Macro I

Macroeconomics Basics and IMF Financial Programming

June 2026

Introduction

- Welcome
- Your instructors Anne Epaulard, Juan Pradelli
- Rules (questions in chat, Mentimeter Questions and Quizzes, Case Study)
- Slides will be available on Capacity4dev - Economics, public finance, domestic revenue mobilisation & budget support Group
- Introduction participants

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Ground Rules – Virtual Class

Our daily sessions are scheduled to last **4 hours** (30 minutes break included). Please be on time!

Please ensure you have your webcam ON during the sessions`; if not possible, switch it on when intervening ☺, it makes our sessions livelier!

Make sure to have a headphone connected to your computer, the sound will be better

Please mute yourself when not talking – but **do not hesitate to intervene** with questions, suggestions and contributions!

Keep next to you a good coffee and a bit of patience, sometimes technology is not perfect. And let colleagues and supervisor know you are on training!

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Getting to Know Each Other!

Pre-Course Questionnaire (Test-in)

Objectives

- Understand **macro concepts** in context of Low-Income Countries (LICs) and Emerging Markets (EMs)
- Analyse **macro relationships** in open economies
- Grasp **general macroeconomic analysis**
- Identify **macroeconomic imbalances**
- Explore **main macroeconomic sectors** and **interrelations**
- Learn IMF financial programming and policies (IMF FPP)
- Interpret IMF reports' tables

Introduction (1/6)
Analysing the economic situation of a country

- **The most difficult thing in macroeconomic analysis comes from the fact that everything is inter-related:**
  - For example: an increase in oil prices on international market will increase the value of oil import, increases domestic inflation, may reduce household consumption on other goods, reduce domestic production …..
- **To understand all these inter-relations, and be able to foresee the impact of a given shock on the whole economy and design and implement policies responses it is useful to:**
  - start by considering separately different sectors of the economy
  - and then look at the link between these sectors.

Introduction (2/6)
Analysing the economic situation of a country: 4 sectors

- **It is usual to consider 4 sectors that together cover the whole economy**
  - **The Real Sector** (GDP, employment, saving, investment)
  - **The External Sector** (Exchange of good and services with the rest of the world, capital flows from and to abroad, International financial position)
  - **The Monetary Sector** (The Central bank, commercial banks, other financial institution, lending and borrowing)
  - **The Government Sector** (Government revenue, government consumption, government investment, public deficit, public debt)

- **The IMF considers these 4 sectors, but so do other economists.**
  - For example, sovereign rating agencies (Standard and Poor's, Moodys, Fitch …) also start their analysis by looking at these different sectors.

Introduction (3/6)
Analysing the economic situation of a country: 4 sectors + 4 tables in IMF reports

- **In each IMF (Article IV) report, on can find 4 types of table that together cover the whole economy**
  - **The first table is called "Selected Economic Indicators": This is a summary of the most important information regarding the economy. This table is usually at the very beginning of the report**
    - **The top part of this table gives information regarding the real sector** (GDP growth, saving, investment, inflation)
    - **The rest of the table** gives some information on the other sectors (External Sector, Government Sector, Monetary sector)
  - **There are then 3 important tables, usually toward the end of the report. These tables summarize (and organize) the information regarding the 3 other sectors of the economy**
    - **One table on the External Sector (it is called the BoP for Balance of Payment).**
    - **One table on the government sector (it is called the Government Sector indicators)**
    - **One table on the Banking sector (it is called the Monetary Survey)**

Introduction (4/6)
2 Examples: Madagascar – South-Africa

- Download from the IMF website the last county report for **Madagascar (2025)** and **South Africa (2025)**

- For each report identify the different tables

Introduction (5/6)
In this course we will spend some time understanding these 4 sectors separately

REAL SECTOR

National Accounts (local currency, flows)
Private consumption
Final government consumption

Private investment
Government investment

Exports of goods and services
Imports of goods and services

GENERAL GOVERNMENT

Fiscal Accounts (GFSM2001, local currency, flows)
Revenue
Grants
Expense
  Interest payments
Operating balance
Transactions in nonfinancial assets

Net lending/borrowing
  Domestic financing (net)
    Banking system
    Nonbanking sector
  External financing (net)

EXTERNAL SECTOR

Balance of Payments (US dollars, flows)
Current account
  Exports of goods and nonfactor services
  Imports of goods and nonfactor services
  Primary income (net)
  Secondary Income (net)
    Official
    Private
Capital and financial account
    Direct investment
    Portfolio Investments
    Financial derivatives
    Other investments
Errors and omissions
Overall BOP balance
Change in reserve assets

MONETARY SECTOR

Monetary Authorities (local currency, implied flows)
Net foreign assets
Net domestic assets:
  Net claims on government
  Claims on other depository corporations
  Other items (net)
Reserve money
    Currency
    Banks reserves

Other Depository Corporations (local currency, implied flows)
Net foreign assets
Banks' reserves
Net domestic assets:
  Net claims on government
  Claims on nongovernment
  Other items (net)
Liabilities to monetary authorities
Private sector deposits

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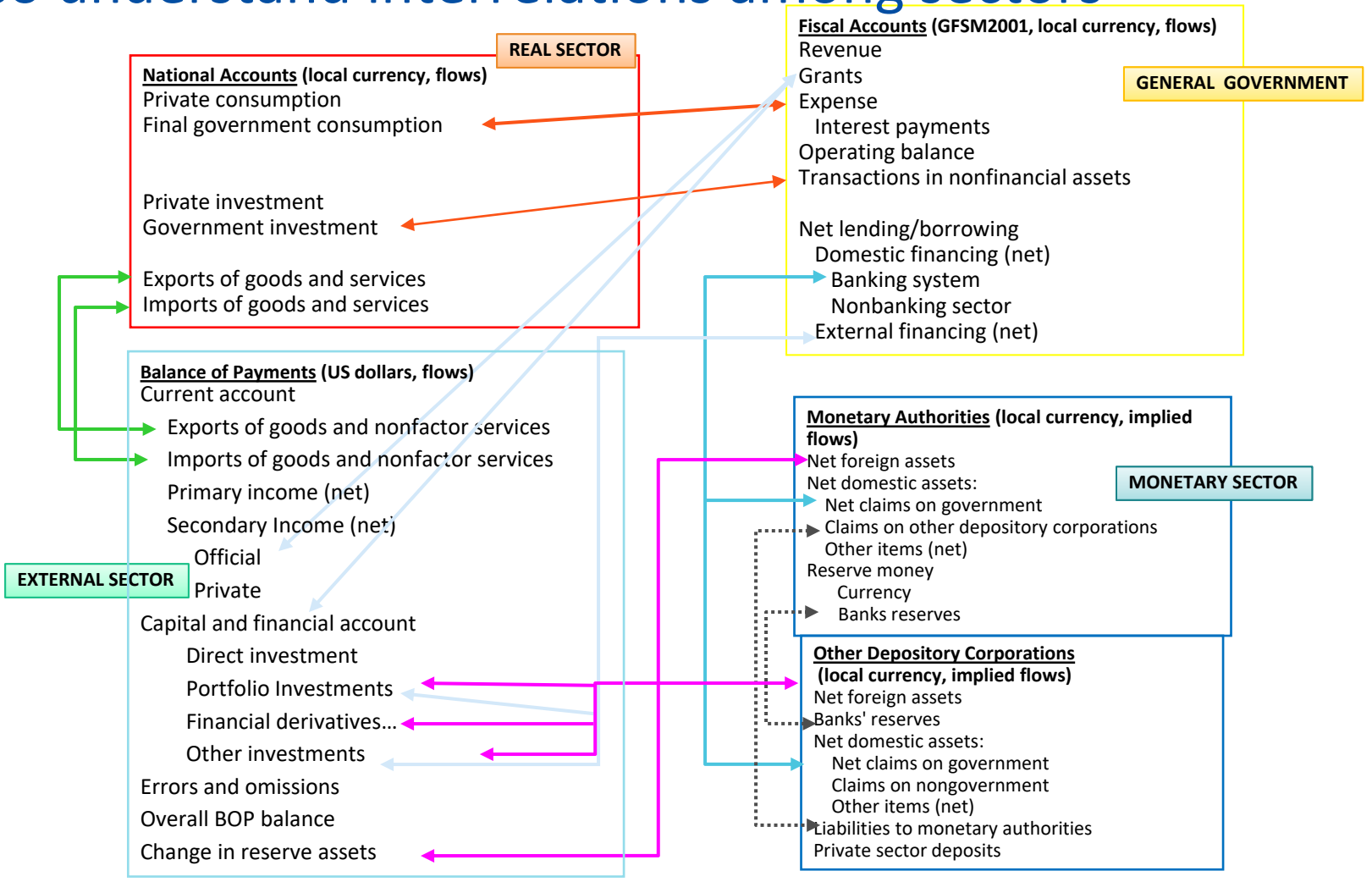
Introduction (6/6)
we will also understand interrelations among sectors



Outline

- Basic Macroeconomic concepts
- Macro building blocks in open economies and macro imbalances (the 4 sectors)
- What is the IMF FPP and main features
- IMF FPP in practice: How to read, analyze, interpret IMF Staff Reports (SR)—Case Study

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I. What is Macroeconomics?

An introduction

Name one macroeconomic policy

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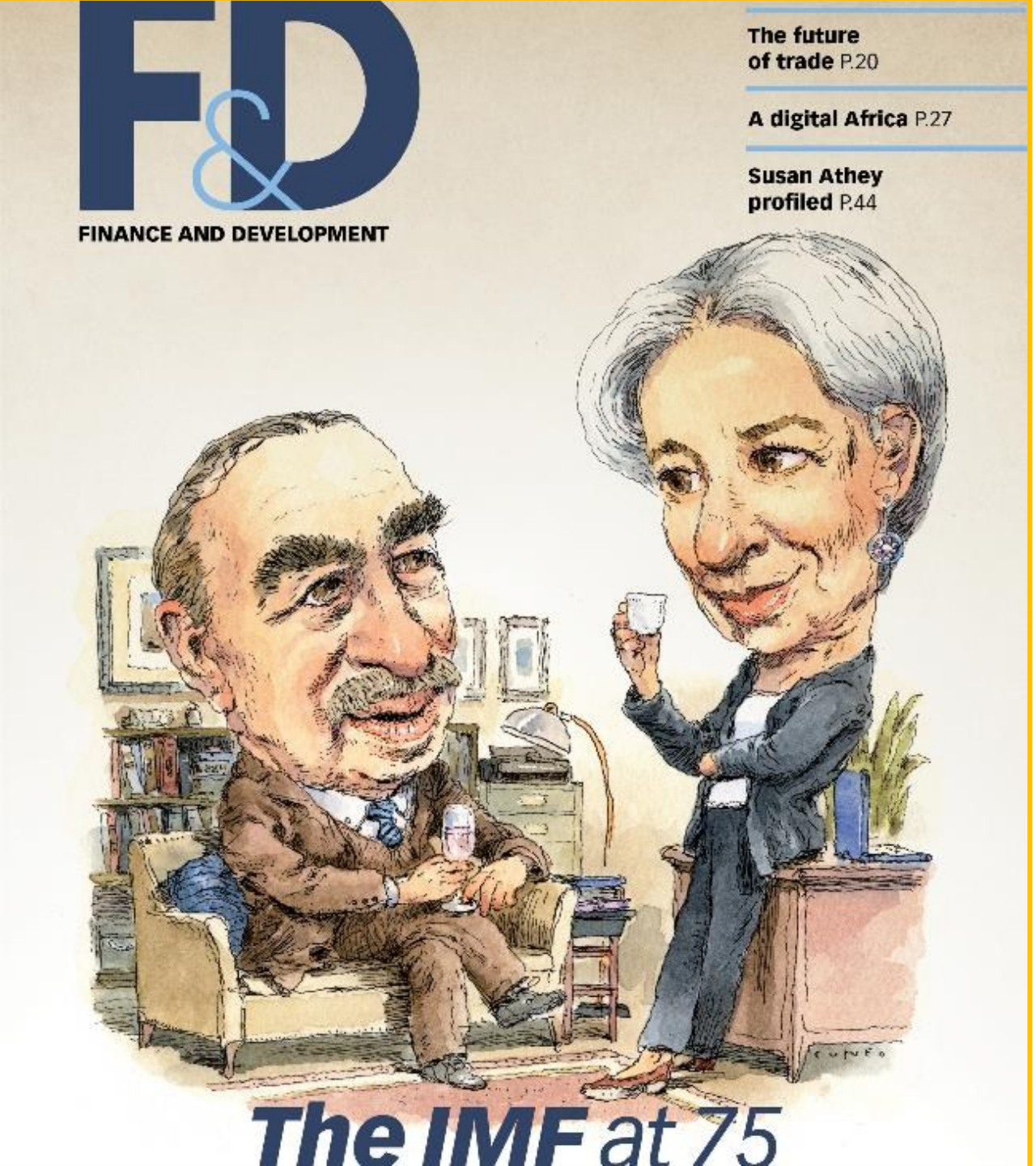
What is Macroeconomics? An Introduction

