Slide 1

Financial Indicators & Trading

A S – 12.1.3 12.1.1 12.1.2

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dollar strengthens
prices rise !
job cuts
To understand some local, national and global economic issues we need to look at the following concepts:
Inflation, financial indicators like CPI, BCI, exchange rates and the impact on imports and exports and how Government can affect international trade by restricting imports and subsidising exports.

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Inflation

The prices of most items such as clothes, food, cars and education are rising each year. A few years ago, we could buy more with R50 than we can today.

This is due to a general increase in prices, called inflation.

The price of white bread, in May 2005, at Pooka Supermarket was R4,15. In May 2006 it was R4,59. What was the % price rise?

e.g.

$$\% \text{ rise} = {}^{0,44}/_{4,15} \times 100$$
$$\approx 10,6\%$$

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Let's Practice

- When planning for the 2010 World Cup the organisers must take inflation into account. If a ticket for a soccer match costs R300 in 2007, what might the cost be in 2010 if the estimated inflation rate is 6% p.a.

$$\text{Cost} = 300(1+ {}^{6}/_{100})^{3}$$
$$\approx \text{R}357{,}30$$

- Mr Ndiki needs a new Kombi that costs R210 000. He cannot afford the cash price so he invests R200 000 at 8,5% p.a. compounded annually. Calculate how much money he will have after 2 years.

$$A = 200000(1+ {}^{8{,}5}/_{100})^{2}$$
$$= \text{R}235\ 445$$

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- The cost of the R210 000 Kombi increases at the rate of inflation. Calculate the cost of this Kombi at the end of 2 years, if the inflation rate is 5,8% and 6,9% after year 1 and 2 respectively.

Year 1 = $(^{105,8}/_{100})$ x 210000 = R222 180,00
Year 2 = $(^{106,9}/_{100})$ x 222180 = R237 510,42

- Can Mr Ndiki now afford the Kombi? Explain.

No – although the rate of inflation was lower than the rate of his investment, in real terms his investment only grew by 4,3% (2,7+1,6). He needed a real growth of at least 5%.

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Setting up a index

A financial index is a number that indicates a relative change in price, value or quantity from one time period to another.

A base year is chosen with the base value as 100. This is the reference point for measuring the change in index numbers relative to the base year.

e.g.

If the index starts at 100 and it increases to 105 the following year, the variable it represents has increased by 5%.

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Consider the cost of 1 litre of milk. If the base year is 2004, calculate the milk indices using the formula below:

Year	2004	2005	2006	2007
Price	R4,59	R4,69	R4,65	R5,10
Index	100	102,18	101,31	111,11

$$\text{Index year B} = \frac{\text{cost year B}}{\text{cost base year}} \times 100$$

Index 2005 = 4,69÷ 4,59 x 100 ≈ 102,18
Index 2006 = 4,65÷ 4,59 x 100 ≈ 101,31
Index 2007 = 5,10÷ 4,59 x 100 ≈ 111,11

Note: Price increase of 11,11% since 2004

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CPI and CPIX

The CPI (consumer price index) is used to measure the inflation rate. CPI is the average price rise using a 'representative basket of 1500 consumer goods and services'. CPIX is the CPI index excluding home loans.

e.g.

If the year 2000 was the base year and the CPIX in 2005 was 131,5 it means that 'the basket of goods' increased by 31,5% from 2000. You would have to spend R31,50 for the same basket in 2005.

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- If the CPIX in Feb. 2003 was 122,2 and in Feb. 2004 it was 128,1, calculate the inflation rate for February 2004.

Inflation rate = $^{(128,1-122,2)}/_{122,2}$ x 100

Inflation rate is the % change of the CPI/CPIX of one month with the CPI/CPIX of the same month a year ago.

- If workers got an increase of 6% in February 2004, would it improve their lifestyle? Explain.

yes

Increase higher than inflation, so their same basic needs are still covered.

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BCI

The Business Confidence Index (BCI) is generated monthly by SACOB as a measure of the level of business confidence within the South African economy. The BCI is a composite weighted index of 13 sub-indices.

A high BCI indicates that people are happy about the conditions for doing business and vice versa.

The BCI for May 2003 was 102,4 and 116,5 for October 2003. What was the % increase?

e.g.

$$\% \text{ inc} = {}^{(116,5-102,4)}/_{102,4} \times 100$$
$$\approx 13,7\ \%$$

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Exchange rates

Each country has its own currency.

The exchange rate shows the relationship between currencies e.g. Rand (R) and Dollars ($). It changes every day.

When importing goods into SA, the Rand is exchanged for the other currency to buy the goods. Importers prefer a strong Rand.

For SA exports, other countries have to exchange their currency into Rand. Exporters prefer a weak Rand.

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- On 2 January 2004, the Rand/US$ exchange rate was 1US$ = R6,565.
  On 2 January 2002 it was 1$ = R12,471.

Raw material was imported from the States for $100. How much would you pay for this material in 2002 and in 2004?

