives the average allocation on asset classes (that is, types of securities) of UK pension funds.

<b>Asset classes</b>	<b>Average allocation</b>
UK shares	37.26%
Overseas shares	25.28%
UK fixed interest	14.09%
Overseas fixed interest	2.98%
Index-linked gilts	7.62%
UK property	5.64%
Overseas property	0.05%
Cash and deposits	2.26%
Other	4.81%

Source: [www.thepensionsservice.gov.uk](http://www.thepensionsservice.gov.uk)

We can see that over 60% of pension fund investments comprise shares in UK and overseas companies. Are you surprised with these statistics? Why do you think this is the case?

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## **ifs Student Investor Challenge 2010/11 – Worksheet 9**

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### **Activity 9.3**

Imagine that you are a pension fund manager concerned about being able to pay the retirement pension of your contributors 20 years from now. A stockbroker recommends two American stocks. He advises you to buy 99 Cents Only Stores (NDN) and Bank of America Corporation (BAC).

Click on:

[www.ft.com](http://www.ft.com)

Now click on 'Companies' and enter 'NDN' and then 'BAC' in the 'Quotes' search function. Based on the business profiles of these two companies, decide which stock you would like to buy. Would it be different if you weren't a pension fund manager concerned with the long term? Why?

### **Activity 9.4**

Click on:

[www.usshq.co.uk](http://www.usshq.co.uk)

The Universities Superannuation Scheme is an occupational pension scheme for academic and related staff. Click on 'USS Investments', then 'Investment Types'. Go to 'Top 100 Investments'. What are the top 15 companies that the USS invests in? What do they have in common?

**Tip** Check which sector each company belongs to.

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## **ifs Student Investor Challenge 2010/11 – Worksheet 9**

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### **Activity 9.5**

Click on:

[www.eiris.org](http://www.eiris.org)

Go to 'For Consumers' and then click on 'Pensions'. What is 'ethical money'? What is the significance of this issue for pension funds? Does this issue interest or concern you?

### **Activity 9.6**

Click on:

[www.londonstockexchange.com](http://www.londonstockexchange.com)

Click on 'Prices and markets'. Type 'Barclays' in the prices search box and click the 'Search' button. Click on 'Barclays' beside the code 'BARC' in the table. Now explore the information available about Barclays shares from this screen.

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