- Macroeconomics examines the **economy as a whole,** focusing on broad aggregates
- **While microeconomics** studies **individual decisions** made by firms and households, **macroeconomics** analyses **overall economic trends** rather than specific impacts on firms, workers, or regions
- Special summary measures of economic activity such as Gross Domestic Product (GDP), saving rates, or the Consumer Price Index (CPI) provide a **'big picture'** of changes and trends
- Micro and macroeconomics are closely linked, as individual decisions influence the economy's overall performance

What is Macroeconomics?

- Macroeconomics thrives on a **vast array of data** collected to comprehend the overall trends in the economy
- ***National income accounts are the backbone of modern macroeconomics,*** recording aggregate output, income, saving, consumption and investment



Historical Context

- The *Great Depression* marked a significant impetus towards modern macroeconomics
- John Maynard Keynes proposed a **new theoretical framework** to explain the Great Depression and **advocated for government policies** to counteract its effects
- The key assertion was that market economies are not smoothly self-regulating, and that **aggregate demand** plays a crucial role in economic fluctuations
- **Macroeconomic policies,** such as government spending, taxation, and monetary policy, were recognized as **critical tools** to counteract economic downturns and **stabilize the economy**
- Additionally, Keynes played a pivotal role in establishing the **IMF** and shaping post-WWII **international monetary system**

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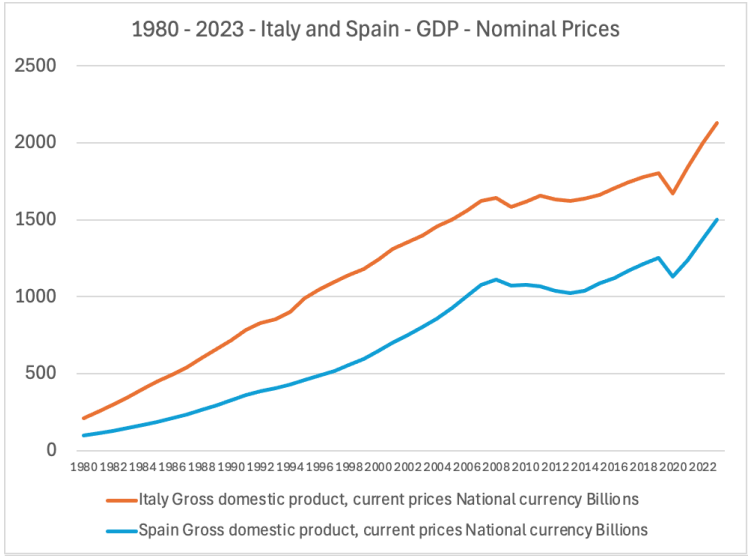
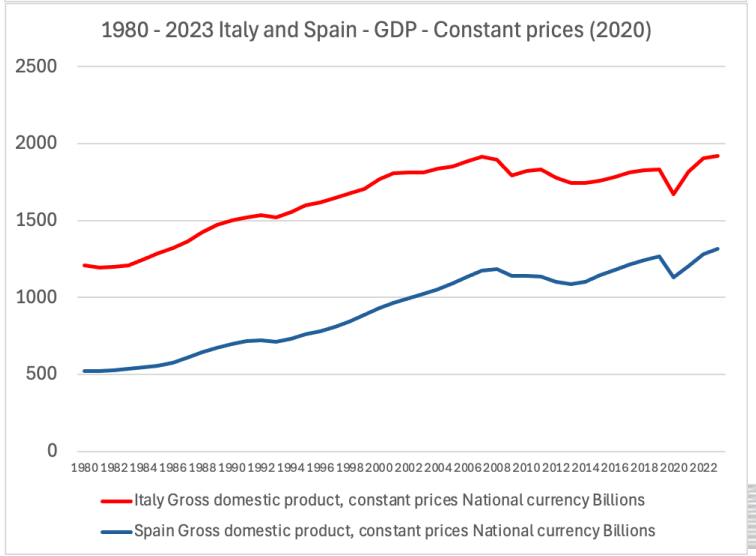
What are the Key Macroeconomics Questions?

- Macroeconomics delves into the *great questions of economic life* seeking to understand:
  - What factors contribute to a country's **economic growth** or decline?
  - How much do citizens **save** for the future?
  - Why have **prices** been rising rapidly recently?
  - What determines the **value** of the $ vs the €?
  - Why does the US **import** more goods than it exports?
- Key variables:
  - Output (Gross Domestic Product – **GDP**)
  - Unemployment rate
  - Prices (measured by inflation)
  - International trade
- Time perspectives:
  - Present economic conditions
  - **Short-run** fluctuations
  - **Long-run** economic trends

What are the Key Macro Indicators?

- The most **important single measure of production** in the economy is the gross domestic product (GDP)
- GDP measures the total value of goods and services produced within the geographic boundaries of an economy *during a specific period*
- There are two essential distinctions in GDP measurement:
  - *Nominal* GDP, which reflects production at current market prices
  - *Real GDP,* which measures the physical volume of production, adjusted for inflation
  - *When one talks about economic growth one refers to the growth rate of the Real GDP*





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What are the main sources of economic growth?

What Are the Main Sources of Economic Growth? (Long term growth)

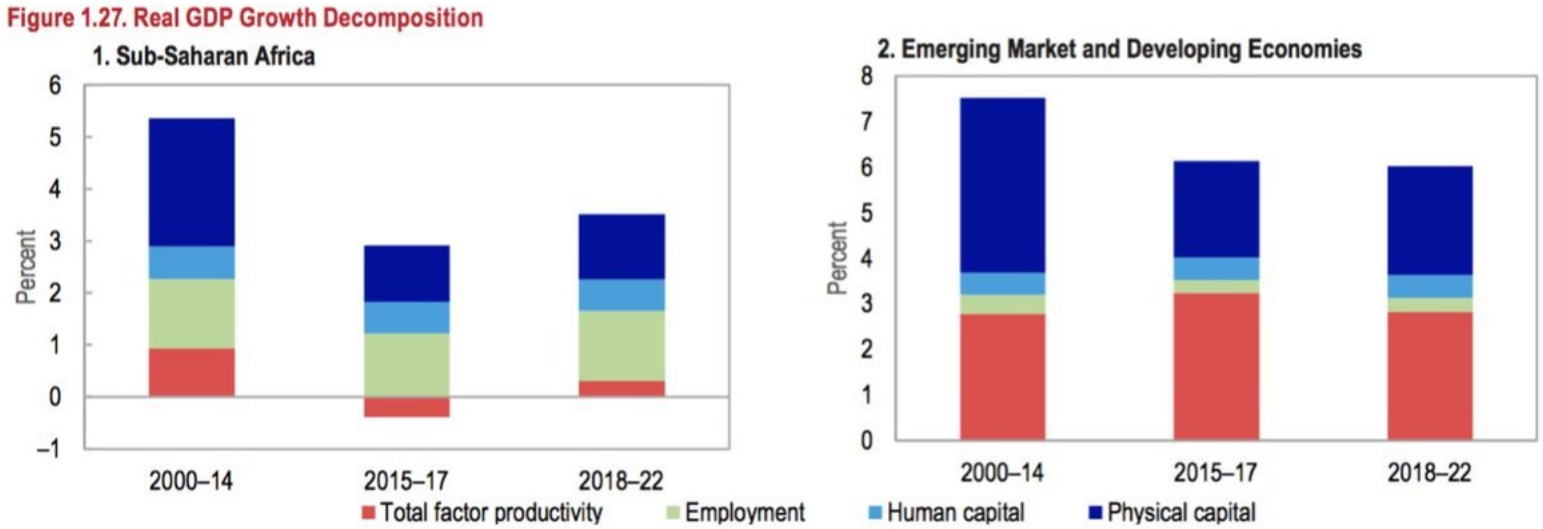
Capital (buildings, infrastructure, machines)

Total Factor Productivity (technological knowledge and efficiency)

Output (GDP)

"Human capital" (quality of labour = level of education)

Labour (hours worked, number of workers)



Sources: IMF, World Economic Outlook database; Penn World Tables; and IMF staff calculations.

