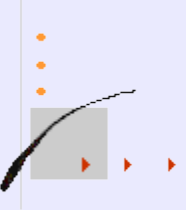# Monetary Transmission and Monitoring of the Real Economy in Uganda

**Presentation to the Monetary and Credit Policy Committee
at the Bank of Uganda**

17. February 2003

Tryggvi Thor Herbertsson

Background of Uganda's economic reforms

- Gradual liberalizations of financial markets with maintenance of macroeconomic stability have been the cornerstone of economic policy from the beginning of last decade.

- Inflation brought down.

- Steady and high economic growth.

- Permanent flow of donor funds.
  - Welfare gains and enormous growth opportunities.
  - Constant need for sterilization of donor funds.
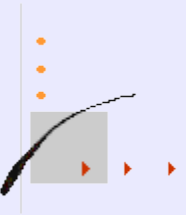
The burden of sterilization
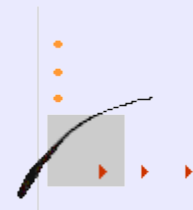
- Responses: Fiscal and monetary policies.
- Contraction of in non-poverty reduction expenditure or increased taxation are difficult.

- Sales of foreign exchange:
  - Lead to depreciation of the Shilling.
  - Harms the export sector and favours import at the cost of local production.
- Issues of new Treasury Bills:
  - Crowds out private investment.
  - Government subsidy to banks.
- So what policy mix?
  - Identify tradeoffs and costs involved.
  - Choose polices that minimize side effects of donor-flows, i.e. polices that entail small price responses. The greater the response the greater the distortion.

# **Choosing the best mix and modifying the system**

- The choice of a possible mix of policy instruments necessitates three types of action:
  - Choice of the mix of instruments in the current environment of rules, procedures, and economic realities.
  - Changes in procedures and introduction of new instruments for monetary policy.
  - Changing institutional settings to widen the impact of monetary policy deepening the transmission mechanism of monetary policy and thereby reducing price distortions.
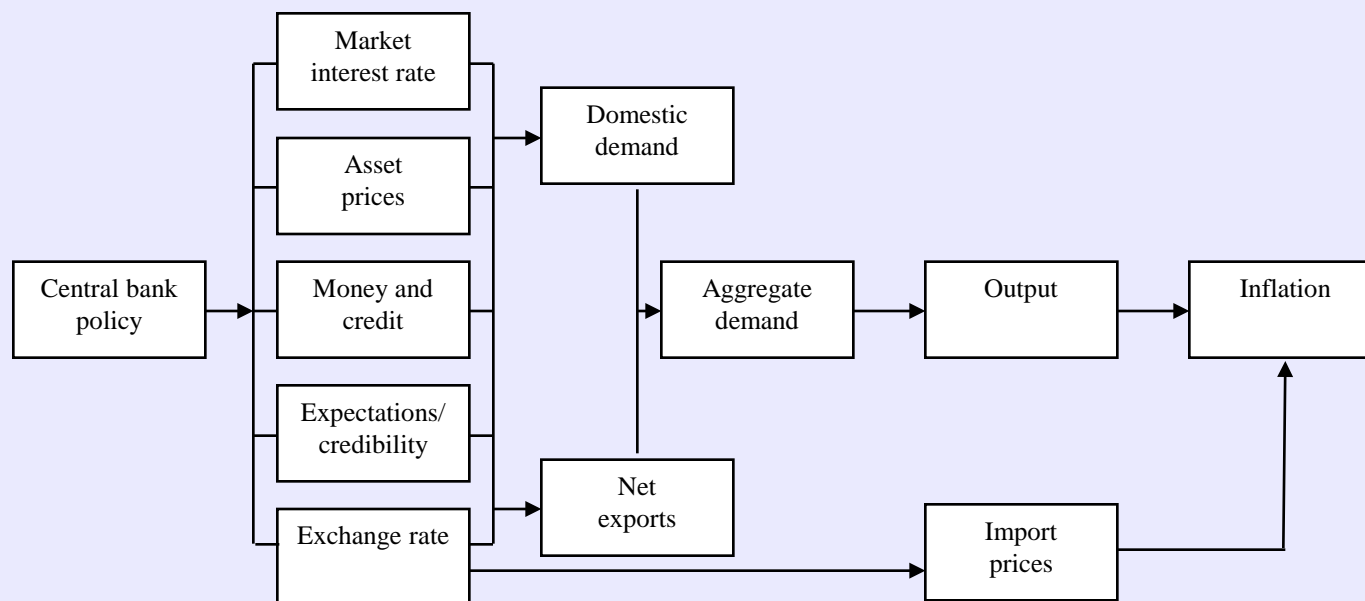
Structural reforms

