

## Financial Cost of Fraud



Adults in the UK lose around £9.1 billion due to fraud every year.  
That's a LOT of money!

1.a) Write down £9.1 billion in full to two decimal places i.e. including the pence.

1.b) If you were given £10 pocket money every week, how many years would it take you to get £9.1 billion? (Assume 52 weeks in a year.)

When we're dealing with big numbers like millions and billions, it's often easier to count in units of millions and billions and plot graphs and bar charts using millions or billions on the axes.

The amount of money stolen by different types of fraud in 2012 is shown in the table below.

Fraud Area	Amount Lost (£ billions)	Amount Lost (£ millions)	Percentage of Total Fraud
Tax system	£14.0 billion		
Central government	£2.6 billion		
Local government	£2.1 billion		
Benefit and tax credits systems	£1.9 billion		
Small enterprises in the UK	£7.7 billion		
Medium-sized UK enterprises	£1.5 billion		
Large enterprises in the UK	£6.7 billion		
Financial and insurance activities	£5.4 billion		
Registered UK charities	£0.1 billion		
UK adult population	£9.1 billion		
Other/mixed	£0.9 billion		
<b>Total</b>			

- Convert the amount lost in the second column into the amount lost in millions in the third column.
- Calculate the total lost in millions and put it in the table.
- Using your total, calculate the percentage of the total money lost to fraud suffered in each area in the UK and put this in the table. (Round to the nearest percentage integer.)

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5. Using your percentages, draw a pie chart to show the amount of money lost in each area.

6. The above values for each area have been rounded before being included to make the totals above. more accurate total amount known to have been lost due to fraud in these areas is £54,657,800,000. Due to quoting all of the original figures to one decimal place in billions, there will be a difference between this figure and the answer you get. What is that difference?

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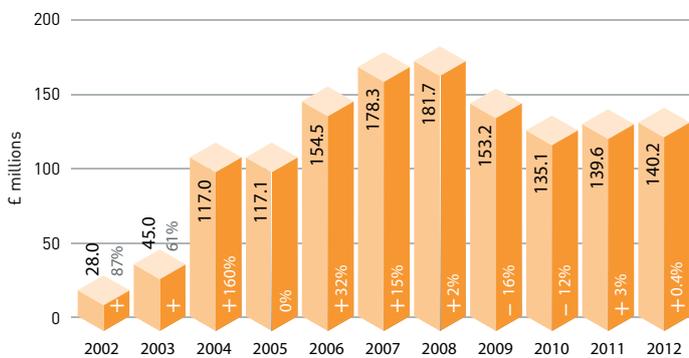
The methods used by fraudsters to trick their victims are always changing. As people and banks learn about one scam and find a way to stop it, the fraudsters find a new one.



7. Look at the graphs below:

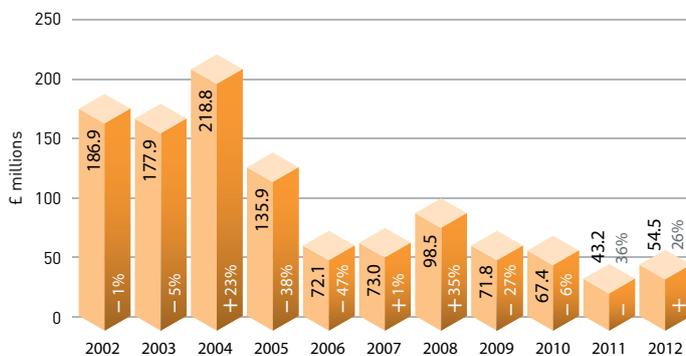
Internet/e-commerce fraud losses on UK-issued cards 2002-2012

Figures in white show percentage change on previous year's total. All figures estimated.



Card fraud losses at UK retailers (face-to-face transactions) 2002-2012

Figures in white show percentage change on previous year's total



7. a) In which year did banks and businesses successfully get people to use a new system to make card fraud in face-to-face environments much more difficult? Find out what this mechanism was and what made it so much more secure.