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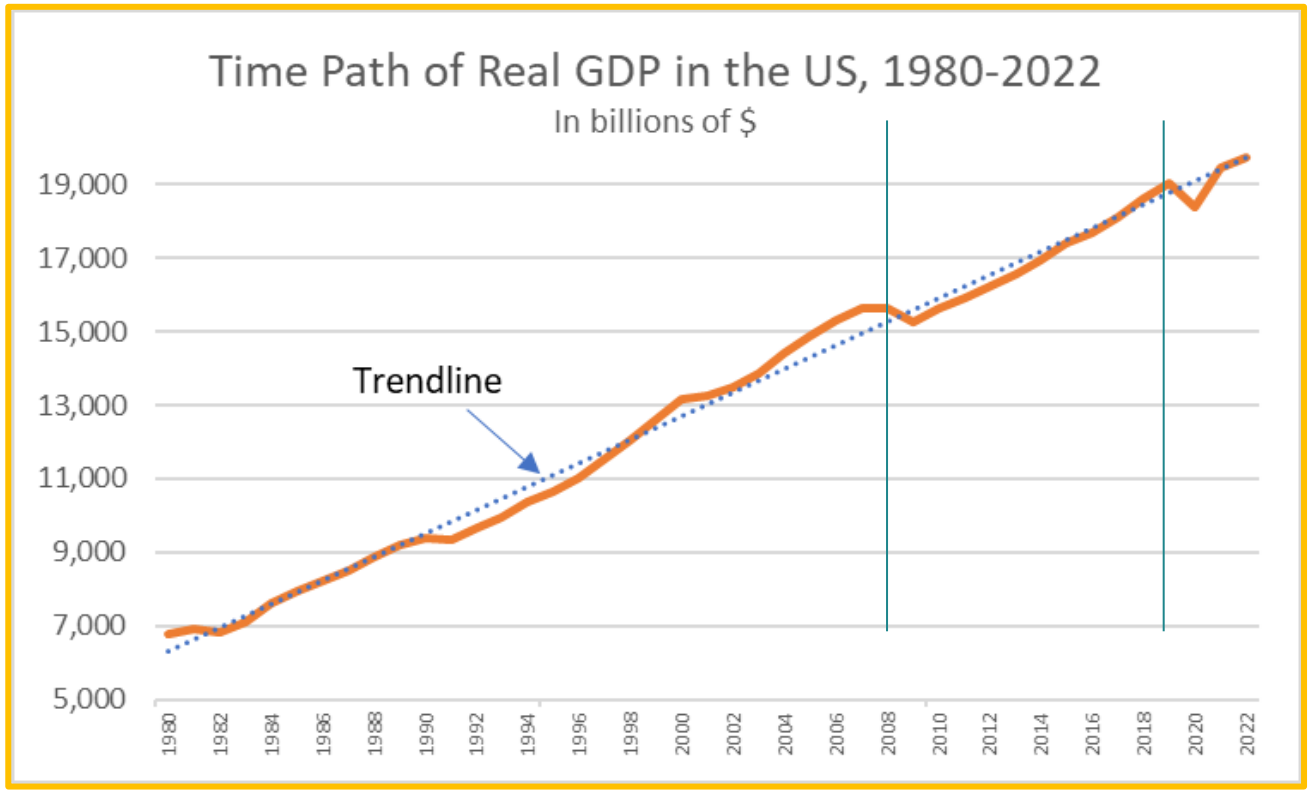
Long-Run Economic Growth

- **Catch-up** (convergence) : countries that are initially poorer tend to grow faster, while those with higher initial GDP experience slower growth
- **Human capital**: Knowledge possessed by individuals becomes an additional factor of production, and educated workers play a significant role in economic growth
- **Public infrastructure :** Well-developed infrastructure facilitates economic activities and supports growth
- **Technical innovations:** Advancements in technology drive productivity and economic growth
- **Economic environment and rule of law**: Ensuring lasting property rights is a precondition for investment and economic development
- **Openness** to trade: Engaging in international trade fosters economic growth by capitalizing on comparative advantages
- **Health**: Life expectancy and overall population health positively influence productivity and economic growth

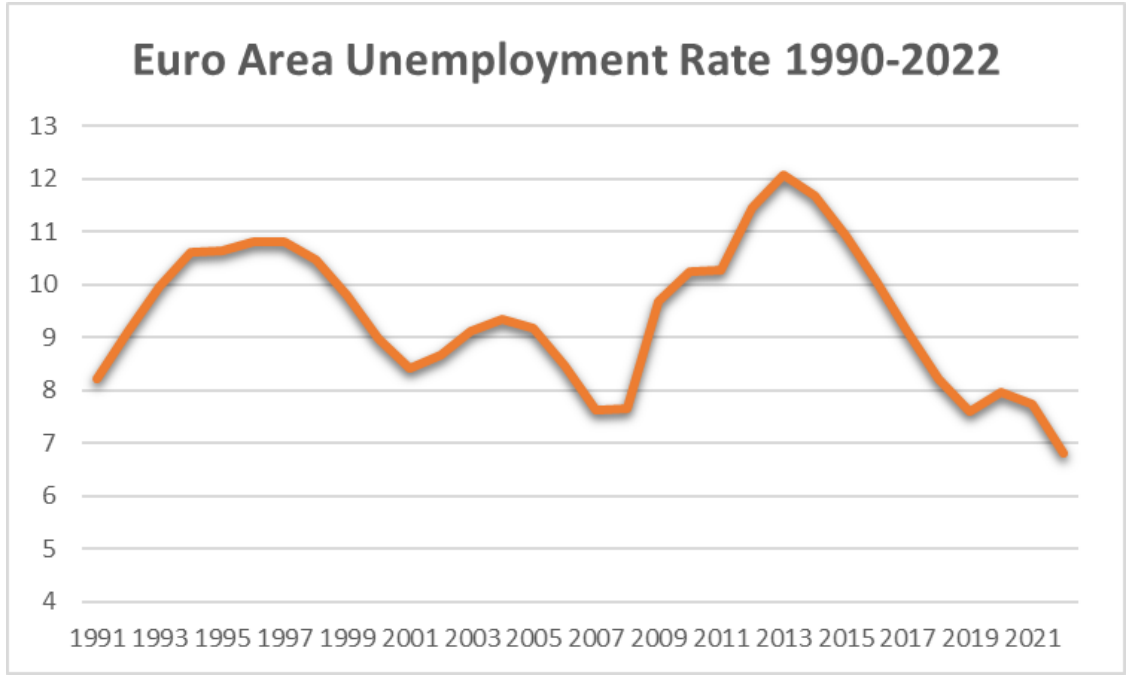
Understanding Business Cycles (and short growth)



- Macroeconomics Questions:
  - Why do business cycles occur?
  - What determines the severity of output decline in a particular cycle?
  - Are cycles caused by unexpected shocks, or predictable internal forces?
  - Can government policies smooth out or eliminate short-term economic fluctuations ?
- Business cycles consist of sustained periods of ups and downs, impacting economic activity

Understanding Unemployment

- **Definitions:**
  - Unemployment is the number of people actively seeking employment,
  - Unemployment rate is unemployment expressed as a proportion of the total labour force
- **Unemployment and *cyclical fluctuations***
  - During economic downturns or recessions, the unemployment rate tends to increase as output declines
  - Conversely, during economic upturns or recoveries, the unemployment rate decreases as economic conditions improve



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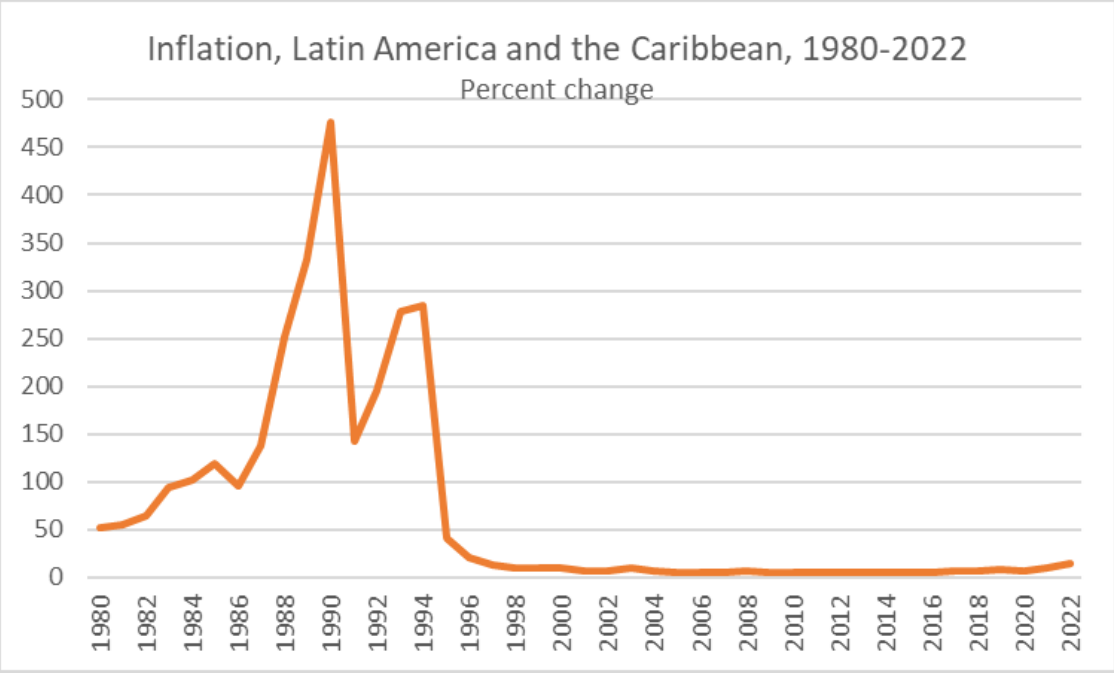
What is inflation?

Understanding Inflation



- **Definition: The inflation rate** measures the percentage change in the general price level of goods and services over time in the economy (usually from one year over the other).
- **Measurement:** The Consumer Price Index (CPI) is widely used to measure inflation, while the Harmonized Index of Consumer Prices (HICP) is used in the Euro Area (EA).
- **Core inflation** is a measure that focuses on underlying and persistent trends by excluding the prices of more volatile products like food and energy
- Hyperinflation occurs when the monthly inflation rate exceeds 50%
- Inflation has short-run and long-run implications:
  - In the short-run, inflation can influence consumer behaviour and economic decisions.
  - In the long-run, persistently high inflation can disrupt economic functioning, eroding the purchasing power of money and leading people to spend their money quickly.

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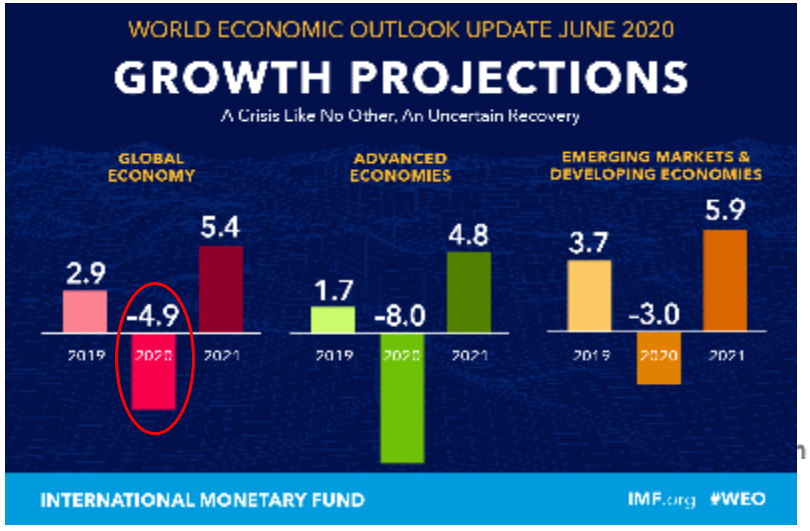
Openness

- **Characteristics of an open economy**: Engages globally in Trading goods and services and buying and selling capital assets in world financial markets
- Economic flows are recorded in the **balance of payments** (BoP) accounts
  - The trade balance measures a country's exports of goods to the **Rest of the World** (RoW) minus its imports of goods
  - A trade surplus occurs when exports exceed imports, while a trade deficit happens when imports exceed exports
- One may also consider Exports o goods **and** services and Imports of goods **and** services (also recorded in the BoP)
- **Usually measured as** = (Exports of good and services + Imports of good and services)/GDP
- **Benefits and Risks:** Openness fosters economic growth compared to relatively closed ones but exposes the economy to external shocks and fluctuations, making it vulnerable to changes in global economic conditions

