Economics summary notes

Economics, Money

ECONOMICS SUMMARY NOTES (From Rein, to you, prepared with loving care, but with scant concern for accuracy) 1. BUSINESS CYCLES The cycles from economic upswing (boom) to economic recession (Black et al., Ch 19. 3) A business cycle may or may not consist of the following 4 cycles (Roux): (i) Recovery Phase / Upswing - Building up of inventories / stocks in reaction to sales - Investment in capital goods (machinery, equipment) to satisfy increasing demand - An increase in employment - Greater expenditure on durable goods - The current account increases - The above start occurring “ exponentially" Boom Phase - Typified by a leveling off in the cycle - Generally, obstructions to the above appear - Shortages of (skilled) labour, raw materials - Production difficulties experienced in meeting growing demand - Production costs and consumer prices begin to increase - More goods need to be imported - Current account surplus decreases - Investment and consumer spending remain high, resulting in a rise in interest rates because the demand for credit exceeds the availability Recession / Downswing - Typified by the exponential decay in the cycle - Consumer spending (durable goods) starts to decrease - Investment loses momentum (drop in expected returns on investment) - Higher interest rates (to curb spending and demand for imports) - Production levels, income, living standards, employment and spending drop - Factories produce fewer goods or will carry too much stock - Profits fall, prices may drop and little investment occurs due to financial burdens on the businesses - Demand for imported goods decreases - The current account may improve eventually Depression - Typified by bottoming out of the economy (pessimism) - Dramatic unemployment - Fall in income and spending results in fall in

demand - Severe case of Recession - Businesses experience difficulties and may close - Prices and profits fall (ii) (iii) (iv) Note pages 32 and 33 (Roux) for a summary on the above cycles. Note page 28 (Roux) on typical variables that rise and fall during this cycle (e. g. employment, interest rates, company profits, stocks, etc.), as well as variables that experience little impact during such cycles (e. g. wage increases, spending on food and medical or non-durable goods). A single indicator of the state of the economy is usually the Gross Domestic Product (GDP), which measures the level of total production in the economy. The textbook definition of a recession is when there are 2 successive quarterly declines in the GDP (Roux). This can then be compared to several indicators, such as new car sales, imports, employment or retail sales, and compared to the real GDP. By watching the leading indicators, it is possible to pick up an early indication of the state of the economy. The per capita GDP is calculated on the basis in which population changes are also taken into account (e. g. 10% increase in production accompanied with a 4% increase in population results in a per capita GDP increase of 6%). Leading Indicators: Indicators that move ahead of the business cycle Coinciding indicators: Indicators that move in tandem with the business cycle Business/Consumer Confidence â†’ Turning Point Indicators: - Politics - Acts of God - World Economy (Trade / Foreign Capital) - Crime (1 major crime may lead to loss of tourism) - “ Arthur Andersen" Effect - Wealth Effect (how wealthy do you feel) - Oil Price - Gold Price (for SA) Of these, (i) (ii) Politics probably influences all others most World economy is the major driver of the economy (when politics in place) A depression is typified by low confidence and expectations. The correct time for investment is at the end of a

recession, going into a recovery period. â†“ â†“ â†“ â†“ â†“ Business confidence Capex Expenditure Employment Wages Bill Sales â†‘ â†‘ â†‘ â†‘ â†‘ Recession Recovery Keynesian economics: Free market economies that are inherently unstable because of the existence of contract and policies, without the information that can predict disturbances. This results in dis-equilibrium, and requires an activist policy (reaction?) to return to equilibrium (Black et al., Ch 19. 3). Private economy is basically stable if allowed to operate in an undisturbed environment, but can be disturbed by the “ interference" of government (interventionist policies) (Black et al., Ch 19. 3). It assumes a permanent income and this can be related to private consumption expenditure. The supply of money is allowed to increase at a rate commensurate with the growth of productivity in the economy. Monetarist economics: Some economists believe that expectations adjust gradually and imperfectly, based on previous experience, others believe we should be able to anticipate fully the consequences of government policy and incorporate this into wages, pricing, etc. Monetary and fiscal policies will thus have no effect on the real level of output and employment (Black et al., Ch 19. 3). Q1: A business cycle consists of the upswings and downswings in business confidence (recession, depression, upswing and boom). Economic growth is related to the real per capita GDP, and the production rates per capita. The GDP can be used as a measure of business confidence. Q2: See pages 32 and 33. Q3: Business cycles are caused by changes in business confidence. A major difference between industrialized and emerging economies is that there is capital outflow from the emerging economies to the industrialized economies during a recession. The effects of a recession

are therefore greater on emerging economies, causing there to be greater swings or cycles. The flow of capital to industrialized countries tends to dampen their cycles, making it easier for them to invest in their own economies and turn the economy around. In emerging economies the outflow of capital makes it more difficult to turn the economy around. Interest rates are adjusted to either change investment in the country or adjust expenditure of the people. Hence during a recession the emerging economies may try to increase the interest rate to attract outside investors or to curb spending and living off credit, whereas in industrialized countries interest rates may be reduced to try to initiate investment in their own economy (e. g. capital expenditure to kick-start growth made easier?). Q4: Asian Crisis The Moral Hazard Problem: This arises when an outside authority (government, parent company or some organization) provides a guarantee against losses, but is unable to check or monitor the investment. An investor might normally be afraid to make a risky investment, but with such a “ guarantee" might be willing to take more risk to gain more profit. The investor is the only one aware of the potential risks, whereas the guarantor against losses is not necessarily aware of the risk the investor might be willing to take (from ArgMax web article). From ArgMax web article: “ The consensus seems to be that short-term loans from foreign banks, coupled with poor investment strategies, created a fundamental instability in the region’s currency. The poor investments are seen to be largely a consequence of financial intermediaries which had an (implicit) government guarantee on their liabilities. " “ The capital inflow lead to a currency appreciation, while the spending boom financed by foreign banks lead to

higher prices of non-traded goods, services and real estate. " “ Since the capital inflows must ultimately be repaid by increased net exports, the exchange rate is most likely to have to depreciate in real terms to service the capital inflows. " (Jeff Sachs’ web article). In other words, the capital inflow was invested at high interest rates, but in investments that didn’t really provide exports, but rather things like construction and real estate (non-tradable sectors). The banks provided short term loans, obtained in a currency with low interest rates for investment in Asia where the interest rates were high and potential profits were greater. However, the economic growth of these areas was not sustainable. The overseas financial institutions were cushioned from any losses because government and / or the IMF would bail them out. The banking system in Asia was under-capitalized and hence the managers had great incentives to borrow money from abroad (at low interest rates) and invest locally (at higher interest rates), with relatively little of their own capital at risk. The banks lent the money to local companies for longer periods at still higher interest rates. “ The banks rolled over loans as they expired, until the borrower’s currency lost value. The foreign loans suddenly became expensive to pay and the alarmed lenders begin to refuse to roll over the loans. The borrowers cannot repay fast enough and the crisis erupts. " (Louis Uchitelle web article) Sometimes, the evidence is masked by the cyclical performance of the economy that are enjoying a boom (e. g. Latin America at the time) or by a particularly strong performing commodity (e. g. electronics in the Philippines). Most emerging economies had their currencies pegged to the dollar, although they were not only trading with the US. When the US Dollar