2002:	2004:
Cost = R12,47 x 100	Cost = R6,565 x 100
= R1 247,10	= R65,65

When was the Rand 'strong'? January 2004

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- Bruce and Nikki visit South Africa from the UK. Before they leave they need to exchange £2 000 into Rand. The table shows the number of pounds for R1 for three consecutive days.

When would it be the best day to exchange their money? Explain.

Pounds : 1R	
Mon	0,0681
Tues	0,0694
Wed	0,0673

Wednesday – they want the most Rand for their money so they use the rate when the pound is the 'strongest'.

How much Rand do they receive?

Amount = $^{2000}/_{0,0673}$
≈ R29 717,68

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Bruce and Nikki only spend 70% of the money they brought. When they arrive back in the UK they exchange the Rand for Pounds.

The Rand has strengthened against the Pound and the rate is now £1 = R12,20. How much money, in pounds, did they have left from their holiday?

Rand left = $^{30}/_{100}$ x 29717,68
≈ R8 915,30

Pounds left = $^{8915,30}/_{12,20}$
≈ £730,60

Did they receive more or less pounds as a result of the strengthening of the Rand?

more

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- Ntombi has many requests for accommodation in SA from Europe. She wants to place an advertisement for her bed-and-breakfast on an overseas website. Ntombi must decide on a price (in Euro(€)).

The table shows the exchange rate for one week in June 2006.

2006 – Rand:1 Euro	
5 June	8,59302
6 June	8,71662
7 June	8,58813
8 June	8,59404
9 June	8,49581

Determine the maximum & minimum exchange rate and the range for this week.

Max = R8,71662
Min = R8,49581
Range = R0,22081

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Ntombi's rates are R250,00 per night.

Calculate the cost of a night at her B & B, in Euro, based on the exchange rate of 7 June 2006.

2006 – Rand: 1 Euro	
5 June	8,59302
6 June	8,71662
7 June	8,58813
8 June	8,59404
9 June	8,49581

Cost = $^{250}/_{8,58813}$
≈ € 29,11

Use the table to calculate on which date would it have cost the least in Euro to stay at the B & B. What is this cost?

6 June

Cost = $^{250}/_{8,71662}$
≈ € 28,68

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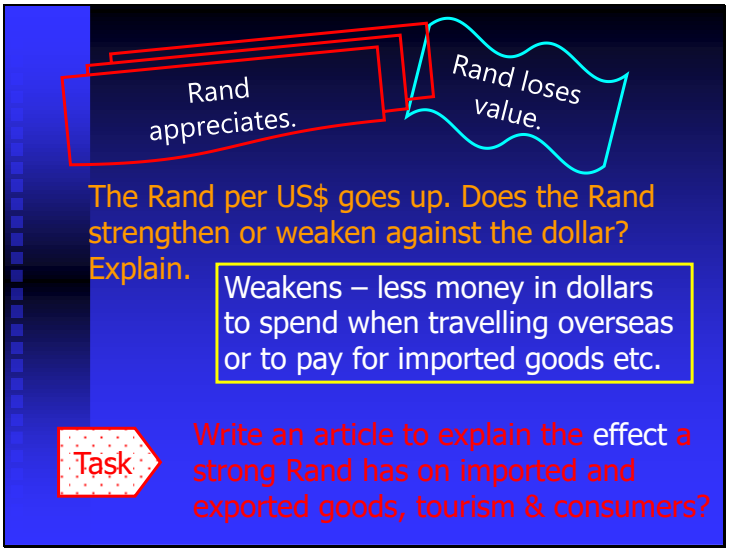
Rand appreciates.
Rand loses value.
The Rand per US$ goes up. Does the Rand strengthen or weaken against the dollar? Explain.
Weakens – less money in dollars to spend when travelling overseas or to pay for imported goods etc.
Task
Write an article to explain the effect a strong Rand has on imported and exported goods, tourism & consumers?

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International Trade

Importing and exporting goods have a huge positive and negative impact on the economy of a country.

To protect jobs and to gain income for the Government, import tariffs or quotas are imposed on some imported goods.

On some commodities, the Government offers subsidies to companies, farmers etc. in their own country. They can then sell their goods at lower prices locally and when exported.

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- 2 000 m of sheeting base cloth is imported from Pakistan at R30 per m. Customs and excise duty of R1000 is paid for this cloth to be released at the docks. An import tariff of 22% of the cost must also be paid.

If this base cloth is sold at R40 per m, what is the % profit that is made.

Customs duty per m = $^{1000}/_{2000}$ = R0,50

Import tariff per m = $^{22}/_{100}$ x 30 = R6,60

Total import cost per m = 30 + 0,50 + 6,6
= R37,10

% profit = $^{2,9}/_{37,1}$ x 100
= 7,82%

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- A Government subsidised maize farmers with $1100 million. The total amount exported was 150 million bags worth $1000 million.

What was the government subsidy per bag?

subsidy per bag = $^{1100mil}/_{150mil} \approx \$7,33$

What was the average price per bag that was exported?

Price per bag = $^{1000mil}/_{150mil} \approx \$6,67$

If there was no subsidy, how would it have affected farmers and the price of maize?

much higher price per bag, fewer exports, job losses etc.