Macroeconomic Forecasting and Analysis

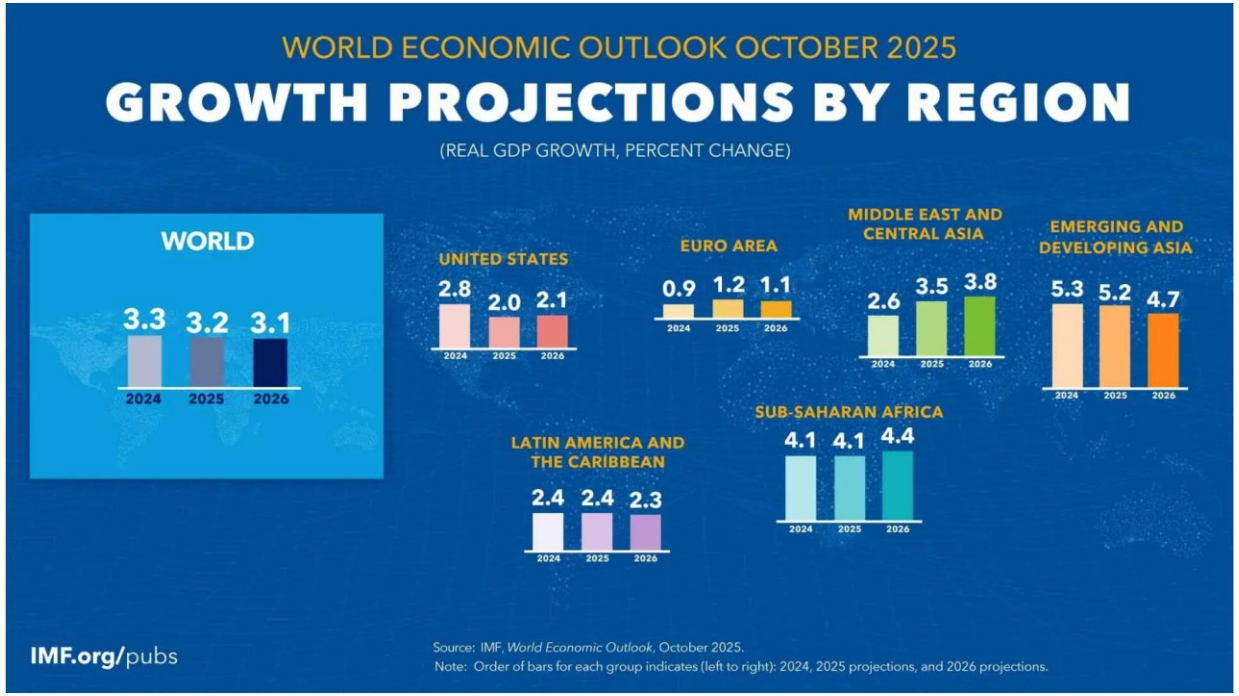
- Macroeconomic forecasting and analysis serve as essential tools for both the private sector and public policymaking
- Forecasting the macroeconomy is **inherently difficult** due to various complexities and uncertainties
- Forecasts are based on provisional information, which becomes more precise only with time as more data becomes available
- Rapid political changes can occur unexpectedly and have the potential to disrupt the economic environment, adding challenges to accurate forecasting



IMF forecast for 2025 2026

- **Growth Projection**: 3.2% (2025) and 3.1% (2026)
- **Inflation Outlook**: Inflation is expected to decline to 4.2% globally in 2025 and to 3.7% percent in 2026.
- **Risks & Challenges**:

Policy uncertainty could dampen consumption and investment.
Protectionist measures could suppress investment, disrupt supply chains, and stifle productivity growth,
Restrictive immigration policies, could reduce growth, especially in economies facing aging populations and skill shortages.
An abrupt repricing of tech stocks could end the AI investment boom.



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What is Macroeconomic Stability?

- **Definition: Macroeconomic Stabilized is characterized** by **internal** and **external** balance in the economy
- **Internal balance:** (1) low and stable inflation + (2) low unemployment rate (or full employment) or stable – and strong enough – economic growth
- **External balance:** the Current Account (CA) can be financed in an orderly manner
- **Sources of instability :**
  - **Exogenous shocks**, such as terms of trade fluctuations, natural disasters, and reversals in capital flows, impacting countries' economic performance. For ex. In LICs with narrow export base centred on one or two key commodities, shock of world prices (cocoa, gold, copper…)
  - **Inappropriate policies,** particularly poor macroeconomic management, can lead to imbalances in aggregate demand, external balance of payments, and domestic price levels
- **Policy Response to instability** : Swift and effective responses crucial to ensure sustainable economic growth and reduces vulnerability to economic fluctuations.
- **Economic crises can** result from inadequate policy responses to shocks, or just from inadequate policies (even without shock)

Macroeconomic stability in Madagascar

- Go to the « Selected economic indicators » table for Madagascar (Page 37 of the report = page 43 of the pdf file)

- **Internal balance:**
  - Would you say that inflation is low and stable?
  - Would you say that unemployment is low (or growth stable and strong enough)?

- **External balance:** …… we will look at that after learning more about the BoP

Macroeconomic stability in South-Africa

- Go to the « Selected economic indicators » table for South-Africa (Page 43 of the report = page 47 of the pdf file)

- **Internal balance:**
  - Would you say that inflation is low and stable?
  - Would you say that unemployment is low (or growth stable and strong enough)?

- **External balance:** …… we will look at that after learning more about the BoP

Macroeconomic Policies—Demand and Supply Sides

- Macroeconomics categorizes events (and policies) into two main areas:

- **Demand side:** Relates to spending **decisions made by economic agents** such as households, firms, and government agencies, both domestically and internationally
  - Demand side management is usually done with short term policies (policies that have an impact on the short run)
  - **Aggregate Demand Management Policies:** Governments can offset or smooth out fluctuations in total spending to stabilize the economy

- **Supply side:** Relates to the **productive potential of the economy,** encompassing factors such as households' choice of hours worked, labour productivity, and the efficiency of resources allocation that generates a nation's output
  - Supply side policies usually take more time to have an impact on the economy

What Are Macroeconomic Policy Instruments?

- **Instruments in Macroeconomics:** Demand Management (fiscal, monetary and macro-prudential policies) and supply-side policies
  - ❖ **Fiscal policy:** manipulates government expenditures or taxes to influence the volume of national spending
  - ❖ **Monetary policy:** directly affects interest and exchange rates, as well as conditions in financial markets
  - ❖ **Macro-prudential policies :** allow to tame the credit cycle to ensure financial stability
- **Supply side policies:** represent the government's effort to increase the overall efficiency of the economy (usually structural reforms)
- **Goals:** Achieve stable economic growth and maintain price stability.

QUESTIONS?

Quiz 1

Let’s go to Menti!

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II. Real Sector

What is GDP?

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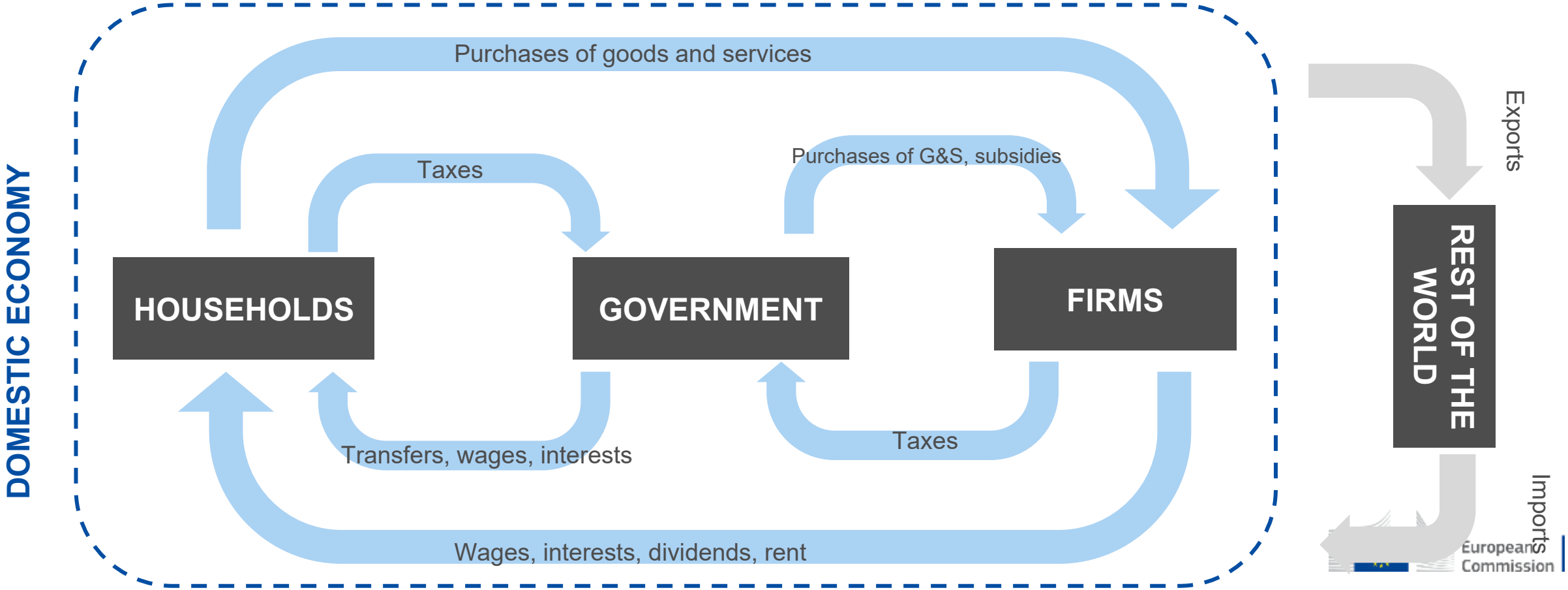
The Real Sector

REAL SECTOR

WHAT DOES IT CONSIST OF? Production, consumption, investment, foreign trade, and employment of an economy

WHAT DOES IT COMPRISE? Households, government, financial and non-financial institutions (e.g., companies), and the rest of the world (non-residents)



The Gross Domestic Product (GDP)

The value of the output in an economy

GROSS DOMESTIC PRODUCT (GDP)

- Is the **macroeconomic aggregate** that measures the **monetary value** of the production in an economy
  - Why monetary value?: To add-up different goods & services
- A widely-used indicator of **economic activity and welfare**
- It allows **comparisons** across countries and time

GROSS DOMESTIC PRODUCT (GDP) = How much is it **produced** = How much is it **spent** = How much is it **earned**

GDP **is the monetary value of the final goods and services** produced in an economy throughout a year.

Intermediate goods and services are not included in the GDP to avoid **double counting** of value.

GDP is often **measured** by the **sum of value-added** in each stage of production throughout the 'value chain' in the economy.

GDP is a 'monetary value' that combines quantities and prices; therefore it can be measured in **current** or **constant** prices.