- ## The issue of spreads:
    - Monetary policy in itself does generally not influence spreads.
    - High spreads can obstruct financial sector development and form an effective block of monetary and credit policies.
    - Banks burnt by past experience and utilizing the TB issues to operate at a profit - banks are in part relieved of their ordinary function of serving as coordinators of lending and saving.
- ## High intermediation costs:
    - Adopting efficient operation procedures.
    - Constant improvements in standards of accounting and operation practices.
    - Reducing incentives of commercial banks to maintain Reserves. Increasing liquidity in inter-bank markets and secondary markets.
    - Fostering competition (attracting more foreign players).
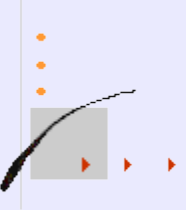
Structural reforms

- Contribute to less costlier enforcement of property rights
  - Reducing the length and cost of legal process already in progress.
- Sharing of information on defaulters.
  - Already in the pipelines.
- Promote secondary markets through a Primary Dealers System. Just recently!
  - Strengthens monetary policy and widens the transmission mechanism of monetary policy
- Successful reforms hinge on:
  - Constant monitoring.
  - Review and revision.
  - Keeping an open dialogue with banks on modifications.
 - Vigilance.

The Monetary Transmission Mechanism

```
                  ┌──────────────┐
                  │    Market    │
                  │ interest rate│
                  └──────────────┘      ┌──────────────┐
                  ┌──────────────┐      │   Domestic   │
                  │    Asset     │      │    demand    │
                  │    prices    │      └──────────────┘
                  └──────────────┘
┌──────────────┐  ┌──────────────┐      ┌──────────────┐   ┌────────┐   ┌───────────┐
│ Central bank │  │   Money and  │      │  Aggregate   │   │ Output │   │ Inflation │
│    policy    │  │    credit    │      │   demand     │   │        │   │           │
└──────────────┘  └──────────────┘      └──────────────┘   └────────┘   └───────────┘
                  ┌──────────────┐
                  │Expectations/ │
                  │ credibility  │
                  └──────────────┘
                  ┌──────────────┐      ┌──────────────┐   ┌───────────┐
                  │Exchange rate │      │     Net      │   │  Import   │
                  │              │      │   exports    │   │  prices   │
                  └──────────────┘      └──────────────┘   └───────────┘
```

- **Bank of Uganda monetary policy influences:**
  - Interest rates
  - Liquidity in the financial system
  - Quantity of money and credit
  - Other asset prices
  - Market expectations
  - Exchange rate

- **All this influences:**
  - Consumption and investment
  - Output
  - Net exports and import prices
  - And ultimately, inflation

