



uOttawa

L'Université canadienne
Canada's university

Introduction to Money and Banking

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ECO 2115

Assignment 1

Solutions

Note that the Excel file contains a different sheet for every problem. You will see the different sheets at the bottom of every excel file.

1. The first exercise deals with The National Balance Sheet Accounts, which are not discussed in the book. These accounts do provide however some valuable insights about the nations wealth and how it is distributed. What follows is a brief description of these accounts.

“The National Balance Sheet Accounts provide a stock dimension to the System of National Accounts. Incomes, expenditures, investments in financial assets and funds raised in a given period are cumulated to produce balances. These balances - assets, liabilities and net worth - are the result of economic and financial activity. The National Balance Sheet Accounts are presented in an economy-wide framework. Links between sectors and major shifts in the economy are reflected in the composition and changes in the structure of sector balance sheets. Domestic sector balance sheets can be aggregated to produce the National Balance Sheet, from which National Wealth and National Net Worth are derived. The National Balance Sheet Accounts provide data on the assets, liabilities and net worth for 42 sectors and sub-sectors of the Canadian economy as well as for the nation as a whole, at a point in time. They also provide information on the national

wealth and on credit market debt in the economy.”

You can retrieve a free downloadable version of the national balance sheet by going to www.statcan.gc.ca then to KEY RESOURCE then to System of National Economic Accounts.

- a. Find and import in Excel the Balance sheet (stocks) by sector. Using the CSV tab can easily do the importing into Excel. Use quarterly data at market valuation. Print this table in landscape mode on a single sheet. (5 points)

(See Excel)

- b. Draw a graph that shows how net worth has evolved over the entire period. Include the graph on one sheet. (5 points)

(See Excel)

- c. By looking at the data from the last available period, identify the largest non-financial asset in the economy. What is this value? (5 points)

Land \$1 954 879 000 000

- d. By looking at the data from the last available period, identify the largest financial asset in the economy. What is this value? (5 points)

Stocks \$2 259 414 000 000

- e. Which financial asset recorded the largest drop in value during the last financial crisis in 2008? **Support your answer with a calculation showing the percent change during the third and fourth quarter of 2008 in the value of this asset.** Draw a graph showing the quarterly change in percent between each quarter for this asset. Include the graph on one sheet. (10 points)

Shares dropped almost 17% during that period. (See calculations in Excel on sheet 1A)

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2. Now instead of going to the national balance sheet, go to the Financial Indicators page and download the Persons and unincorporated businesses table. (5 points)
- a. Draw a graph for the entire period showing the behaviour of the debt to GDP estimates. Explain what this measure means and briefly comment on the direction of the trend in this series. (5 points)

(See Excel for graph)

Debt to GDP is the amount of federal debt of a country as a percentage of its GDP. It is an indicator of how an economy is doing.

Direction of the trend: starts slightly above 80% in the 3rd quarter of 2007 and increases until the 4th quarter of 2009.

- b. Draw a graph for the entire period showing the behaviour of the debt to personal income estimate. Explain what this measure means and briefly comment on the direction of the trend in this series. (5 points)

(See Excel for graph)

Debt to personal income estimate is an estimate of the ratio of debt payments to disposable personal income. Debt payments consist of the estimated required payments on outstanding mortgage and consumer debt.

Direction of the trend: starts slightly above 130% in the 3rd quarter of 2007 and increases until the 1st quarter of 2010 and then falls.

- c. Draw a graph for the entire period showing the behaviour of the Financial assets to non-financial assets

estimates. Explain what this measure means and briefly comment on the direction of the trend in this series. (5 points)

(See Excel for graph)

Financial assets: assets such as stocks, bonds, and bank deposits that derive value because of a contractual claim.

Non-financial asset: an asset with a physical value such as land or property.

Financial Assets to Non-Financial Assets estimates indicate how much the health of an economy is dependent on the market system.

Direction of the trend: Fluctuates...starts slightly above 130% in the 3rd quarter of 2007 and experiences a significant drop in the 4th quarter of 2008 and the first quarter of 2009. Then it starts to rise gradually in the second quarter of 2009.