How is GDP measured? Three approaches

1. **Expenditure Approach** (**demand side**) : it measures the sum of all final demands (purchases) for goods and services (G&S) in the economy at market prices, including private consumption by households (Cp), private investment (Ip), government spending in consumption and investment (Cg + Ig), exports (X), minus imports (M): GDP = Cp + Ip + Cg + Ig + X - M

2. **Production Approach** (**supply side**): It measures the sum of value added across sectors (primary, secondary, tertiary) of the economy, representing the difference between value of output and value of intermediate G&S used in production (*intuitively, invoicing to customers minus invoicing from suppliers*): GDP = Sum of VA across sectors

3. **Income Approach**: It adds up incomes of all factors (labor and capital) that contribute to the production process (*intuitively, the value added is used to fund salaries, profits, interests, direct taxes, etc.)*: GDP = Sum of Incomes generated

The Gross Domestic Product (GDP)

The final output approach and the value-added approach

TOTAL ECONOMY

Example

- The economy produces wheat, flour and bread
- Wheat is used to produce flour, and flour to produce bread
- Wheat is sold at $ 100, Flour at $ 200 and Bread at $ 250 (‘current prices’)

		Inputs A	Output B	Value-added B-A
Farmer	Wheat	0	100	**100**
Mill	Flour	100	200	**100**
Bakery	Bread	200	250	**50**
GDP		**300**	**550**	**250**

WHEAT $ 100 **FLOUR $ 200** **BREAD $ 250**

Intermediate goods **Final goods**

GDP is the sum of the value of final goods (bread) = **$ 250**

GDP is computed by adding up the value-added in each stage (wheat, flour, bread) = **$ 250**

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Table 2. Madagascar: National Accounts, 2018-27

	2018	2019	2020	2021			2022			2023	2024	2025	2026	2027
	Actuals	Est.	Est.	Program approval	1st review	Est.	Program approval	1st review	Proj.	Projections				
	(Percent change)													
Real supply side growth														
Primary sector	0.4	5.9	0.6	2.6	3.4	2.3	3.0	4.1	3.3	3.5	3.5	3.6	3.6	3.6
of which: Agriculture	3.2	7.6	0.6	3.0	4.0	2.5	3.5	5.0	3.9	4.0	4.0	4.0	4.0	4.0
Secondary sector	2.0	6.8	-29.5	4.9	9.6	16.6	9.5	9.3	8.2	7.6	7.5	7.0	6.6	6.5
of which:														
Manufacturing	3.4	8.2	-15.7	2.0	16.4	29.8	4.5	6.6	6.0	7.1	7.1	6.9	6.7	6.4
Energy	4.4	3.7	-0.1	5.0	3.3	2.2	5.8	5.0	2.2	3.9	4.8	4.7	4.7	4.4
Extractive industry	-0.8	9.9	-49.3	8.1	21.2	40.1	19.3	17.3	15.7	12.3	11.3	10.3	9.4	9.2
Tertiary sector	0.8	5.0	-6.5	2.8	2.6	3.0	4.3	5.0	3.9	5.2	5.3	5.2	4.9	4.8
of which:														
Trade	2.5	2.3	-2.7	1.0	3.4	3.0	1.9	3.9	3.7	3.9	3.5	3.3	3.2	2.6
Services	-0.4	2.9	-8.1	2.5	2.0	2.0	4.3	2.5	2.0	2.5	2.6	2.7	2.9	2.9
Transportation	-3.6	4.8	-6.4	1.5	4.8	8.1	3.5	6.8	6.0	8.2	8.2	8.1	7.9	7.9
Indirect taxes	24.0	-1.1	13.3	5.4	2.9	2.9	5.7	6.4	3.9	8.0	7.4	6.9	6.3	5.8
Real GDP at market prices	3.2	4.4	-7.1	3.2	3.5	4.3	5.0	5.4	4.2	5.2	5.2	5.1	5.0	5.0
	(Percent of GDP)													
Nominal demand side composition														
Resource balance	-3.5	-4.7	-9.0	-8.8	-10.2	-10.1	-6.9	-8.1	-8.8	-6.7	-6.7	-6.0	-5.0	-4.8
Imports of goods and nonfactor services	35.1	33.4	28.7	31.8	33.0	33.6	33.2	33.4	35.2	33.6	34.1	32.9	32.2	31.7
Exports of goods and nonfactor services	31.7	28.7	19.7	23.1	22.9	23.5	26.3	25.3	26.4	27.0	27.4	26.9	27.2	26.9
Current account balance (including grants) = (S-I)	0.7	-2.3	-5.4	-5.0	-5.5	-4.9	-4.4	-5.0	-5.4	-5.1	-5.1	-4.2	-3.4	-3.2
Consumption	85.6	86.0	95.1	91.4	93.2	94.9	87.3	88.4	89.0	85.9	84.1	82.9	80.8	80.9
Government	14.8	15.1	15.2	16.9	18.0	14.0	15.0	16.6	17.8	15.8	15.8	15.7	15.8	15.9
Private	70.8	70.9	80.0	74.5	75.3	80.9	72.2	71.8	71.2	70.0	68.2	67.2	65.0	64.9
Investment (I)	19.5	18.3	15.0	18.4	16.6	14.9	20.6	19.3	19.4	20.4	22.2	22.7	23.8	23.5
Government	5.0	5.8	6.8	7.6	7.4	5.2	8.6	9.2	9.3	9.0	9.5	8.9	8.9	8.4
Private	14.5	12.5	8.2	10.7	9.3	9.6	12.1	10.2	10.2	11.4	12.7	13.8	14.9	15.1
of which: foreign direct investment	3.6	2.6	1.9	2.2	1.5	1.7	2.4	1.9	1.7	1.9	2.3	2.3	2.4	2.5
National savings (S)	19.9	17.5	8.2	13.4	11.2	9.9	16.2	14.3	14.0	15.3	17.1	18.5	20.4	20.4
Government	2.9	3.7	2.1	1.0	0.4	1.7	3.0	2.5	2.1	3.4	4.0	4.0	4.3	4.2
Private	17.0	13.8	6.1	12.4	10.8	8.2	13.2	11.8	12.0	11.9	13.1	14.4	16.1	16.2
Memoranda items:	(Billions of Ariary)													
Nominal GDP (at market prices)	45,886	51,035	49,453	57,024	54,324	54,706	63,300	60,744	62,177	70,846	79,569	88,915	98,716	108,922

Sources: Malagasy Authorities; and IMF staff estimates and projections.

Madagascar Country Report - National Accounts

Supply side

- Production sectors: Focus on the sectors that generate goods and services, understanding the structure of production in the country

Demand side

- Expenditures C, I, X, M: Analyze how goods and services are utilized through consumption, investment, exports, and imports, understanding the structure of aggregate demand in the country

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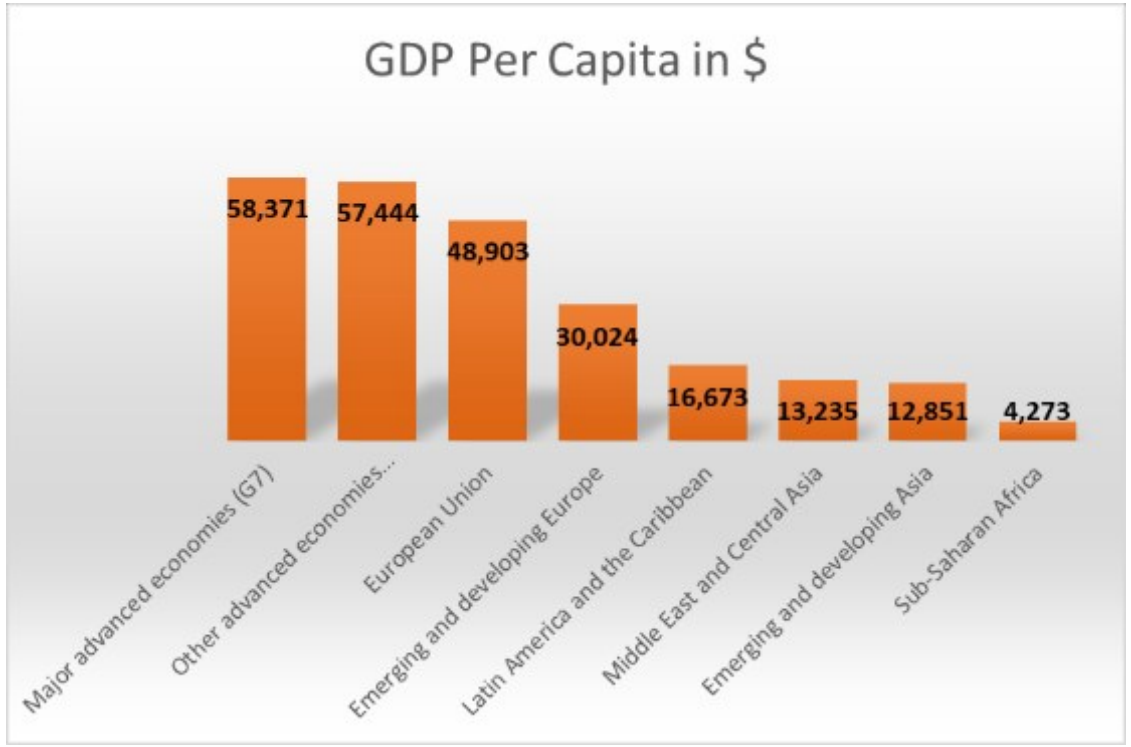
Key Issues and Problems Measuring GDP

- Importance of GDP: Crucial for financial programming and conditionality, influencing key ratios (e.g., fiscal balance/GDP, CAB/GDP, Debt/GDP)
- Challenges in Measurement:
  - Boundaries of production: Difficulty in capturing all economic activities, market vs. non-market production
  - Production for self-subsistence: Limitations in accounting for subsistence activities
  - Women's work and informal sector: Unpaid domestic work and informal economic activities are often overlooked
  - Black market transactions: Informal and illegal activities pose measurement difficulties
- Other Concerns:
  - Revisions, timeliness, and data collection costs
  - Exclusion of externalities like environmental impacts
  - Limited reflection of quality improvements in goods (e.g., technology advancements)

Measuring Economic Development Across Countries GDP per Capita

- GDP per capita is a widely used measure for comparing economic development across countries.
- Higher GDP per capita in advanced economies is often associated with higher economic well-being, but it may not fully capture actual income, overlooks non-market activities, and ignores income inequality.



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Measuring Economic Growth in a Country Nominal vs Real GDP

- To understand changes in GDP, it is essential to distinguish between nominal and real GDP
- Nominal GDP:
  - Measures total production value at current prices
- Real GDP:
  - Isolates changes in GDP that reflect changes in quantities versus prices
  - Calculated using the formula: Real GDP = Nominal GDP ÷ GDP Price Deflator
- The use of real GDP helps account for the impact of price changes and provides a more accurate measure of economic growth

The Gross Domestic Product (GDP)

Nominal and real GDP

Example

- The economy produces apples
- In the year 1, the economy produces 5 apples, sold at $ 1 each
- In the year 2, the economy produces 4 apples, sold at $ 1.5 each

Accounts at current prices

TOTAL ECONOMY

	Production	Price	GDP
Year 1	5	1.0	**5**
Year 2	4	1.5	**6**
YoY growth %			**20%**

Nominal GDP calculated using the prices of each year; thus, y-o-y growth is +20%.

Accounts at constant prices

TOTAL ECONOMY

	Production	Price	GDP
Year 1	5	1.0	**5**
Year 2	4	1.0	**4**
YoY growth %			**-20%**

Constant GDP (or Real GDP) calculated using the prices of the base year #1; thus, y-o-y growth is -20%.