Monetary Transmission: Interest Rates
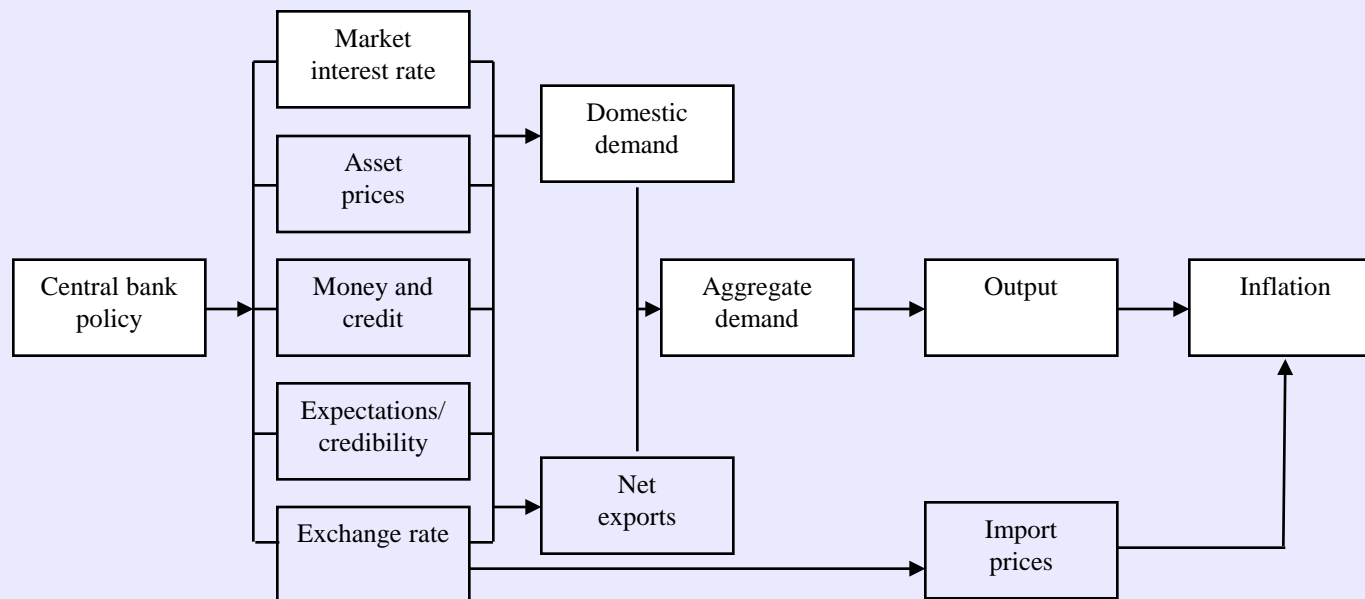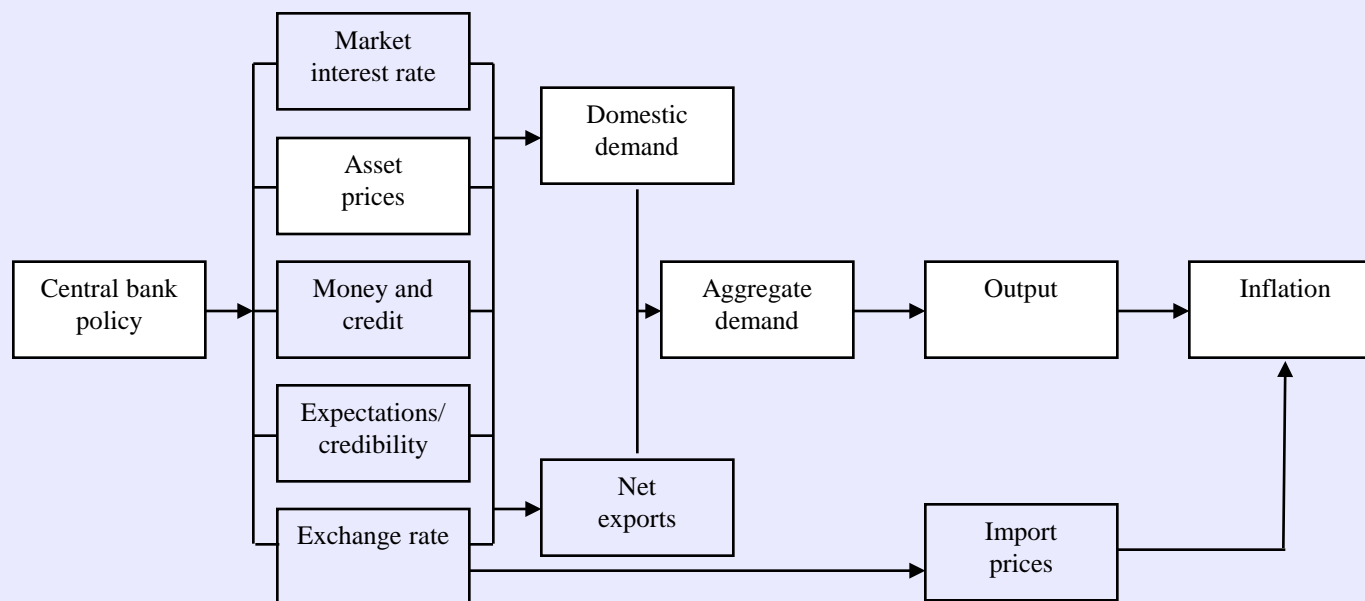

- **Theory (liquidity injection):**
  - Expected prices up
  - Expected inflation up
  - Consequently real interest down
  - Investments of households and firms up
  - Aggregate demand up and output
 - Inflation pressures increase

- **Uganda:**
  - Conditions in the financial sector often seem to dominate monetary policy signals
  - Changes in TB rates do not seem to lead to significant changes in commercial bank rates
  - This channel seems to be blocked in Uganda

Monetary Transmission: Asset Prices

- Theory (liquidity injection):
  - Tobin's q theory
  - Wealth effects
  - (Exchange rate)