appreciated this affected the pegged currencies in an apparent positive light, but not in real terms. “ Today’s money managers will therefore serve both a public and private purpose if they recall the basic macro-economic truth that capital flows must be serviced — eventually — by net exports. " (Jeff Sachs’ web article) Potential alternative courses of action could be that foreign banks or governments are forced to take losses (rather than, say, the IMF), or ceilings are placed on how much banks are allowed to borrow, or pegging of currencies should be discouraged as a means to fight inflation in emerging economies. 2. ECONOMIC GROWTH 2. 1 History: When people no longer depended on producing only sufficient quantities of consumables for their own families, due to the start of the Industrial Revolution, it can be said that economic growth became part of our daily lives. People concentrated on producing one item (machined) and this changed or lowered the pricing structures and way of living. “ Good money" is a currency that is durable or lasts. It must have a good value for its mass. It must be easily divisible. Hence gold or paper and coins are good money, but bartering goods such as live-stock are not. Paper money evolved from receipts given out mostly by goldsmiths (Samuel Goldsmith, England) or “ bankers" who kept gold or silver in a safe place for people, but gave them a receipt in order to claim back later. Rather than trade in the gold or silver itself, people began to trade in the receipts (“ as good as gold"). In the UK, the original standard was 1 lb sterling (silver). 2. 1. 1 Gold Standard (? — 1930) During this period gold backed paper money. 2. 1. 2 Flexible Exchange Rate (1930 — 1948) During this period many countries would devalue their currency to increase their exports, and decrease their imports. Import barriers were put in place

to prevent other countries trying to enter the home markets. This caused world trade to come to a standstill, as it became increasingly impossible to trade with other countries due to their trade barriers and exchange rates. After WWII, only the USA and Switzerland had gold left. Therefore it was not possible to revert back to the Gold Standard. 2. 1. 3 Bretton Woods era (1948 — 1972) The USA went back to the Gold Standard at US$ 35 per ounce, and all other countries set their currencies at a fixed exchange rate to the US$. This allowed countries to switch from their currency to the US$, and then to gold. However, during the Vietnam War, the USA printed more money than they had gold. The French then “ ran" on the USA and their stocks of gold (Fort Knox). This Bretton Woods era therefore could no longer be maintained by the USA stocks of gold. 2. 1. 4 Flexible Exchange Rate (1972 — current) Today’s flexible exchange rate system is based on a principle where gold no longer backs any currency. People trust paper money more than they used to, because gold only has a historical perception of value. However, in times of crisis people do tend to revert back to gold. Up until the 1970’s the world had not had inflation except in small pockets. Since 1980 central banks have controlled interest rate 1979 Regan / Thatcher put in place stringent inflationary controls. Induced a recession via higher interest rates (break inflationary expectations) with a sovereign risk. SA Gerald de cock did the same for SA caused a depression and not a recession foreign capital Sovereign Risk is another factor which must be considered before using interest rates to control inflation. Emerging markets do not have the luxury to zap the markets with high interest rate. Sovereign risk — risk that you will lose all your money Gold as investment as a function

of inflation: Suppose you could invest US$ 100.-in a US Treasury Bill with a 10% rate of return or in gold. (i) (ii) If the inflation rate is 0%, then the US Treasury Bill will be worth US$ 110.-, whereas gold will still only be worth US$100.-. If the inflation rate is 100%, then the US Treasury Bill will be worth US$ 55.-, whereas gold will still be worth US$100.-. Therefore the interest rate would have to be about 110-120% for the US Treasury Bill to compete with gold at such high inflation rates. Up to ± 1980 the Central Banks could not control the interest rates, and therefore had no influence over this phenomenon. From ± 1980 the Central Banks began controlling the interest rates. Exchange controls were removed from 1980-1990. During the Oil Crises of the ‘ 70’s people invested in gold as a safe haven for their investments. Although this will probably still happen, it is likely to occur to a lesser and lesser extent in future. The real gold price has risen during the Great Depression and Oil Crises, the Iranian Revolution and Iran/Iraq War, but has generally declined since the early ‘ 80’s. At this point Thatcher and Reagan put into place policies to reduce inflation, and this has resulted in greater trust in money rather than gold. The world production of gold is ± 1000 t/a, and the world sales is ± 1000 t/a. The Central Banks possess ± 20000 t/a. If this gold is dumped on the market, the gold price could plummet. This may have huge implication on the SA economy, where the cost of mining gold is marginal at US$ 330-390 per ounce. Our mineral wealth has given our currency a particular value or “ wealth" that makes it difficult for other industries to be competitive globally. 2. 2 Policy-Induced recessions during the Thatcher — Reagan Era During the ‘ 70’s there was a wage expectation phenomenon. In anticipation of increased prices, people

expected to get a wage increase. In the ‘ 70’s the interest rates could not be changed. Thatcher and Reagan pushed up the interest rates and induced a recession. In such harsh times, people would fear losing their jobs and were reluctant to ask for a wage increase, and prices could not be increased by the producers of goods. This broke people’s expectations, after which the government could then release interest rates and their economies could grow. This was achieved in a remarkably short period (1-2 yrs). A similar event took place in the USA and Europe in the early 1990’s. - - The Reserve Bank tried a similar policy in SA, but due to massive outflow of capital from SA, the result was a massive depression. The current policy is to tighten the screws slowly so that inflationary expectations are broken without a loss in confidence from overseas that could cause such massive outflows of capital. 2. 3 South African Economy: Chapter 4 (Roux) described the influences on the SA economy after WWII. A lot of growth was experienced in the 50’s due to high demand from Europe after the war. A brief recession took place when this demand decreased at a time, also with the Sharpeville Riots. During the late 70’s, 80’s and early 90’s the economy went through a number of cycles, and growth was far less on average than after WWII. This downturn may have been influenced to changes elsewhere in the world (e. g. the electronic age), reducing demand for SA’s typical or historic growth generators. It is postulated that any country has 4 basic production factors at its disposal: - Land - Labour - Capital - Entrepreneurship (i) Land and Natural Resources SA has significant space and natural resources (mining, fishing, agriculture), but the contribution to the total GDP has decreased from 30% in 1960 to 10% in 2000 (Roux). Future economic growth is unlikely to be sparked by these