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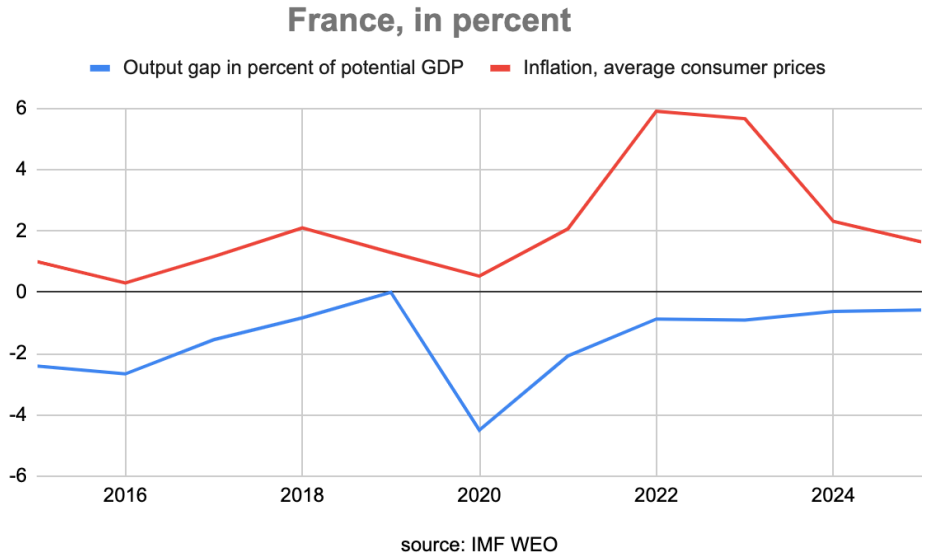
Measuring Economic Cycle and Slack Actual vs Potential GDP

- Potential output (GDP) is the maximum efficient production level of an economy
- Output gap is the difference between actual GDP and potential GDP
- Negative output gap indicates spare capacity due to weak demand, potentially causing deflation
- Positive output gap occurs when actual output exceeds capacity, leading to inflationary pressures
- In summary, the output gap reflects the economy's efficiency and can signal potential inflation or deflation risks



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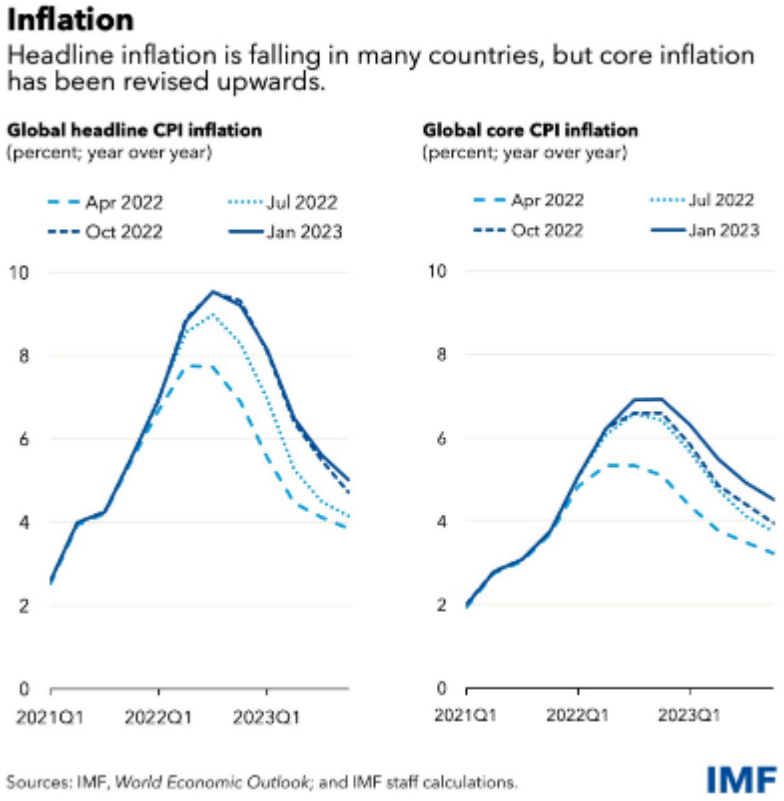
Inflation

=> Sustained increase in general level of prices of goods and services in the economy

- CPI most widely used
- Other measures (GDF deflator, WPI, PPI…)
- Used to calculate real variables such as:
  - ➢ Real exchange rate (more later)
  - ➢ Real return (real interest rate)
  - ➢ Real wages



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Inflation - GDP Deflator vs CPI

Inflation is the sustained increase in the general level of prices in an economy. Two measures used are:

- GDP Deflator:
  - Measures the overall price level for goods and services in the GDP
  - Used for real GDP and economic growth analysis
- Consumer Price Index (CPI):
  - Tracks price changes of a basket of household goods and services
  - Used to gauge changes in the cost of living
- Both measures provide insights into inflation trends, but they focus on different aspects and may yield slightly different inflation rates.

Inflation and Real variables

- Inflation, as measured by CPI, impacts real variables:
- Real Wages:
  - Nominal wages represent income/salary at current prices.
  - Real wages consider purchasing power by adjusting for inflation.
- Real Interest Rate:
  - Nominal interest rate is the cost of borrowing or lending without considering inflation.
  - Real interest rate accounts for inflation's impact on borrowing costs and the value of debt.

Transitioning from Real Sector to External Sector

- $Y = C + I + (X-M)$

Trade Balance in goods and services

- CA (Current Account) = Ydom = Ynat + Rx ; Sdom = Ydom – C ; Snat = (Ydom – Rx) – C
- From NA identities:
- Sdom = Ydom – C = I + (X-M) and Snat = Ydom – Rx – C = I + ~~(X-M-Rx)~~

Current Account Balance

If I > Snat => Current Account Deficit, then the country is 'borrowing' from RoW or 'depleting' external assets

If Snat > I => Current Account Deficit, then the country is 'lending' to RoW or 'accumulating' external assets

Investment, Saving and the Current Account in Madagascar and South Africa

Check that the Current Account Balance (in % of GDP) is equal to Saving (in % of GDP) – Investment (in % of GDP)

$$CA = S - I$$

For South-Africa (« Selected economic indicators » table for South-Africa (Page 43 of the report = page 47 of the pdf file)).

For Madagascar (« Selected economic indicators » table for Madagascar (Page 37 of the report = page 43 of the pdf file)).

QUESTIONS?

III. External Sector

Balance of Payments (BoP)

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Mentimeter

How would you define the Balance of Payments (BoP)?

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What is the BoP? Principles of Accounting

Records all transactions between a country and the ‘rest of the world’ during a **period of time**

BoP is reported in domestic currency or foreign currency (often in US$)

Residency is determined based on 'economic interest' rather than nationality or passport

BoP Recording of Transactions

Real Transactions

(G&S, incomes, transfers)

- **Current account**
  - Goods
  - Services (travel and transportation, etc.)
  - Income (compensation of employees, investment income, interests on external debt)
  - Current transfers (donations, remittances)

Financial Transactions

(transactions in real assets; creation and repayment of financial claims and liabilities)

- **Capital and Financial Account**
  - Capital account (non-produced assets like land, copyrights)
  - Direct investments (greenfield investment, acquisition of existing companies)
  - Portfolio investments
  - Other investments (external loans, credits)
  - Reserve assets

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Double-Entry Accounting

Credits	Debits
Exports of G&S	Imports of G&S
Donations received	Donations made
Incurrence of financial liabilities	Repayment of financial liabilities
FDI inwards	FDI outwards

The Current Account (CA)

Current Account Balance =

Balance of Goods and Services =

Total Credit (Exports) –

Total Debt (imports) +

+ *Primary income* (compensation of employees, direct and portfolio investment, incl. interests on public debt)

+ *Secondary income* (personal transfers)

Most important item

Adds to the balance of *goods and services* the balance of unilateral transfers, payments not related to commercial or financial transactions (current transfers, foreign aid, payments to/from the EU budget, remittances)

The Capital & Financial Account (FA)

Financial Account =

Direct investment

+ Portfolio investment

+ Financial derivatives

+ Other investment

+ Reserve assets

- Credits (+)
  - Incurrence of liabilities to the world
  - FDI inwards
  - Disposal of gold and claims on the world
- Debits (-)
  - Repayment of liabilities to the world
  - FDI outwards
  - Acquisition of gold and claims on the world

Reserve Assets

- Available for use in **funding payments imbalances**, and meeting other financial needs
- Reserves assets consist of **assets** that are:
  1. under the **control of the monetary authorities** (Central bank)
  2. readily **available**
  3. usable for direct financing of payments imbalances
- Reserves
  - Monetary gold
  - SDRs
  - Reserve position in the IMF
  - Foreign exchange assets (currency, deposits, and securities)
  - Other assets

Errors and Omissions

- In theory, BOP implies sum of credits = sum of debits
- In practice, this equality is not met because of (i) different data sources utilized to compile BOP (customs, banks, companies), (ii) unobservable transactions (e.g., use of foreign currency ‘under the mattress’), (iii) capacity to collect data.
- Errors and Omissions ‘restore’ the BOP equality, and are calculated as the residual necessary to meet it.

BoP Presentation (I) 'Accounting'

Table 2. Namibia: Balance of Payments, 2018–27[1/]

(US$ millions, unless otherwise indicated)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
				Prel.	Proj	Proj	Proj	Proj	Proj	Proj
Current account	-455	-210	304	-1,179	-1,187	-776	-757	-727	-600	-585
Trade balance	-1,544	-1,302	-956	-1,946	-1,884	-1,734	-1,732	-1,701	-1,653	-1,683
Exports, f.o.b.	4,198	3,879	3,140	3,585	4,162	4,656	4,952	5,128	5,387	5,643
Of which:										
Diamonds	832	648	429	566	823	941	1,033	1,086	1,141	1,198
Other minerals	1,117	1,136	1,203	1,298	1,416	1,654	1,810	1,892	1,968	2,052
Other	2,249	2,095	1,508	1,721	1,922	2,061	2,108	2,150	2,278	2,393
Imports, f.o.b.	-5,742	-5,182	-4,096	-5,530	-6,046	-6,391	-6,684	-6,829	-7,040	-7,326
of which:										
Non oil imports	-4,839	-4,300	-3,532	-4,693	-4,827	-5,295	-5,629	-5,799	-6,025	-6,318
Food imports	-545	-617	-516	-935	-1,177	-1,175	-1,207	-1,209	-1,245	-1,294
Oil imports	-903	-882	-564	-837	-1,219	-1,095	-1,055	-1,029	-1,014	-1,008
Services (net)	178	82	-64	-177	-9	50	43	62	69	68
Transportation	-35	-27	-60	-130	-141	-149	-150	-153	-159	-166
Travel	327	242	45	78	260	289	305	323	320	340
Other services	-113	-134	-48	-124	-128	-90	-113	-107	-91	-107
Income (net)	-496	-300	-37	-236	-253	-261	-439	-511	-490	-512
Compensation of employees	-1	0	-5	-9	-5	-6	-7	-6	-6	-6
Investment income	-496	-300	-32	-227	-248	-255	-432	-505	-483	-505
Current transfers	1,408	1,310	1,359	1,179	959	1,170	1,371	1,423	1,473	1,541
Official transfers	1,357	1,292	1,314	1,124	904	1,110	1,309	1,357	1,404	1,469
Of which: SACU receipts	1,354	1,283	1,301	1,125	890	1,094	1,299	1,344	1,391	1,457
Other transfers	51	19	45	55	56	59	63	66	69	72
Capital and financial account	-493	90	144	-1,367	-1,089	-1,047	-995	-1,011	-884	-807
Capital account	-131	-105	-101	-137	-121	-135	-145	-148	-157	-165
Financial Account	-362	195	244	-1,229	-968	-912	-850	-863	-727	-643
Direct Investment	-110	188	208	-525	-612	-520	-436	-436	-340	-264
Portfolio Investment	230	125	-58	-468	-181	-205	-211	-222	-193	-168
Other Investment	-482	-119	95	-236	-175	-187	-203	-205	-193	-210
Errors and Omissions	-91	224	-66	47	...	...	...	...	...	...
Overall Balance	-52	-76	160	187	-98	272	238	285	284	222

a) Current account
   a) Trade balance
   b) Services and income
b) Capital account
c) Financial account
   a) Direct investments
   b) Portfolio investments
   c) Other investments
d) Errors and omissions
e) Overall Balance (= a+b+c+d) (to be related to change in reserve assets)