Monetary Transmission: Credit View
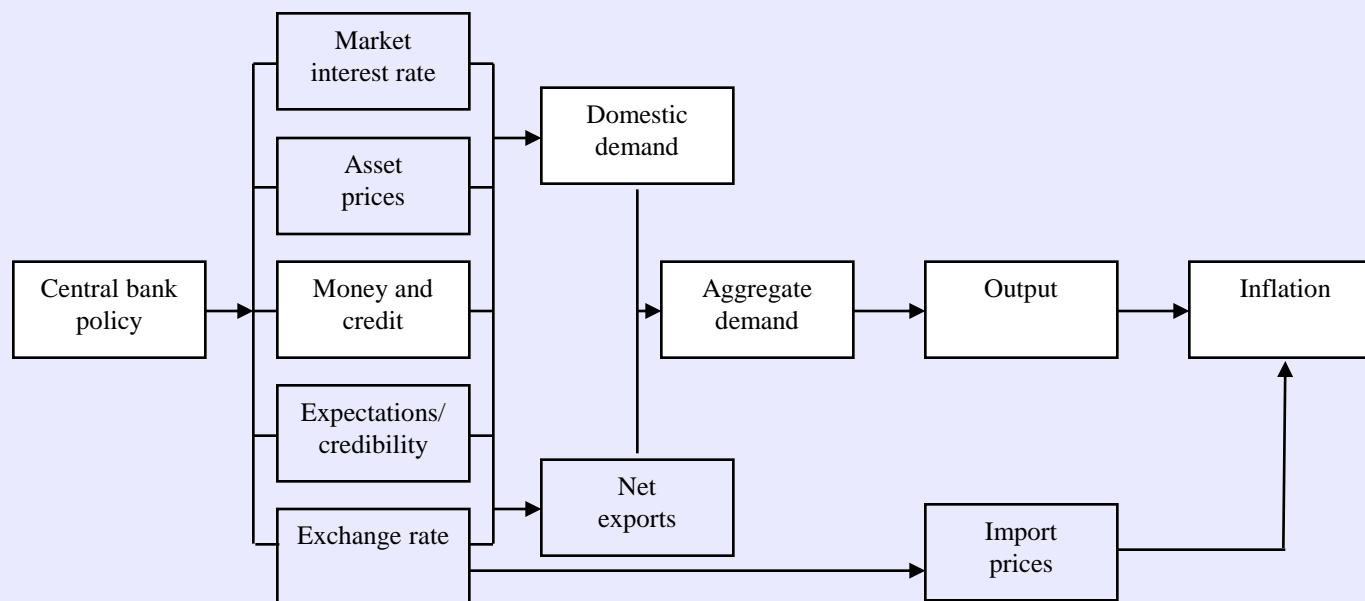
- Theory (liquidity injection):
  - Money and credit
  - Bank lending
  - Balance sheet of firms
  - Cash flow channel
  - Unanticipated price level channel
 - Household liquidity effects

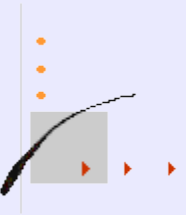# Monetary Transmission: Exchange Rate
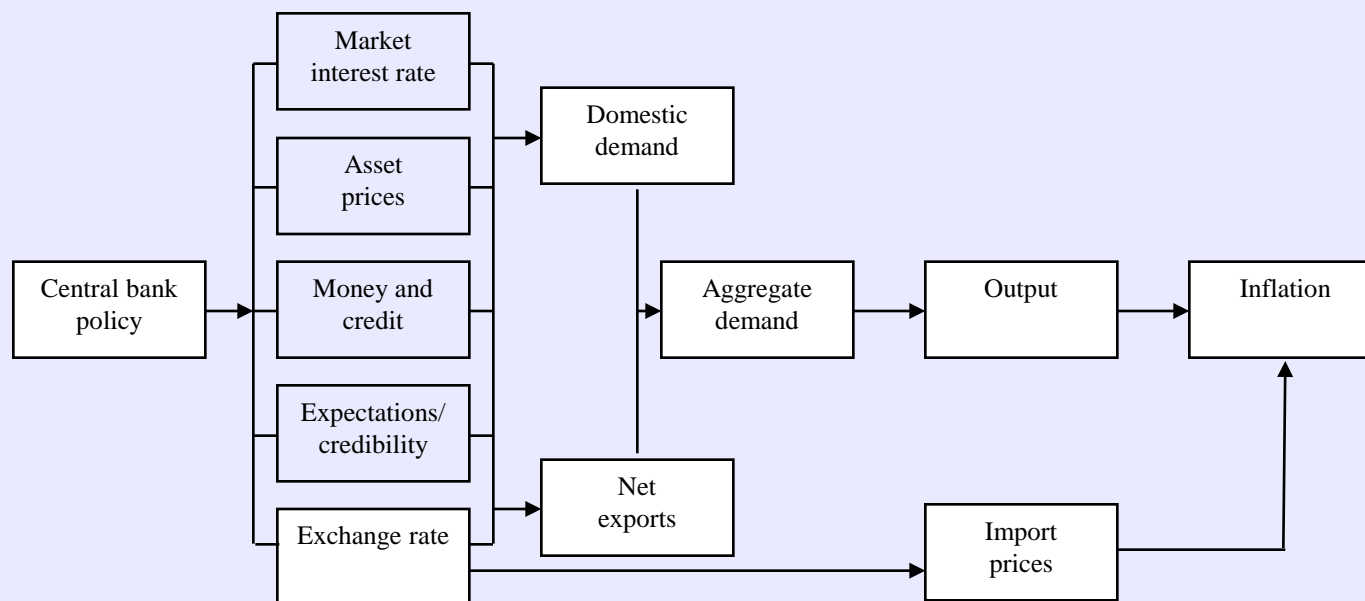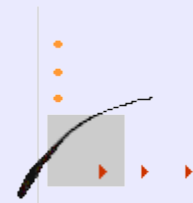
- **Theory (liquidity injection):**
  - First effect: Interest rates fall, domestic papers less attractive, the Shilling depreciates and funds flow out of Uganda, causing further depreciation. Depreciation makes imported goods more attractive and consumption shifts to domestically produced goods. Exporters now get more Shilling for their exports. Net causes rise in net exports and economic activity increases.
  - Second effect: To mop up liquidity from poverty reduction measures the BoU sells a steady flow of funds in the FOREX market, preventing depreciation of the Shilling.