sectors. (ii) Labour and Entrepreneurship There has been a significant shift of the population towards the urban areas, due to the decline in agriculture. There is an anticipated increase in population (taking into account various factors including HIV/Aids, etc.), which will require an increase in production. In this instance, there will be a significant demand for better skills levels and hence for better training and education in the country in order to significantly alter the economic growth pattern of the country in this manner. (iii) Capital In simplistic terms, money saved is the difference between (the surplus) income and expenditure for a given period (personal, industry or government). The money is typically saved in a financial institution, which can use this money for capital investment. If necessary, if not enough savings are available, the money can be borrowed. During 1985-1993 the foreign debt crisis resulted in huge savings leaving the country for investment outside of the country, which together with disinvestment and sanctions, resulted in far too little money being available for investment in SA itself. Currently, the economic growth in SA since 1994 has averaged 2. 6%, but should be closer to 5% to achieve meaningful changes in SA (Roux, Ch 4). A point of debate could be how economic growth can affect our lives, and the impacts of rapid economic growth outpacing that of other aspects of society (industrialization, environmental impact, social behaviour, etc.). Generally, economic growth outweighs the costs, but has certain consequences. People not participating in the economy could be left in greater poverty (e. g. people without the required skills). 2. 3. 1 History Note on Fig 3 in handbook the Runderpest and the effect of the Great Depression on the SA economy (the Great Depression did not affect SA too much,

because it did allow SA to export products to the rest of the world). After WWII there was a sustained recovery/boom period, due to: - The Marshall Plan (reconstruction of Europe, Germany & Japan, which enabled SA to export) - Removal of “ Beggar thy neighbour" policies during Bretton Woods era - Substantial capital investment in SA economy (Eskom, Sasol, mining, etc.) Fig 7 shows a long period of sustained growth from the ‘ 50’s to the ‘ 70’s. The 2 Gold Booms of the early and late ‘ 70’s are reflected with the 1976 Soweto Riots indicating the effect of political unrest on the SA economy. Here gold was holding off political turmoil. The Gold Booms were in response to the Oil Crises of these periods. 1982 — 1986 Depression The causes for this were: - Interest rates were pushed up too far (c. f. Policy-Induced Recession policies), resulting in the first depression in 40 yrs. - Major political upheaval and fear of communist regime. - A major draught occurred in the early ‘ 80’s. - World economy in recession in ’81-82 (SA feels this in ’83-84). - Gold prices falling. - Note that the Oil Prices were also falling, and thus this was opposite to normal reasons for a recession. With the above all happening simultaneously, a recession is a likely occurrence. 1990 — 1993 Depression An even worse depression occurred in SA, the causes being: - - - - - - - A spike in Oil Prices. (Gulf War only lasted 7 days) Policy induced recession in the USA and depression in Europe. Huge political upheaval. P. W Botha out of parliament, Blood shed in Natal A drop in Gold Prices. A major draught (worse than ever) el nino In addition to 4 factors of ‘ 80’s, oil prices went up as well. Note droughts and floods have different effects Floods can create development look at New Orleans 1994 â†’ current - - - - Elections, STABLE politics and policies No natural disasters World economy growing

Increased productivity 1998 outlier Asian Crisis 2. 4 The Japanese Crisis Refer to Figs 9 & 10. “ The Wealth Effect" 80% of loan were bad loans in Japan in the late 90’s What caused it? - Share speculation - Property speculation (prices tripled in late ‘ 80’s and early ‘ 90’s) - Ordinary citizens took money out of RA, Pension Funds etc and placed it into the share and property market - Ordinary citizens borrowed money and invested it in shares and property - Oil Prices â†‘ - Interest Rates â†‘ - The bubble burst The results of this were: - People lost their pension funds - People started saving and stopped spending - Because the Japanese Banking system now had up to 80% non-performing loans (loans where they couldn’t pay the interest of the loans), the Japanese Banking system faced bankruptcy - Therefore citizens invested their savings off-shore - Unemployment â†‘ (unheard of in Japan: “ job-for-life") - Money essentially left Japan because Japan saved itself into a depression due to a wealth effect Note: - - - The Japanese people who had invested their savings in the Pacific Rim countries took their money out of those countries during the Asian Crisis. The Pacific Rim countries now also have non-performing loans (up to 40-50%). The Pacific Rim countries also have banks facing bankruptcy. 2001 — 2002 USA Recession (not policy-induced) The Dot. Com bubble (esp. on the Nasdaq) resulted in major speculation - A wealth effect similar to Japan’s resulted in people using collateral to borrow money to invest - Alan Greenspan tries to notch up the interest rates to avoid a sudden wealth effect - Oil Prices climbing since 1999 The differences between Japan & USA: - USA banks are not bankrupt - USA property bubble is still happening in major cities, although this may cause a 2nd wealth effect 2. 5 - - - - - - - - Looking into the Crystal Ball: things to look

out for Stability of SA and Southern Africa (vs. Zimbabwe, DRC) USA policies cause uncertainty Gold Price sliding Oil Price going up Strong Rand Worst draught ever (worse than ‘ 90’s) The Japanese Banking system (bankruptcy) USA economy slow-down in the economy beware of high budget deficit, property bubble bursting â†’ beware influence of US economy on Europe If the Rand remains strong â†’ USA economy picking up â†’ European economy picking up Watch leading and coinciding indicators Recession in (i) (ii) (iii) Agriculture Mining Manufacturing (draught & strong Rand) (strong Rand) (strong rand & world economy) Budget Deficits Budget deficit = Government spending > Trade The sum of the annual budget deficits is then the public debt of the nation In the USA, Hence Government spending Trade Budget Deficit â†‘ â†“ â†‘ As a rule of thumb, the [BD / GDP] â‰¤ 3% In the USA this factor is 4. 5% and growing, and this is unsustainable. The USA economy is growing, but there are several concerns: (i) Property bubble (ii) Budget Deficit (iii) Trade Deficit If the US$ (exchange rate) keeps decreasing, then the US may export more to Europe and cause a slowing down of the European economic growth. 3. THE CIRCULAR FLOW OF INCOME People who offer services or goods for sale are FIRMS. Definition: Assumption: Households own all resources or “ factors of production" (exceptions are “ free goods, such as air, rain, fish outside of territorial water, etc.). Households own everything in the firm (via shares owned by shareholders). Theoretical Sectors: - Households - Firms - Financial sector - Foreign sector - Government INCOME Profit Wages Interest Rent Factor Market Factors of Production Entrepreneurs Labour Capital Land HOUSEHOLD Product Market Productivity Goods & Services EXPENDITURE Consumption Investment