BoP Presentation (II) 'Analytical'

- The aim of the analytical presentation is to focus on the management of international *reserves* and other '*financing*' items
- It draws the line between ways monetary authorities finance transactions (or what is aka '*below the line*') and other items (above the line)
- and consists mostly of:
  - **Reserves** assets (Gold, fx…)
  - **Loans** and credit from the IMF
  - **Exceptional financing transactions** (debt forgiveness, debt rescheduling/refinancing, arrears, borrowing for BoP support)

a) Current account
   a) Trade balance on G&S
   b) Primary and secondary income
b) Capital account
c) Financial account
   a) Direct investment
   b) Portfolio investment
   c) Financial derivatives
   d) Other investments
d) Errors and omissions
e) Overall Balance (= a+b+c+d)

Above the line

Total Financing: Reserves and related items
- Reserve assets
- IMF credit and Loans
- Exceptional Financing

Below the line

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CA and Link with National Accounts

- GDP = C + G + I + (X – M)
- (X-M = balance on G&S in the BoP)
- CA = Y – (C + I + G)
- C + I + G = A or referred as **absorption** or total domestic spending on G&S, both domestic and foreign by households, firms and the government in excess of income (GDP) overspending.
- Signals whether the country is a net borrower or a net lender
- When a country earns more that it spends (CA > 0) it is a **net lender** via a vis the RoW.
- Country running a CA deficit spends more than it earns and must match the difference by borrowing abroad, country is a **net borrower**
- Improvement in a country's CA requires that resources must be released through a fall in domestic absorption (i.e., a reduction in expenditure relative to income)

Relation between CA and FA

- Basic method of BoP accounting takes advantage of the fact that trade flows and financial flows are two sides of each transaction!
- But not just accounting … there is an important economic fact:
  - CA surpluses must be matched by net financial outflows because the country is lending to RoW or acquiring assets abroad so financial capital flowing out of the country (‘exporting capital’)
  - CA deficits must be matched by net financial inflows because the country is borrowing from RoW or depleting assets abroad so financial capital flowing into the country (‘importing capital’)

The International Investment Position

- IIP records stocks :
  - Externals financial assets of a country on row
  - External financial liabilities to the row
- Accumulated value of a country owned assets in other countries and liabilities to other countries
- The difference is the **net IIP** which **indicates if a country is a net creditor or borrower to the row**
- This is a **stock concept** (vs BoP flows)
- Linked to BoP

International investment position and its components, EU and EA, 2023
(€ billion)

		Assets	Liabilities	Net
EU	**International investment position (excluding reserve assets)**	33 038.1	33 369.5	-331.5
	Direct investment	11 584.8	9 801.6	1 783.2
	Portfolio investment	11 883.1	14 127.6	-2 244.5
	Financial derivatives and employee stock options	3 029.9	3 001.5	28.5
	Other investment	6 540.3	6 438.9	101.4
	Reserve assets	:	:	:
EA	**International investment position**	34 929.6	34 344.3	585.3
	Direct investment	11 957.1	9 642.3	2 314.8
	Portfolio investment	12 219.9	14 267.5	-2 047.6
	Equity	5 218.1	3 337.1	1 881.0
	Investment fund shares	793.5	6 007.9	-5 214.4
	Debt securities	6 208.3	4 922.4	1 285.9
	Financial derivatives and employee stock options	2 920.5	2 912.1	8.3
	Other investment	6 683.8	7 522.3	-838.5
	Reserve assets	1 148.3	:	1 148.3

Note: EU: Eurostat estimations
: not applicable
Source: Eurostat, ECB (online data code: bop_iip6_q)

eurostat

European Commission

The IMF Purpose and the BoP

- Art. I: *Purpose of the IMF is to give confidence to members by making the general resources of the Fund temporarily available to them under adequate safeguards, thus providing them with opportunity to correct* ***maladjustments in their balance of payments*** *without resorting to measures destructive of national or international prosperity*.
- Art. V: *The Fund shall adopt policies on the use of its general resources, including policies on stand-by or similar arrangements, and may adopt special policies for special balance of payments problems, that will assist members to solve their* ***balance of payments*** *problems.*
- => Providing loans and concessional financial assistance to member countries experiencing actual or potential **balance-of-payments problems** is a **core responsibility** of the IMF.

Issues and Interpretation of BoP Balances

1. Trade balance = does domestic production meet overall demand for C and I?
2. CAB = country net saver or borrower? (CAB > 0 or CAB < 0)
3. Overall balance = are capital flows sufficient to finance CA or need to use reserves?

Macroeconomic stability in Madagascar

- Go to the « BoP» table for Madagascar (Pages 43 and 44 of the report = pages 49 and 51 of the pdf file)

- **External balance:**
  - How large is the CA account deficit?
  - How is it financed?
  - What are the foreign exchange reserves of the country expressed in months of imports?
  - Do you think Madagascar economy meets the criteria for external balance?

Macroeconomic stability in South-Africa

- Go to the « BoP» table for South-Africa (Page 45 of the report = pages 49 of the pdf file)

- **External balance:**
  - How large is the CA account deficit?
  - How is it financed?
  - What are the foreign exchange reserves of the country expressed in months of imports?
  - Do you think South-Africa economy meets the criteria for external balance?

QUESTIONS?

BoP Accounting

CASE STUDY

Reminders

- In the exercise, figures are to be inserted in yellow cells.
- All transactions between residents and non-residents require *two entries* in the BOP.
- Any transaction recorded in the Current and Capital Accounts must have a counterpart entry in the Financial Account (reflecting how a payment or a receipt materializes with financial assets/liabilities, FX or Reserve Assets).
- Financial Account includes FX Held by Private Sector and Reserve Assets Held by Central Bank.
- Accounting convention:

Current Account + Capital Account – Financial Account = 0

Quiz 3

Let’s go to Menti!

Mentimeter

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IV. Monetary and Financial Sector

What happens when a central bank increases interest rates?

Mentimeter

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Monetary and Financial Sector

- Our focus so far: real side of the economy (production, consumption, employment)
- Acknowledging **money's pivotal role** in the economy
- Stressing the intrinsics correspondence of financial flows with real resource flows
- Understanding the imperative of comprehending linkages **between the monetary sector and other macro sectors that** is crucial for effective monetary policy design
- Money plays a pivotal **macroeconomic role**, influencing prices, interest rates, and real economic activity
- Monetary accounts' reliability, available promptly in most countries; even in data-scarce situations, stand out as **pivotal macroeconomic indicators for policymakers**

Economic Functions of Money

- **Medium of Exchange:** Facilitates the exchange of goods and services, widely accepted as a medium of transaction
- **Unit of Account**: Serves as a benchmark for pricing all other goods
- **Store of Value and Standard of Deferred Payment**:
  - Functions as an asset, allowing wealth to be held in a readily accessible form
  - Reliable measure for future payment valuations

Monetary Authorities - Central Bank Functions

- National financial institutions with control over key aspects of financial system
- Key functions are:
  - Lender of last resort: Provides emergency funding to stabilize the financial system
  - Currency Issuance: Central banks control money supply by issuing currency
  - Monetary policy conduct : Main mandate typically focuses on achieving price stability, controlling inflation as the primary objective
  - Foreign Reserves Management : Oversee the country's foreign exchange reserves
  - Banker to Government: Facilitate government financial transactions
  - Financial Stability Oversight : Supervise banks and ensures overall financial stability, safeguarding the banking system

Central Bank Balance Sheet—Analytical Presentation

Assets

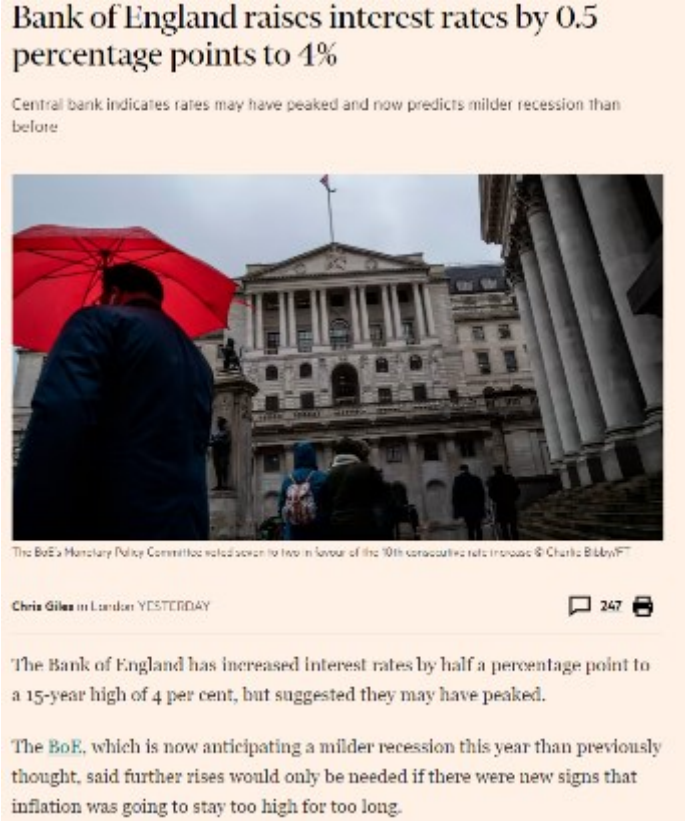
- Net Foreign Assets (NFA)
  - Reserves, Gold, Special Drawing Rights (SDRs)
- Net Domestic Credit (NDC)
  - Net Claim on Government (NCG)
  - Others
- Other items net (OIN)

Liabilities

- Monetary base
  - Currency issued
    - Held by public
    - Held in ODC
- Liabilities to Other Depository Corporations (ODCs)
- Liabilities to Rest of the World (RoW)

Monetary Policy and Central Banking

- Central Banks (CBs) play a crucial role for ensuring **economic and financial stability**
- Primary objective: Achieve price stability with low and stable inflation
- Monetary policy tools, including open market operations, influence short-term interest rates and economic activity
- Effectiveness of monetary transmission mechanism varies between countries



Bank of England raises interest rates by 0.5 percentage points to 4%

Central bank indicates rates may have peaked and now predicts milder recession than before

The Bank of England has increased interest rates by half a percentage point to a 15-year high of 4 per cent, but suggested they may have peaked.

The BoE, which is now anticipating a milder recession this year than previously thought, said further rises would only be needed if there were new signs that inflation was going to stay too high for too long.