Monetary Transmission: Expectations
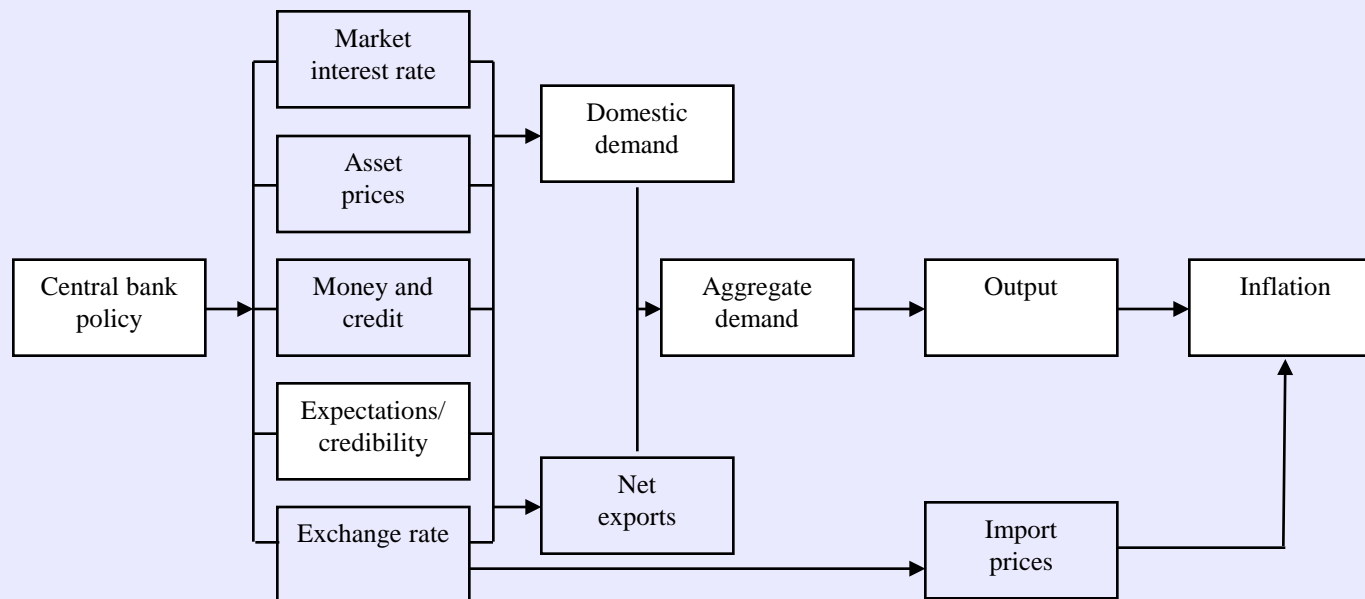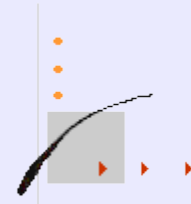
- Consumer and business expectations, credibility of the monetary policy regime, and political stability play a big role in determining the effects of monetary policy.

Monitoring the real economy

- Urgent need for real sector data:
    - Constructing national accounts is time-consuming.
    - GDP published with a long time lag.
    - Use quarterly GDP figures?
        - Generally not accurate enough to use for policymaking until several quarters have passed.
        - An accounting measure, not a good measure of good times or bad.
    - Other indirect measures serve better as a signal of things to come and are more easily obtained.
- Current status of monitoring at BoU
    - Identification of indicator
    - On-the-spot surveys
   - What information does employment and inventories convey?