Govern. Expend. Exports - Imports FIRMS Expenditure = C + I + G + (X — M) C I G X M = = = = = consumption investment government expenditure exports imports 3. 1 Building a Casino Suppose someone invests R1, 000, 000 on building a casino. The money does not take away from any other investment opportunities. Savings R 200 k R 160 k ..... HOUSEHOLD Expenditure R 800 k R 640 k ..... Wages R 1000 k R 800 k ..... FIRMS Investment R 1000 k Let us suppose that the people save 20% of the extra income that is received as a result of each extra wage packet above the norm or usual wage packet. It is assumed we are not at full employment. Income R1000 k R 800 k R 640 k R 512 k ..... R 5000 k Expenditure R 800 K R 640 k R 512 k .... R 4000 k Savings R 200 k R 160 k R 128 k .... R 1000 k After each cycle the money not saved goes back into the cycle as expenditure by the people. The sum of the total savings is equivalent to the initial investment âˆ‘ GP = [a (1 — r n)] / [1 — r] a = âˆ†I = the investment r = Marginal Propensity to Consume (MPC) nâ†’âˆž r nâ†’ 0 âˆ†Y = âˆ‘ GP = a/[1—r] = âˆ†I / [1 — MPC] = âˆ†I / [fraction withdrawn] âˆ†Y - - - = R 1000 k / 0. 2 = R 5000 k For a single investment, there is a multiplier effect on the economy. At full employment, we would be drawing people away from other employment and this would be at the expense of other business. This would result in a zero gain. If not at full employment, the less we save the more money is circulated for increased productivity levels. This in turn increases the employment rate (move towards full employment line on figure shown). Y = GDP Impact of building casino, with each cycle being added Normal levels of GDP time Prod. Y Workforce is at full employment. 2 curves for different productivity levels.

Capital Goods Factor Market? Factors of Production Moving towards full employment Labour force used at the expense of other businesses Consumer goods Product Market? Productivity Prod. X In the example of the casino: - The model is in equilibrium at the start, - R 1000 k is invested or injected into the economy, - R 1000 k worth of savings are accumulated Q4a Q4b Q4c The income or GDP is increased by R 5000 k. âˆ†Y = R 1000 k / [0. 2 + 0. 3 + 0. 1] = R 1667 k This results in a zero gain effect, because labour is taken away from other industries. Therefore whatever productivity would be gained by the construction would be at the expense of other businesses. This results in a zero gain effect, because the investment is taken away from other industries. Therefore whatever productivity would be gained by the construction would be at the expense of other businesses because they will not receive the investment (in this case the casino doesn’t produce any goods or services). Q4d 3. 2 GEAR — Growth, Employment and Redistribution INCOME Profit Wages Interest Rent HOUSEHOLD EXPENDITURE Consumption Investment Govern. Expend. Exports - Imports Entrepreneurs Labour Capital Land Goods & Services FIRMS For a better life in: (i) Households (ii) Firms - better education, training, housing, health, etc. - better domestic & foreign competition - reduction of import tariffs (compete or die) To achieve this we would want to have a greater circulation of income and expenditure in the 2sector economy. - Government can improve production to improve “ demand & supply". - Saving will reduce the amount available for expenditure. This money would need to be spent to improve quality of life. - Reducing taxes would mean that the government has less to spend as well to improve quality of life. - Investment can only be at the expense of another

investment. GEAR VISION - Competitive economy - Fast growing economy - Redistribution of income and opportunities to the poor - Health, education and services available to all - Secure assets - Productive workplaces GEAR STRATEGY - Competitive platform for export growth - Stable environment for private investment - Restructured public services - Industrial and infrastructural development - Greater labour market flexibility - Improved human resource development GEAR POLICY - Lower budget deficit - Budget reform for distribution - Reduction in import tariffs - Privatisation - Moderate wage demands and flexible collective bargaining - Stable real exchange rate - Sensible monetary policy - Elimination of exchange control - Tax break for investment in competitive and labour absorbing projects - Expansionary infrastructure programme - Levy system to fund training Import substitution - We can’t make everything…… - But we must produce goods locally - We must focus on what we’re good at…… - To move towards a degree of self-sufficiency in the country Problems with GEAR - Import tariffs were removed to make the market more competitive - The architects of GEAR were too optimistic about the rate at which we could re-tool - No strategy on how to re-skill people - No social safety net - A resulting increase in unemployment - A resulting increase in crime - Crime has affected the economy - A disastrous Public Works Programme (i) Greater need to re-focus people for the job market, via training, to re-enter the job market (ii) Greater need for members of the community to help provide infrastructure to reintegrate people into the workplace (iii) Many people in SA are unemployable 3. 3 Gross Domestic Product (GDP) Definition: The value of the total final goods & services produced (i. e. when it gets to the user, but not an intermediate

user) within a specific time period. INCOME Profit Wages Interest Rent HOUSEHOLD EXPENDITURE Consumption Investment Govern. Expend. Exports - Imports Entrepreneurs Labour Capital Land Goods & Services 1. GDP measured as income equival. to production FIRMS 3. GDP measured as ValueAdded at the firm 2. GDP measured as sales (but must be adjusted for stock level changes) Method 1 is not regarded as reliable (people might lie in order to pay less tax). Method 2 can be measured as follows, but not accurately: (X — M) customs & exports G from the budget I receiver (investment of capital on production capacity) C estimate of consumption expenditure from people Method 3 Value Added = Sales - Purchases from firms (left with profit, rent, interest……) Firms can be audited SARS documentation The example below shows the concept for the making of a fence and how the GDP could be calculated for a simple system. HOUSEHOLD 50 60 40 30 20 200 200 FIRMS 50 110 150 180 200 Cost Miner Smelter Fence Maker Painter Builder 0 50 110 150 180 Value Added 50 60 40 30 20 200 Value Added Method Income 50 60 40 30 20 200 Income Method Total Value 50 110 150 180 200 Expenditure Method GDP is the total final goods and services produced (therefore the expenditure method should only look at the final value). HOUSEHOLD FIRMS 4. 4. 1. - - DEMAND AND SUPPLY CURVES DEMAND CURVES Demand curves are usually negative because as the price decreases the demand tends to increase, (except status symbol curves such as Ferrari whose demand may increase with price increase). A shift from D1 to D2 may occur due to: (i) an increase in income (ii) stock-piling (anticipating price increases) (iii) taste (fashion or seasonality) (iv) population growth (v) competition (vi) complements (lack of

car-tire sales due to petrol increases) For price P2, shifting the curve from D1 to D2 results in a sales quantity increase from Q1 to Q2. Lowering the price to P1 will result in a further sales quantity increase to Q3 - - Price D2 D1 Price S1 S2 P2 P1 P1 Q1 Q2 Q3 Q Q1 Q2 Q 4. 2. - - SUPPLY CURVE The supply curve is usually positive, because as the price decreases the supply tends to increase. A shift from S1 to S2 may occur due to: (i) a change in production costs (ii) opportunity costs may have changed The opportunity cost is the cost of making product A when you could be making product B instead (e. g. making leather jackets instead of leather shoes due to changes in the market), hence normalizing profits. The Plastic Bag Industry A tax was introduced which was passed on to the manufacturer (hence the supply curve). If the same number of bags is to be produced, the price will increase by the cost of the tax increase. Price Price P2 S1 + tax S1 P2 P1 P1 Q1 Q2 Q3 Q1 4. 3 The Demand-Supply Curve Price S1 D1 Price S1 D1 P2 P1 P1 P2 Q2 Q1 Q3 Q3 Q1 Q2 In the LHS figure, for an increase in price from P1 to P2, the demand will drop from Q1 to Q2, while the supply will increase from Q1 to Q3. Hence the net surplus (red double arrow) will be [Q3 — Q1]. Either (i) drop stocks (purple vertical arrow) (iii) drop prices (purple horizontal arrow) to address the imbalance (purple angled arrow). Note that if the price were to decrease there would be a shortage and the demand would be greater than the supply. This may cause bidding. The shortage would be [Q2 — Q3] on the RHS figure. Either prices would be increased or stocks increased as shown by the purple arrows. The speed of adjustment depends on the market: - instantaneous markets: shares, exchange rates - 24-hour markets: fruit & vegetable markets - week / month: clothing, cars The slope of the