3. This exercise deals with a topic that seems to crop up in the news when the economy is doing poorly.
 - a. Is gold money? Why or why not? (5 points)

Gold was used for money but it is no more, at least officially. For a very brief history of Canada and the gold standard go here:

<http://www.thecanadianencyclopedia.com/index.cfm?PgNm=TCE&Params=A1ARTA0003300>

For something to be money, it has to be generally accepted as a means of payment which today gold is not. Money is an **agreement within a **community** to use something as a **medium of exchange**.**

- b. Find a website with the price of gold going back 10 years or more. Draw a graph showing how the price of gold has been behaving during this period. (5 points)

There are a number of websites that show how gold prices have evolved over time. Simply Google history

of the price of gold.



- c. Can you find a reason that explains why the price of gold has reached a record high lately? (5 points)

Here are some possible answers:

- 1. The dollar's in trouble. That's because the Fed is going to keep cutting interest rates, which will make investors sell dollars to chase better returns outside the U.S. Investors holding assets in dollars see this coming, so they too will be dumping dollars to avoid the carnage and get their money into something more stable -- including gold.**
- 2. Gold production lags demand. While investors chase gold to get into something more stable than the dollar, producers aren't keeping up. Gold production was down 3% last year, and it was flat in the most recent quarter. In other words, gold demand is outstripping demand thus pushing up the price of gold.**
- 3. Gold producers are buying gold. Traditionally, gold producers have sold gold for delivery at some point in the future, to offset**

the risk that prices may decline between now and then. Not so much anymore. Apparently sensing more gains ahead for gold, producers are unwinding their hedges.

- d. What characteristics does gold share with money and what characteristics make it different? Provide two reasons for each. (5 points)

Characteristics that gold share with money: physically durable, limited in quantity, a somewhat good store of value, and its divisible.

Characteristics that make gold different from money: not easily transferable, not readily acceptable, not easily recognized, not stable in value and therefore not an ideal store of value.

- e. What argument is often used for a nation to return to the gold standard? (5 points)

The argument used for a nation to return to the gold standard is that a corrupt or less than noble government might pay its bills by printing more money, which would cause inflation (monetary discipline). Furthermore, that shrinking the money supply allows the government to create recessions. Under a gold standard, the total value of money would be fixed (or nearly so), and the market would adjust itself efficiently around it.

It also promotes fiscal discipline by the government. It cannot print money to finance the deficit but instead can only rely on tax increases or by lowering expenditures.

4. If you suspect that a company may go bankrupt next year, which would you rather own, bonds issued by the company or stock issued by the company? Explain. (5 points)

You would rather hold bonds, because bondholders are paid off before equity holders, who are the residual claimants.

5. Produce a Table and draw a graph that shows the trend in the Canadian “annual” personal savings rate for all years that are

available from E-Stat (it is found in the on line library link to databases). Why should we be concerned with the savings rate and its behaviour over time? Provide three reasons (with the source of your answers) as to why the savings rate is behaving as it is. (10 points).

The answer as to why the saving rate is important is the following:

You can use quarterly or annual data for this. I have provided both solutions on the Excel sheet.

Saving is what is left over after you deduct from income consumption spending and taxes. The purpose of saving is to increase the resources available for future consumption.

This point is true both for individual consumers and the nation as a whole.

For the nation: What is saved can then be used to acquire fixed capital assets such as factories, machinery, and equipment. Hence, capital accumulation contributes to future economic growth.

For the individual consumer: Another reason for the concern is that a lower savings rate may mean that households may not be providing adequately for their short to long term needs, such as for retirement, medical emergencies or in case of layoffs.

There are a number of possible reasons why the saving rate has been declining in the last few years. Here but a few of the theories that have been advanced:

- 1. Lack of self-control on the part of consumers.**
- 2. Increased access to credit by households that previously were unable to borrow.**
- 3. Wealth effects on consumer spending such as the large increases in stock and home prices since the mid-1980s (capital gains). This answer is related to the**
- 4. permanent income/life-cycle income hypothesis'; in other words, expectations about future stock prices , bond prices,**

and house prices. Recent (at least before the present crisis) increases in the value of financial assets may have raised consumption relative to current disposable income, thus lowering the savings rate.

4. Measurement issues (all of them can be viewed as separate explanations)

- Consumer durables are not considered as saving in the official estimates.
- The official measure of savings should include taxes on capital gains.
- Removing non-profit institutions from the official measure.
- Revisions of the original estimates based on changes to methodology, concepts such as the inclusion of the underground economy in the measure of savings.
- Expenditures for education could be viewed as a form of savings which they are not accounted for in the measured savings.