Leading, lagging and coincident indicators
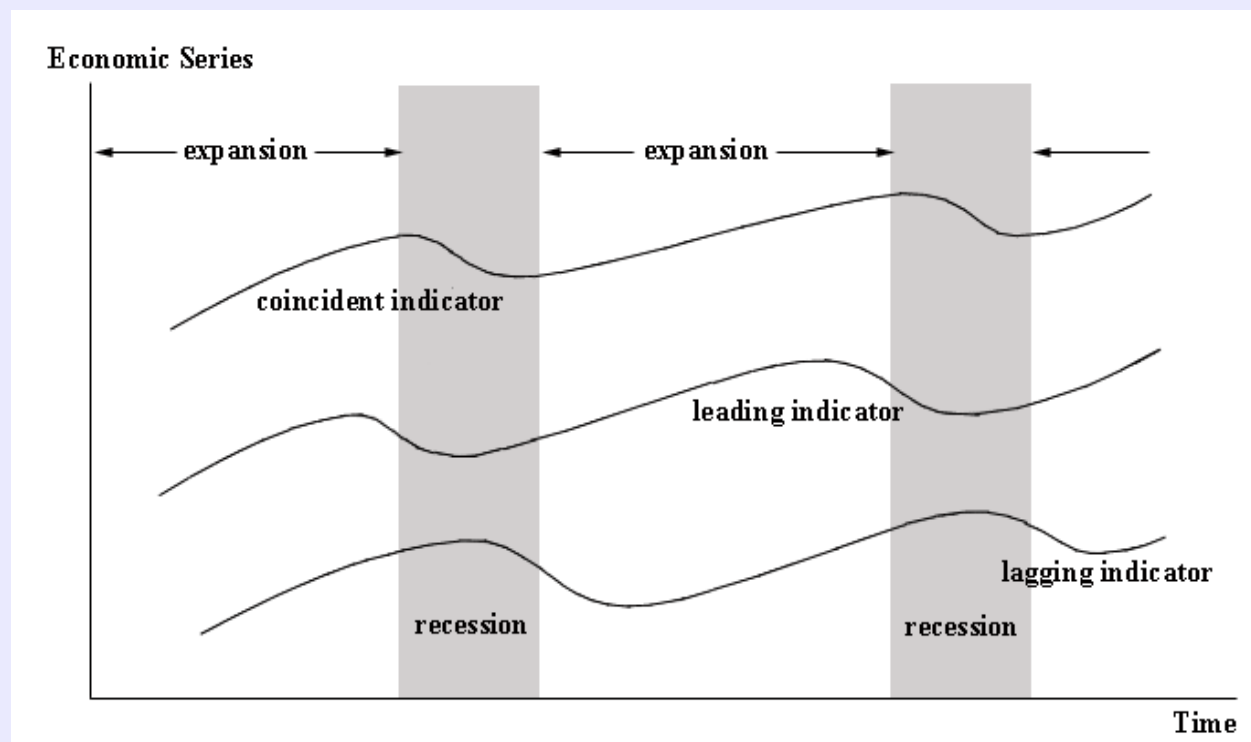
Proposals for Real Sector Indicators
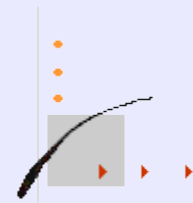
- The Bank of Uganda should start publishing a monthly Real Sector Indicator Report.
- The Bank of Uganda should initiate a joint effort between the Bank, the Uganda Bureau of Statistics, the Treasury, and the Economic Policy Research Centre at the Makerere University to compile various survey based expectation indicators which would be used for the Real Sector Indicator Report:
  - Consumer Confidence Indicator
  - Business Confidence Indicator
  - Inflation Expectation Indicator
- The Bank of Uganda should initiate a joint effort between the Bank and the Uganda Bureau of Statistics to compile a Construction Index and to make the Index of Industrial Production timelier than it currently is.
- The Bank of Uganda should initiate a joint effort between the Bank, the National Social Security Fund, and the Uganda Bureau of Statistics to compile information on employment in firms contributing to the fund by sectors, the total wage bill of those firms, and number of firms.
- The Bank of Uganda should encourage the Uganda Bureau of Statistics to start compiling as many of the subcomponents of quarterly GDP accounts as currently possible in a timely manner.
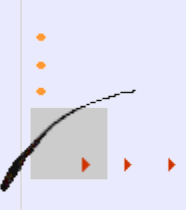
Long run objectives

- An effort should be made in overcoming obstacles related to the problem of compiling quarterly GDP.

- Research capabilities of the Real Sector Section in the Research Department should be strengthened.