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7. b) In which year did online businesses suffer the greatest losses due to card fraud?

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7. c) Card fraud losses online are rising despite the fact that improved security features, such as Chip & PIN and more sophisticated detection tools are being used by the payments industry. Why do you think that card fraud losses online are increasing?

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8. The methods used to calculate the amount of different types of fraud are adapted each year in an attempt to make the estimates more accurate. What does this mean for drawing conclusions about the 'growth' or 'decline' of fraud over time?

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In an attempt to find out how best to warn people about fraud so they don't become a victim, the following data was collected.

Segment	Percentage of UK Adult Population	Risk Appetite and Awareness	Demographic	Total Fraud Loss	Most Common Types of Fraud	Fraud Loss per Percentage of UK Adult Population
<b>Segment 1</b>	16%	Avoiding risk but lacking awareness	Moderate to wealthy females, aged 36-55, high worth targets for fraudsters – "I wasn't able to tell it was a scam"	£4.12bn	£2.70bn Identity Fraud £1.17bn Holiday Club Scams £0.16bn Property Investor Scams £0.07bn Work at Home Scams	
<b>Segment 2</b>	19%	Avoiding risk, exemplary behaviours	Low income, older females, aged 56 plus and pensioners – "be very aware of anything that comes your way"	£0.36bn	£0.26bn Foreign Lottery Scams £0.06bn Prize Draw Scams £0.04bn Clairvoyant Fraud	
<b>Segment 2b* (This is a subset of Segment 2)</b>	4%*	Avoiding risk but vulnerable to offers	Very low income, pensionable aged females, aged 66 plus - "I was taken in thinking I would get a big prize"	£0.32bn	£0.26bn Foreign Lottery scams £0.06bn Prize Draw scam	
<b>Segment 3</b>	10%	Avoiding risk but still a victim	Less affluent, older males, aged 56 plus (approaching retirement) – "I don't believe I was specifically targeted"	£0.22bn	£0.16bn Premium Rate Telephone Scams £0.06bn Prize Draw Scams £1bc bn Romance Fraud	
<b>Segment 4</b>	21%	Risk takers seeking financial gain	Affluent, opportunity seeking professional males, aged 36-55 – "because of greed I became a victim"	£3.35bn	Property Investor £2.70bn Identity Fraud High Risk £1.17bn Investment Scams £0.16bn	
<b>Segment 5</b>	10%	Risk takers, demonstrating naivety	Less affluent, younger females, aged 26-35, lacking knowledge – "it just happens to people"	£0.84bn	Pyramid Schemes £0.42bn Loan Scams £0.19bn Premium Rate Telephone Scams £0.16bn Work at home scams £0.07bn	
<b>Segment 6</b>	10%	Risk takers and sure of themselves	Over-confident men, aged 26-35, in denial - "victims are stupid", but most likely to have experienced fraud and multiple times	£3.36bn	£2.70bn Identity Fraud £0.31bn Rental Fraud £0.16bn Property Investor Scams £0.19bn Loan Scams	
<b>Segment 7</b>	14%	Risk takers and poor behaviours	Young males and females, aged 18-25, complacent and careless – "it won't happen to me"	£0.54b	£0.31bn Rental Fraud Online Ticket Fraud £0.17bn Career opportunity Scams £0.06bn	

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9. Calculate the amount of money lost to personal fraud per percentage of the UK Adult population and put it in the last column of the table. Give the figure in £millions rounded to one decimal place.
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10. Which segment loses the most money? Why do you think they are most susceptible to fraud?
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11. Which group is most cautious and loses least? Why do you think they are the least susceptible to fraud?
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12. Choose one demographic segment and look at their appetite for and awareness of risk, the types of fraud they are susceptible to and what their typical thoughts might be about fraud. Create a poster, awareness leaflet, advertisement or public service announcement to educate this segment so they are less likely to become a victim of fraud.