curve gives an indication of the response to the adjustment. 4. 3. 1 The Taxi Wars (i) Shooting up the Taxis (LHS figure) - By shooting up the taxis, fewer taxis are available & supply line shifts to the left. Hence S1 shifts to S2 - With fewer taxis, the # of taxis decreases from Q1 to Q2 - The price increases from P1 to P2 (ii) Shooting up the Buses (RHS figure) - By shooting up the buses, demand for taxis increases & demand line shifts to the right. Hence D1 shifts to D2 - With more customers, the # of taxis increases from Q1 to Q2 - The price increases from P1 to P2 Price S2 S1 D1 Price D2 D1 P2 S1 P2 P1 P1 Q2 Q1 # Taxis Q1 Q2 # Taxis 4. 3. 2 Rent Control in NY after WWII After WWII many soldiers came back to NY looking for rent. The Figure on the LHS depicts the scenario just after the influx of soldiers. Because of a limited supply of flats, the supply line will be very steep (people prepared to pay heavily for a flat if they could afford to). - - - Just after the soldiers get back the market would normally clear at Q2 and P2. Due to rent control being imposed, the maximum rent is only Pcont. However, because the flat owners are making a loss on rents under these circumstances, only Q4 flats are for rent. The others may have been put up for sale, etc. The price for these flats would go for P4 (if there is a black market) before the market would clear. The normal shortage would be people looking for flats to rent [Q3 — Q2], but now there is an additional shortage of people who’ve lost their accommodation as well [Q2 — Q4]. - Price S1 Price S1 D1 P4 P2 P2 Pcont Pcont P4 D1 Q4 Q2 Q3 # Flats Q3 Q2 Q3 # Flats Note: In the long term (RHS), with more flats being available or at least less of a crisis, rent control could be even worse on the rentals of flats???? I. e. in a free market this would really mess things around??? 4. 3. 3 Minimum Wages Let’s suppose

that minimum wages are imposed on the industry (LHS). - Firstly, more people would be willing to work (they'll be getting higher wages) - Industry would tend to reduce the jobs available (keep the wages bill level) - Before the minimum wage the market would clear at Q1 and W1 - With minimum wage, more people [Q3 — Q1] would be prepared to work - However, the job losses due to people being retrenched would be [Q1 — Q4] - Therefore the total unemployment would increase, although those with work would be earning more. Wage D2 D1 Wmin W1 S1 Wage D1 Wmin W1 D2 S1 W3 Q4 Q1 Q3 W3 Q2 Qd Q1 Labour Labour Let's suppose we have (i) (ii) (iii) Minimum wages No retrenchments allowed Price control (see RHS above) - - - - - - - - The labour force remains at Q1, but with Wmin The total wage bill exceeds what companies can afford to pay, because they cannot retrench and cannot increase prices The labour market would clear at Qd if there could be retrenchments to reduce the wage bill. However, the companies that can't sustain the higher wage bill go bankrupt The demand for labour drops from D1 to D2 The actual market now clears only at Q2, because no-one is hired and many lose their jobs when the companies go bankrupt. Instead of an increase in unemployment of [Q1 — Qd], there now is an increase in unemployment of [Q1 — Q2]. Reducing wages to increase employment could result in " sweat shop" conditions Minimum wages for domestic workers is somewhat different, as household substitute wages for other expenses. Note: (i) (ii) 4. 3. 4 The Wage Gap In SA, there are many unemployed people, and a large wage gap exists between the skilled and unskilled labour force. What would happen if there was an increase in labour demand? - - - - The figure on the LHS represents the Unskilled Labour force,

assuming that those at the very bottom of the spectrum will not work under any circumstances for less than a particular minimum acceptable wage, W1. For an increase in demand in unskilled labour, there will be sufficient labourers available who will work for the same wage. The figure on the RHS represents the Skilled Labour force. For an increase in demand in skilled labour, wages can be expected to go up. The figure on the RHS shows that because the wages for skilled labour increases, but not for unskilled labour, the wage gap widens. Wage Wage D4 D3 W4 S1 D1 W2 D2 S1 W1 W1 Q2 Q1 Labour Q1 Q2 Labour Price Price 5 THE MONEY MARKET There are 3 key financial markets: - - - The Money Market The Capital Market The Share Market (Short-term: (Long-term: (Long term: credit card, savings, home-loans…) long bonds…) shares…) Debt Equity The Capital Market means “ you go into debt to raise capital" (???) The Share Market means “ you issue shares to raise money" (???) Households Savings Factor market wages Supply Financial markets interest rates Savings Product market prices Supply Demand Investment Demand q q q Investment Firms Scenario: (i) (ii) (iii) (iv) (v) (n) M1 = Let’s spend all our money, in order of preference… (credit card & home loan is not our own money) cash demand deposit (cheque & transmission accounts,…) savings accounts (incl. 32-day withdrawal notice accounts) fixed deposits … Treasury Bills Shares … cash in circulation [not in vaults or accounts in banks] (i) + (ii) M2 = M3 = (i) + (ii) + (iii) (i) + (ii) + (iii) + (iv) up to 60 day deposits up to 90 day deposits This series goes up to M25 Scenario: R1000 is deposited in a bank by a visitor to an island. The bank has a 20% reserve (i. e. it needs to have 20% of its loans in cash in reserve). Liabilities 1 2 Deposit Deposit R1000 R1000 Cash