- The Research Department at the Bank of Uganda should start building short and medium run forecasting models for GDP growth, inflation based on real sector data to supplement current practices.

- The Bank of Uganda should start publishing Quarterly Inflation Report to support the mission of the Bank.
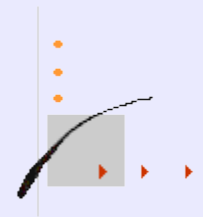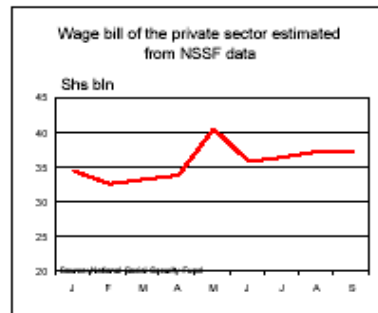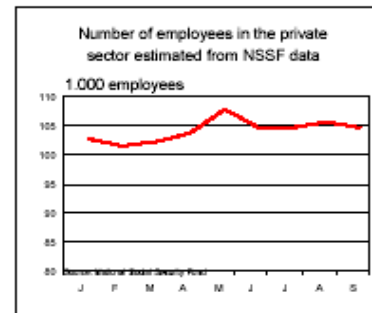
Real Sector Indicators
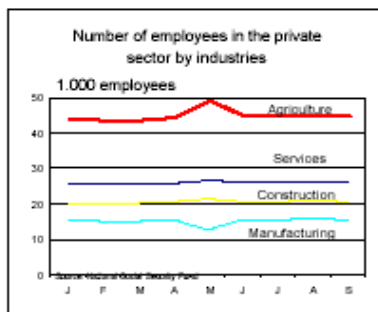
Bank of Uganda
November 2002

1. Employment and wages

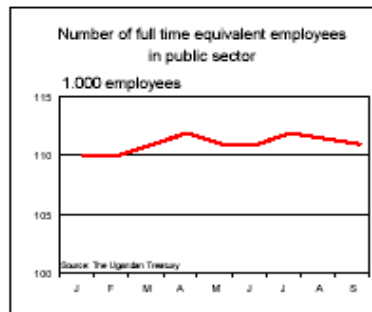**Wage bill of the private sector estimated from NSSF data**

Shs bln

Over the first nine months of 2002 the total wage bill in private sector firms, employing five employees or more, rose by 7.6%. The jump in wages in May was caused by receipts of contributions from four large firms that had not contributed before. The steady rise in the wage bill indicates that growth in the real sector is fairly constant, although it seems to have stagnated in September. Data for October will be available from the NSSF November 20th.

Number of employees in the private sector estimated from NSSF data

1.000 employees

Employment in the private sector rose by 3.000 jobs, or by 2.9% the first nine months. When compared to wage bill increases it seems that wages are increasing faster than employment, indicating a tighter supply of labour and wage drift in the real sector. Data for October will be available from the NSSF November 20th.

Number of employees in the private sector by industries
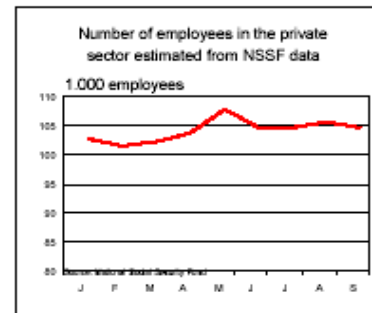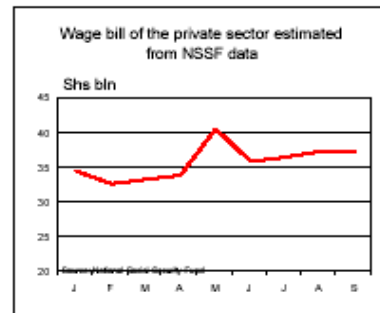
1.000 employees

The first nine months employment rose fairly steadily across all industries. The jump in May in employment in the agricultural sector reflects the four big farms that contributed to the NSSF that month. Data for October will be available from the NSSF November 20th.

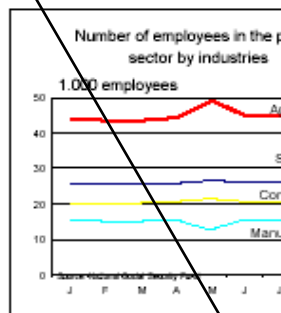**Number of full time equivalent employees in public sector**

1.000 employees

Employment in the public sector has remained farily stable during the first nine months of 2002. Figures on public sector employment in October will be available from the Treasury November 10th.

1. Employment and wages

Wage bill of the private sector estimated from NSSF data

Shs bln

Number of employees in the private sector estimated from NSSF data

1.000 employees

Over the first nine months of 2002 the total wage bill in private sector firms, employing five employees or more, rose by 7.6%. The jump in wages in May was caused by receipts of contributions from four large firms that had not contributed before. The steady rise in the wage bill indicates that growth in the real sector is fairly constant, although it seems to have stagnated in September. Data for October will be available from the NSSF November 20th.
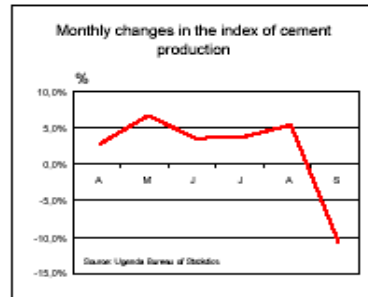
Employment in the private sector rose by 3.000 jobs, or by 2.9% the first nine months. When compared to wage bill increases it seems that wages are increasing faster than employment, indicating a tighter supply of labour and wage drift in the real sector. Data for October will be available from the

Number of employees in the private sector by industries

1.000 employees

The first nine months employment steadily across all industries. The j employment in the agricultural se four big farms that contributed to month. Data for October will be available from the NSSF November 20th.

Over the first nine months of 2002 the total wage bill in private sector firms, employing five employees or more, rose by 7.6%. The jump in wages in May was caused by receipts of contributions from four large firms that had not contributed before. The steady rise in the wage bill indicates that growth in the real sector is fairly constant, although it seems to have stagnated in September. Data for October will be available from the NSSF November 20th.
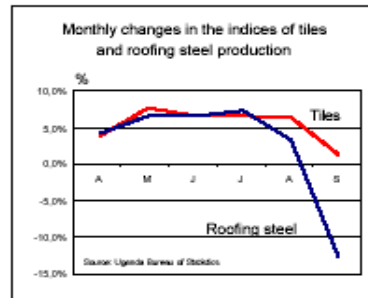
2. Construction

Monthly changes in the index of cement production

Monthly changes in the index of lime stone production

Production of cement increased by an average of 4.1% April to August, but dropped by 11% in September. This chould indicate that the construction industry is contracting. Data for October, which will be available from the UBoS November 20th, will further cast light on development in the construction industries.
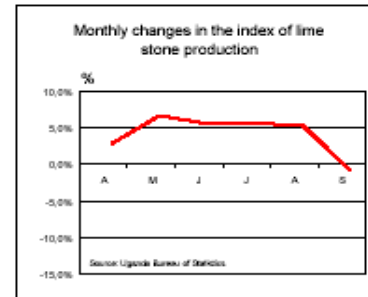
The increase in the production of limestone was fairly constant until September when production decreased by 1%. This, along with the recorded drop in cement production, indicates that the construction industry is contracting. Data for October, which will be available from the UBoS November 20th, will further cast light on development in the construction industries.

Monthly changes in the indices of tiles and roofing steel production

Monthly changes in the index of steel production

Production of roofing material increased steadily until September, when the production of tiles halted and production of roofing steel fell by 14%. This indicates that construction of less expensive housing, which uses tiles for roofing, did not contract as much as the building of more expensive housing and industrial buildings, which use more expensive roofing material. Data for October on roofing material will be available from the UBoS November 20th.
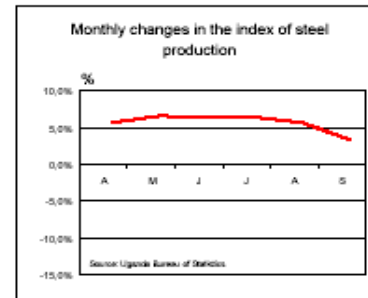
Steel production increased at a fairly constant rate until September when it slowed somewhat. Steel production is somewhat later in the construction cycle than other building material and consequently a decrease in its production might be expected in October, if the drop observed in the other construction indices will continue in October. Data for October will be available from the UBoS November 20th.

NOTE: Currently work is underway at the UBoS on compiling a construction index based on all the indexes shown above, using principal component analysis.
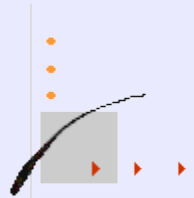
3. Agriculture

Procurements of tea and coffee
Sugar production
Exports of agricultural goods
Export prices of agricultural goods

4. Manufacturing

Index of industrial production
Subcomponents of the index of industrial production
Import of investment goods

5. Various proxies for the real sector

Telecommunication services
Electricity generation
Petroleum consumption
Diesel consumption
Import of motor vehicles

6. Expectations

Consumer confidence index
Producer confidence index
Inflation expectations

7. External sector

Real exchange rate
Imports
Exports
Capital account

8. Etc.