Reserve Cash Loan (1) Reserve Cash Loan (1) Cash Reserve Cash Loan (1) Cash Loan (2) Reserve Loans Assets R 1000 R 200 R 800 R 200 R 800 R 800 R 360 R 800 R 640 R 1000 R 4000 M1 R 1000 Visitor deposits money into bank. Fisherman gets loan & spends R800 @ fish-shop, who deposit the R800 at the bank. Bank can make another loan of R640, keeping an additional R160 in reserve. R 1800 3 Deposit New Deposit Deposit(s) R1000 R 800 R 1800 R 1800 4 R 2440 R 5000 n Deposit(s) R 5000 The Money Multiplier (MM), = [Reserve Requirement (rr)] -1 = 1 / rr = 1 / 20% = 5 Note: A 1-step method of doing the above is to extend a line of credit worth R 4000 via a cheque book. The Central Bank could take the following courses of action: - change the reserve requirement & hence the money multiplier - conduct open market operations (sales or purchases) - use moral persuasion Open market operations are when the Bank intervenes with a view to influence the liquidity of the market via: (i) purchases (buying “ paper" from the market) (ii) sales (selling “ paper" to the market) This is typically done in the secondary market (not the banking sector, but private ???) Under the old system up to the ’80-‘ 90’s, the Central Banks did not control interest rates. Commercial banks would in times of crisis recall loans such that, for example, the lines Ms1 would shift to Ms2, and hence the interest rate would shift from I1 to I2. This is shown on the LHS of the diagram below. This has an enormously disruptive consequence if there is a sudden change in the system. In the old system, if the reserve requirement was changed from 20% to 10%, the line would shift from Ms1 to Ms2, and the interest rate would have to drop from I1 to I2 to clear the market. Under the newer system the interest rate is set by the Central Bank, and the money resources are

essentially “ flexible", such that when the interest rates are set, the money borrowed is determined by the market and hence the market clears. Int. Rate Ms3 I3 Ms1 Ms2 Int. Rate I1 I1 I2 I2 Md1 Ms1 Ms2 Md1 Q3 Q1 Q2 Qm Q1 Q2 Qm Money Demand @ HIGH interest rate Money Demand @ LOW interest rate Money Demand @ HIGH interest rate Money Demand @ LOW interest rate Scenario: - - - - little money in circulation lots of money in circulation expect int. rate to fall expect int. rate to rise invest Suppose the visitor suddenly withdrew the R1000 The bank does not have sufficient reserve left. Even after 32 days notice, the bank may have to call in loans. This would be from the fisherman, who does not have cash readily available. The fisherman goes bankrupt, and the fisherman’s belonging that were bought with the R800 brings the bank < R800 at auction. The bank calls in the loan of the next person, and the cycle continues. This is effectively what happened in the Japanese Banking system, where people no longer wanted to save in their own banking system and saved money elsewhere wealth effect. - The Japanese pulled their money out of the Pacific Rim during the Asian Crisis. - - - The Pacific Rim countries pulled their money out of Russia during the Russian Crisis. The Russian Banks closed their doors for 1 year. Standard Bank SA had lent the Russian Banks US$ 150 million before this, and spent a long time waiting to get it back from the Russians. The Reserve Bank will let small banks go into insolvency, but not large banks. The question they face is “ How big will the wealth effect be if a bank goes bankrupt" before a Central Bank intervenes? There used to be an “ Accommodation Window" through which a bank could ask the Central Bank for assistance when in trouble. Nowadays, the banking system has changed to make this facility

available on essentially a daily basis. Up to the 1970’s the Central Bank could change the reserve rate, and hence when the reserve rate was increased, the banks would have to call in their loans. Businesses would go bankrupt, and even major wealth effects could result. The Accommodation Window was a means in which the banks could be “ floated" by the Central Bank. In the 1980’s the banking system around he world changed. 2. To pull excess money out of the Banking Sector, the Central Bank sells bonds & bills, and cashes the cheque at the bank. securities securities Treasury Bills Land Bank Bills Reserve Bills Government Stock < 30 day maturity Deposits Loans People Banking Sector Central Bank Charges at the Bank Rate (BR) Charges at MORE than the Bank Rate (BR+) Rands Rands 1. Money may come into the Banking Sector, and if banks pay off all debt they will no longer be “ in the bank". The interest rate is now set by the Central Banks, who charge the Banking Sector at the Bank Rate. Commercial Banks charge at slightly more than the Bank Rate. In exchange, securities are offered for the money made available (securities usually < 30 days to maturity), much like people will offer security to obtain a loan. Previously, the RHS of the picture did not really exist. Int. Rate Credit Card, HP … Prime Housing Bonds REPO … … … Savings Recession If the Bank Rate (Repo Rate in SA) changes, then the whole spread will shift, because the Bank Rate is approx. the average of the spread. LOANS > REPO SAVINGS < REPO Recovery Qm Why is the current Banking System better than the old one? - You can go backwards Int. Rate Int. Rate Ms2 I1 I1 I2 Ms1 Ms2 Md1 I2 Ms1 Md1 Q1 Q2 Qm Q2 Q1 Qm In the previous system, banks set the Reserve Requirement. If necessary, the banks would call in loans, and businesses could go bankrupt. In the current

system, the interest rate is set, and people tend to borrow more or less accordingly (i. e. you save more or you pay off debt, etc.). In this way, the system can go backwards or fluctuate according to market forces, and not be stuck with an interest rate purely decided by the bank. Businesses may still go bankrupt, but they are less likely to do so as there is more flexibility to operate. The banking sector must report to the Central Bank at the end of each day to show that they have enough reserves for the different types of accounts, or else they will be fined. Banks can get money from 2 sources: - other banks (which they prefer due to lower rates) - the Central or reserve Bank (Note that it would take too long to raise money from people) Banks can have a crisis of - liquidity - (in?-)solvency Banks will lend to and borrow from one another (@ the Inter-Bank Rate) before the “ net" will borrow from the Reserve Bank. The Inter-Bank Rate is usually slightly less than the Bank Rate, as the banks will want to borrow from one another at a rate less than that of the Reserve Bank. The Banking Sector must, however, be “ in the bank" on the whole. This means that at least some of the banks must be borrowing from the Reserve Bank, or else the Reserve Bank will not be able to set interest rates themselves any more. Suppose many millions of Rands or Dollars come into the market and the banking sector pays off all of its debts to the Central Bank. Any remaining surplus the bank will ant to lend out. It will drop the interest rates in order to be able to lend out more. If this happens the banking sector is no longer dependent on the Central Bank and we are back to the old system. Banks must therefore be “ in the bank" for the system to be able to go backwards. To pull money out of the system, the Central Bank will sell government bonds, treasury bills, etc. on the secondary

market (i. e. the people) and cash the cheques with the banks. This pulls extra money out of the banks and keeps the banking sector “ in the bank". The only effective means of monetary policy is via interest rates. Previously this was done via - reserve requirements - moral suasion - open market policy An open market sale (open market policy or open market operations) occurs when the banks first sell bonds for cash, and ultimately the people will sell the bonds back to the bank. In that case the bank may have to call in loans to pay for the bonds. In the old way this could cause bankruptcy, while in the new system the banks can approach the Central Bank to borrow money to raise such funds. The REPO Rate was introduced in March 1998. The Reserve Bank would determine how much money it would make available for banks to borrow, and banks would determine how much by way of interest they were willing to pay for it. - - - The reserve Bank wanted to “ de-politicize" the Bank Rate. Banks would bid for money from the Reserve Bank and the Repo Rate would be the weighted average of this. The Marginal Lending Rate was slightly higher than the Repo rate, and banks could borrow at this rate if they needed more money than the amount made available by the Reserve Bank. March 1998 15% 17% R 4 billion April 1998 22% 45% R 2 billion Repo Rate MLR Quantity Available Within 3 weeks of the beginning of the Repo Rate, the Asian Crisis broke. As soon as it became clear that the interest rates would increase dramatically, the following occurred: - Loss of confidence in the emerging economies due to higher inflation and interest rates, and the Rand as currency and hence Rands were converted into Dollars. - Due to an expected weakening of the Rand, banks took out Forward Cover Agreements (Central Bank agrees to pay a defined amount of

Rands for each Dollar). This forward Cover guaranteed that banks could not make any losses if the Rand did not depreciate. - At an exchange rate of R4/US$ and 10% interest, more money could be gained if the exchange rate depreciated by more than that. The exchange rate went from 4 to 6 Rand to the Dollar. Hence it was more effective to use Rands to buy Dollars, and sell them after the depreciation of the Rand. - A way to stop this speculation (buying forward cover & buying dollars) on the currency is to increase the interest rates. For an interest rate of 50%, an equivalent gain could be made. Seeing that the MLR was pushed up to 45% while the Repo Rate was only 22% in April, it is clear that the local bankers were speculating on the Rand, and not foreign speculators (they had to have access to the Reserve Bank and borrow in excess of the money made available by the Reserve Bank for this to happen). - In 2001, the Myburgh commission found that only 2-3% of Forward Cover Contracts were genuine contracts while this occurred. No-one at the Reserve Bank lost their job, but many traders did. The banks made fortunes during this period. - The Reserve Bank did not cover forward and accepted that the Rand would weaken and that bankers would make massive profits. US$ 26 billion was the amount the Reserve Bank had to pay out because they did not cover forward, and the Rand weakened to 1213 Rand to the Dollar. Once this Forward Book was paid off, the Rand strengthened again. In 2001, the Reserve Bank did cover forward. - Now we are effectively in a Bank Rate system again, where there is as much money available from the Reserve Bank as is needed by the banking sector. MONETARY POLICIES When a Central Bank sets the Bank Rate, the objectives are to: - “ Control" inflation (SA targets = 3-6%) - “ Control" Exchange Rate -

Adjust the State of the Economy - Adjust Money Supply / Credit Extension The stance of Monetary Policy: - Stance has tightened: - increase interest rates - Stance has loosened: - decrease interest rates If we increase Interest Rates: - Inflation will increase - Currency will increase - Economy will weaken - Money Supply will increase The above are all inter-related, and will tend to reverse with time. The Bankers Acceptance Rate (BA Rate) matches the Bank Rate very closely, and it is an indication of what Bankers expect to happen (leading indicator). Nominal interest rates and Inflation (Correct to December 2003) (Price increases?) ((demand for products less â‰¡ GDP) (more investment coming in) 22% BA rate Inflation rate 17% 12% 7% 2% Jan-80 Jan-82 Jan-84 Jan-86 Jan-88 Jan-90 Jan-92 Jan-94 Jan-96 Jan-98 Jan-00 Jan-02 Times when the BA Rate > Inflation, Times when the BA Rate < Inflation When BA Rate = Inflation, then the Real Interest Rate = 0. (i. e. crossing of lines) If r = i - âˆ†P r = real interest rate i = nominal interest rate (BA rate) âˆ†P = inflation rate If it crosses (e. g. 88/89), In about ’87 In about ’97 Shortly afterwards 0 = 12% - 12% r = 8% - 20% = -12% r = 17% - 10% = 7% r = 15% - 5% = 10% Although it appeared that the stance on monetary policy had loosened by dropping the interest rates, they actually tightened in real terms. Presumably, pressure on the government to drop the interest rate and the resulting expectations caused the inflation rate to drop to a larger degree, and this resulted in a real interest rate increase. Nominal and real interest rates (Correct to December 2003) 25% 15% 5% -5% BA rate Inflation rate Real BA rate -15% Jan-80 Jan-82 Jan-84 Jan-86 Jan-88 Jan-90 Jan-92 Jan-94 Jan-96 Jan-98 Jan-00 Jan-02 1984 1992 1996 1998 2000 2002 deliberate recession gone wrong results in big decrease in Real BA Rate

depression (BA Rate dips below 0) spike = appointment of T. Manuel spike = Asian Crisis inflation is constant, but real BA Rate decreasing BA Rate & inflation increasing, but Real BA Rate decreases From the mid-90's the BA Rate has been > 3%, and this constrains economic growth. Real Interest Rates It's impossible to have inflation without money. Without money, there can be no nominal inflation rate, but real rates are always there. Productivity growth must fund any interest rate. USA / Europe economies grow on average by ~ 3%. Therefore, in the long run, Real Interest Rates must be less than 3%. Nominal Int. Rate i 1% 3% 3% 0% Inflation âˆ†P 1½ % 1% 3% -2 % Real Int. Rate r -½ % 2% 0% 2% USA Germany France Japan Good Bad Japan would need to make their âˆ†P positive (positive inflation) - - - - In SA we are trying to bring the Inflation Rate down to 3-6%. We must set interest rates to adjust the real interest rate. Target Interest Rates to a low value (3-6%). Let inflation adjust to get a sustainable real interest rate over the long run. A generic model to forecast interest rates (i) (ii) (iii) (iv) Inflation Exchange rate State of the economy Money supply /cred. ext. â–² â–² â–¼ â–² Interest rates â–² (these must match) â–¼ (â–¼ â–² Suppose iSA = 8% & iUS = 1%, then the âˆ†i = 7%. Suppose iSA = 4% & iUS = 3 %, then the âˆ†i = 1%. Big incentive to invest in SA Marginal incentive to invest in SA Suppose there is now also a depreciation of the Rand of 3 %. Then the effective interest rate become (4 — 3 — 3) = -2% Concern: As the gap of âˆ†i closes between SA and investors, people will start pulling money out of the country, the Rand will depreciate, thus resulting in an additional drop in interest rates, and the spiral continuous. As the gap of âˆ†i closes between SA and investors, perhaps the economy starts to grow and people will start

investing. Then the Rand may not depreciate. Upside: Due to potential high volatility on the Rand Exchange Rate, perhaps it would not be a good idea to decrease the interest rates. Interest rates might go up. Looking at the Crystal Ball The capital market is effectively our crystal ball. In the capital market we have long-term saving and borrowing. Long-term saving is done via pension funds, medical aid schemes and the like, while longterm borrowing is done from government, para-statal industries, etc. The primary market is where new bonds and stocks are first brought into the market. The secondary market is where the existing stock and bonds are traded. For our crystal ball, we need to use the secondary market, but will start off with the primary market because that is our entry point for this discussion. i (int. rate) Savings-1 Savings-2 I-2 I-3 I-1 Q of Loanable Funds - - - - The Investment Curve = Demand for Loans Loanable Funds = Income chosen not to consume A change in the savings curve = a change in income (major factor) A change in investment curve = business confidence and expectations Note that: Money Market - Interest rates driven by policy (i. e. government sets the rate) Capital Market - Interest rates driven by markets - - An increase in business confidence therefore equates to a greater demand for loans I-1 I-2 with a corresponding increase in interest rates (driven by market forces!!!) The SA government has been trying to lower the budget deficit, which equates to a smaller demand for loans, I-1 I-3 with a corresponding lowering of interest rates Hence by lowering the budget deficit they are trying to lower the long-term interest rates (and presumably curb inflation). - By increasing our savings, the interest rates will drop and more Loanable Funds will become available (this is what South Africans should be doing more of)

Crystal Ball gazing in the Capital Market (Primary Market): - - - Let us assume that the interest rate is risk adjusted to a rate of 5% (i. e. equivalent to a Repo Rate representing a basket of interest rates) Let us further assume that it is expected that the interest rate will go up to 10% a few months from now. What would we expect to happen in our crystal ball? i (int. rate) S-2(OM) S-1(OM) Pbonds S1(WT) S2(WT) P-1 10% 5% I-1 I-2 P-2 D1(OM) D2(OM) QLF Qbonds - A company (e. g. WoolTru, WT) that needs to borrow now will not want to end up paying interest at a higher interest rate. It would therefore like to borrow funds at a fixed interest rate of 5% from e. g. Old Mutual. This equates to an increase in demand for loanable funds. I-1 I-2 (LHS) WoolTru will have to issue a fixed interest rate bond at 5%, which equates to an increase in the supply of bonds S1(WT) S2(WT) (RHS) Old Mutual would prefer to wait until the interest rates increase to 10% before releasing their funds. This equates to a decrease in the supply of loanable funds. S-1(OM) S-2(OM) (LHS) This also creates a decrease in the demand for bonds by Old Mutual from companies such as WoolTru. D1(OM) D2(OM) - - - The net effect of this is that the interest rates will go up and the price of bonds will go down. This effectively represents our crystal ball to anticipate which way the Repo Rate will shift from the Financial or Capital Market. Crystal Ball gazing in the Capital Market (Secondary Market): - - - The Secondary Market can be analyzed by looking at the values of a typical Gilt. Gilts are quoted in financial publications. Typically the R 153 is quoted at present, because it is nearing maturation but still has a few years to go before it does mature (a Gilt that will mature very soon is riskless). The Gilt can be bought for a particular value (e. g. R100.-), and each year you are

paid out the value of the coupon (e. g. R10.-). At the end, you get the original purchase price back (R100.-). Gilts are BAD - if the government defaults - if there are very high inflation / interest rates Pbonds RSA I. O. U. R100. 30 year R10.- RSA I. O. U. R 153 R10.- Qbonds - The selling and purchasing of gilts can be monitored from financial publications, by looking at the upward or downward trend of the Gilt. Gilt Market Value R 100 R 50 R 200 Coupon R 10 R 10 R 10 Gilt Yield (int. rate) 10% 20% 5% At high interest rates, the market value of the Gilt is low, whereas at low interest rates the market value of the Gilt is high. This is determined by the fixed coupon amount payable which must be equivalent to the interest one would get by putting your money in the bank. - If we expect the interest rate to increase, then the market value of the Gilt will decrease, and therefore we would sell the Gilt prior to the increase in interest rates. S1 D1 S2 D2 (people want to sell if expecting an increase in interest rates) (no demand for Gilts) The net effect is that the Price of Bonds will decrease. The Price of Bonds or Gilts is therefore an indication of what people expect the interest rate to do in the future. The figure below shows the Eskom and BA rates, where te Eskom s a semi-gilt. Capital and Money market rates (correct to December 2003) ESKOM BA rate 20% 16% 12% 8% 4% Jan-87 Jan-89 Jan-91 Jan-93 Jan-95 Jan-97 Jan-99 Jan-01 Jan-03 - - - - - In 1993 the Eskom was going down, followed by the BA rate (good forecast) In 1994 the Eskom was going up, followed by the BA rate (good forecast) In 1996-7 the Eskom and BA rates show “ tales of the unexpected", where no forecasting was possible. In 1998 the peak shows the Asian Crisis. People are dumping stock, their prices go down and their yields go up. The Repo (BA) rate goes up to defend the Rand. In 2000-1 the

Eskom > BA, but going own. Therefore we’re still expecting the BA rate to decrease. Things to look out for: - Check whether the Repo/BA rate is above or below the Bond (Gilt) - Is the trend going up or going down (increasing or decreasing) - Is the Gilt changing its trend versus that of the BA rate CHAPTER 1: The basic economic problem is one of relative scarcity, i. e. the co-existence of a scarcity of resources and unlimited wants. This is true of poor and rich people alike. Opportunity Cost is the cost of the next best alternative foregone when a choice is made. An Absolute Advantage exists when an individual can produce a good or service with less effort (resources) than some other individual. A Comparative Advantage exists where an individual (or country) has a lower opportunity cost in the production of some good or service than does some other individual (or country). Gains from Trade can be achieved when an individual produces those goods or services for which he or she has the lowest opportunity cost relative to other individuals. Terms of Trade: Eggs Roots Eggs or roots collected in a single day Nimbus Mammoth 20 2 2 20 Opportunity Costs 1r = 10e and 1e = 0. 1r 1e = 10r and 1r = 0. 1e Exchange Boundaries 0. 1e < 1r < 10e 0. 1r < 1e < 10r Nimbus Mammoth CHAPTER 18: THE FOREIGN SECTOR: Exchange Rates, Interest Rates and Prices FDI FPI (bricks & mortar stuff) (money into banks, bonds, bills…) (borrow off-shore) (concessionary loans for projects) (concessionary loans for macro-economic issues) Types of Foreign Investment: - Foreign Direct Investment - Foreign Portfolio Investment - Foreign Loans - World Bank - International Monetary Fund IMF Balance of Payments (BOP) Account: The BOP accounts record the flows of money between a country and the rest of the world. These are given in nominal, and

never real, terms. The accounts are made up of three separate accounts: - Current Account: the account records the flows of money resulting from a country’s involvement in the international trade of goods and services. It is made up of the trading account and the services account. o o - The trading account records the value of imports and exports of raw materials, capital and intermediate goods and consumer goods. The services account records the value of services traded on international markets (transport, financial, tourism) Capital Account: the account records flows of money into and out of a country that are not related to trade in goods and services. It records long-term and short-term capital movements: o Long-term capital flows are assets where the original contract was for more than one year. From a national point of view, these are most desirable. o Short-term capital flows are assets where the original contract was for more than one year. These are more speculative in nature. Both types of capital can be moved on sh