The Role of the Interest Rate

- Interest rate changes is the **key monetary policy tool** that central banks use to influence economic activity, inflation, and overall financial conditions

- **Lower rates** incentivize households to borrow, such as taking out mortgages, and encourage businesses to invest in equipment and hire more workers
- **Higher rates** have a significant impact on both **savings and investments** in the economy and can lead to reduced borrowing and investment, and can slow economic growth

The Money Multiplier and the Creation of Money—Role of Central Banks and Banks (1/2)

- **Central banks control the monetary base:**
  - through activities such as purchasing government securities, financing deficits, buying foreign exchange, and lending to the domestic banking sector
- **Money supply in an economy results from**
  1. The Monetary base
  2. The behavior of commercial banks (through their lending to the private sector)

The Money Multiplier and the Creation of Money—Role of Central Banks and Banks (2/2)

- Central banks issue currency in circulation
- Commercial banks act as intermediaries, collecting funds from depositors
- The bulk of the money supply comprises bank deposits from the private sector
- Banks effectively issue money through lending, **leading to the money multiplier effect**
- The Money Multiplier Effect amplifies the initial impact of central bank actions on the money supply by creating additional deposits within the banking system
- When commercial banks receive deposits, they utilize a fraction to issue loans. This process multiplies the initial monetary injection from central banks, creating more deposits and expanding the overall money supply
- Banks must maintain liquid reserves to meet customer withdrawals, with required reserves deposited at the central bank under the fractional reserve system, creating a link between the monetary base and the money stock

Banks = “Other Depository Corporations (ODCs)”

- The ODCs are **deposit-taking** financial institutions
- ODCs mobilize savings and channel funds to productive sector by their lending
- Includes commercial banks, merchant banks, savings and loans institutions, and cooperative banks
- Functions:
  - Collect **deposits** from the general public
  - Provide **financial resources** for investment (loans)
  - **Transform** short-term deposits into longer-term assets (securities, loans)
- The decisions of the ODCs influence the amount of liquid resources private sector agents can dispose of, **impacting overall liquidity** circulating in the economy
- ODCs constitute an important instrument for the transmission of monetary policy to the rest of the economy

Monetary Survey: CB+ODCs

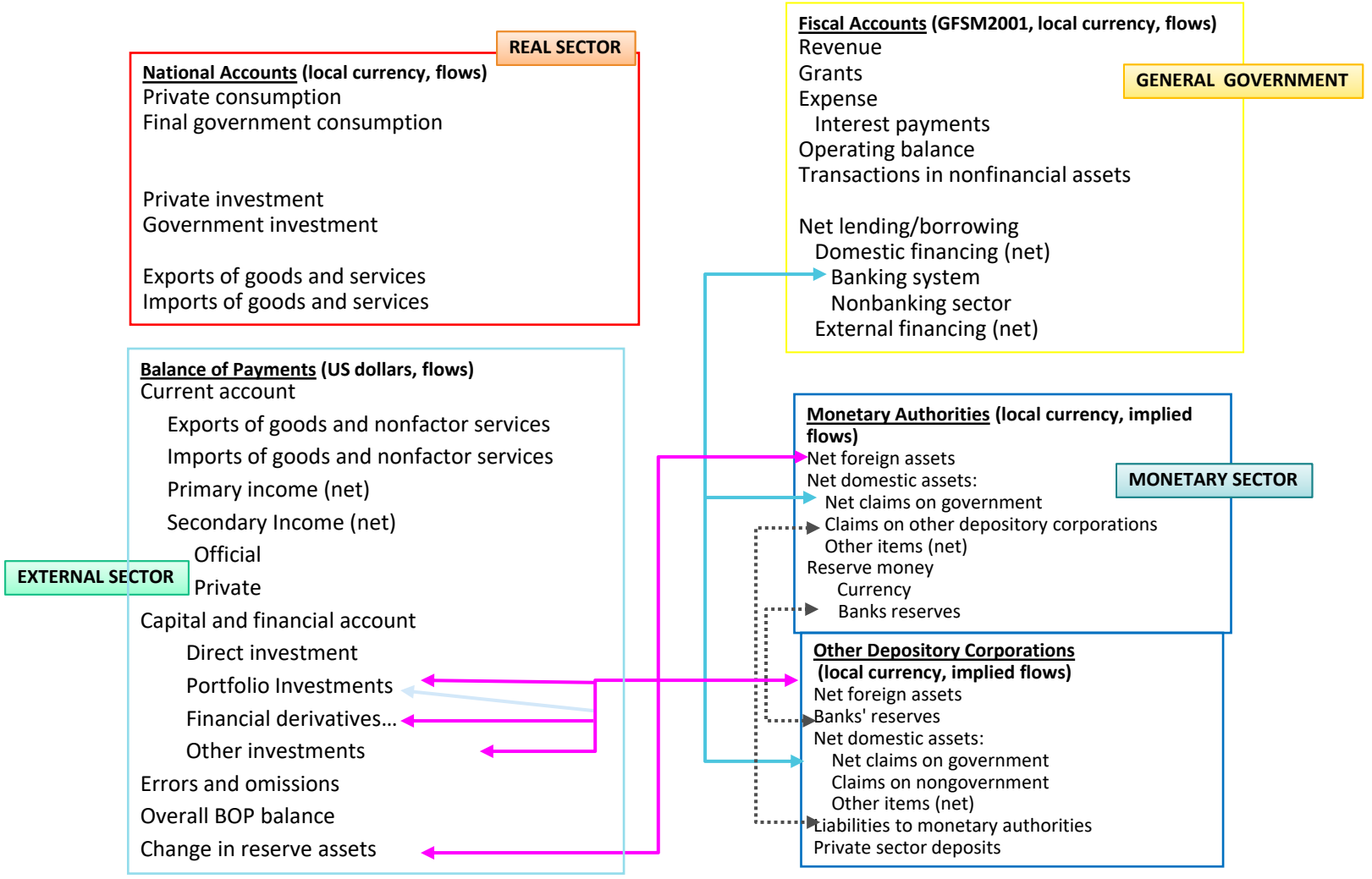
- Consolidates the balance sheets of the central bank and that of the other depositary corporations

1. **Objective:**
   - The Monetary Survey serves as a vital statistical report, providing a comprehensive overview of monetary and financial conditions in the consolidated banking sector
2. **Decision-Making Support:**
   - Policymakers, economists, and investors benefit significantly from the insights derived from the Monetary Survey. It equips them with essential information for making well-informed decisions
3. **Real Resource Reflection:**
   - Monetary statistics within the survey reliably reflect actual resource flows in the economy. This means the data encapsulates tangible movements and allocations of financial resources.

Interconnectedness with Other Economic Sectors

- The interaction between the monetary sector and other sectors is crucial for **designing monetary policies**
- **Net Foreign Assets (NFA) and Balance of Payments (BoP) relationship:**
  - Net position against non-residents correlates with the Balance of Payments (BOP).
  - Change in Net Foreign Assets (NFA) equals reserve accumulation in BOP
  - NFA change mirrors the balance on the current account, capital account, financial account, and net errors and omissions.
- **Link to fiscal policies**:
  - Net domestic assets of Depository Corporations linked to the fiscal sector
  - Reflects through net credit to the government
  - Monetization of fiscal deficit directly impacts the money stock
- **Connection to real sector**:
  - Asset side: Banking system credit to the private sector influences development and growth
  - Liability side: Private sector demand for cash balances is a key factor in determining inflation

Interrelations Among Macroeconomic Accounts



Monetary base, Broad Money (= Money Supply) and Money multiplier in Madagascar and South Africa

For South-Africa (Go to the table 4 for South-Africa (Page 46 of the report = page 50 of the pdf file)).

- Can you find the Monetary base?
- Can you find the Broad Money?
- Can you calculate the Money Multiplier?
- How can you interpret this money multiplier?

For Madagascar ‘Go to table 6 for Madagascar (Page 45 and 46 of the report = pages 51 and 52 of the pdf file)).

- Can you find the Monetary base (also called the Reserve Money)?
- Can you find the Broad Money?
- Can you calculate the Money Multiplier?
- How can you interpret this money multiplier?

QUESTIONS?

Quiz 5

Let’s go to Menti!

Mentimeter

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V. Government Sector

FISCAL POLICY

European Commission

Mentimeter

Can you name some activities of the government sector?

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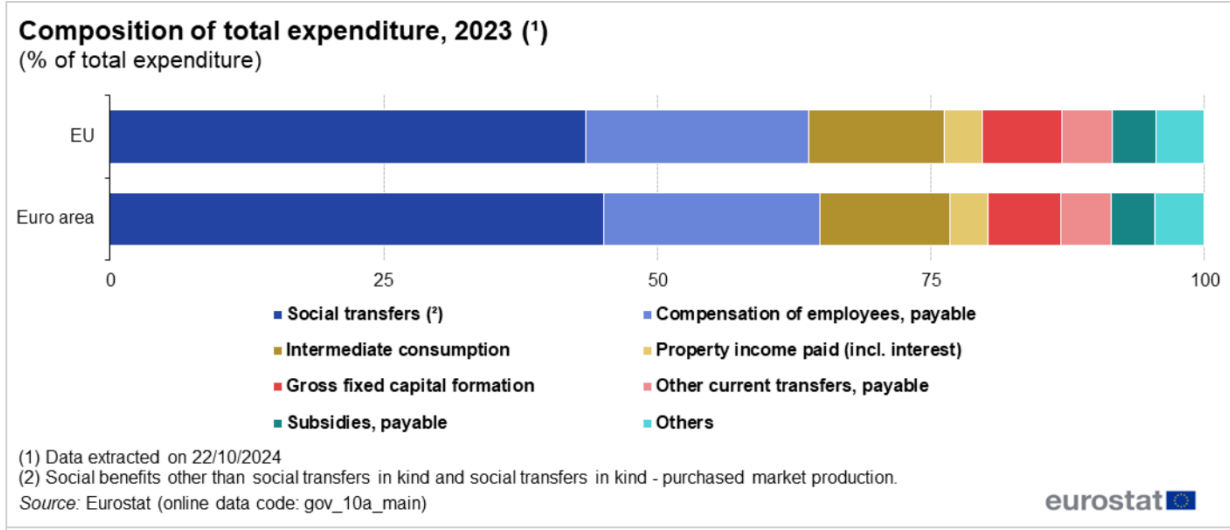
Government Sector Activities

- Fundamental purpose is the provision of **public goods and services**: law, public safety, health, education, defence…
- Collect **revenue** (taxes) to purchase goods and services
- **Redistribution of income** and alleviation of inequities (transfers, large especially in EU, almost 50%)
- **Deficits and financing**
- What is government macro impact and is government activity sustainable over the long-run?



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What Constitutes the Public Sector?

Consolidation of public sector allows for assessment of **macroeconomic impact** on the economy and of **fiscal sustainability**

General government comprises all government units

- Central government
- State governments
- Local governments

Public corporations includes financial/nonfinancial corporations and quasi-corporations controlled by the government units.

Government Budget

- Government budget describes receipts (revenues, financing sources) and outlays (expenditures, financing needs) of the public sector
- Revenues: most important source are taxes, direct taxes (income and property), indirect taxes (VAT). AEs governments tend to derive higher proportion of revenues from direct taxes while LICs rely more strongly on indirect taxes
- Expenditures: consumption, investment, transfers and interest on the public debt. Often classified as current and capital expenditures.
- Difference between revenue and expenditure is budget balance (surplus or deficit)
- Financing sources include borrowings and use of financial assets.
- Financing need include debt repayments (amortizations) and accumulation of financial assets.
- Budget balance must match the difference between financing sources and needs.

Table 2a. Ghana: Summary of Budgetary Central Government Operations, 2019–25

(GFS 2001, Cash Basis, Percent of GDP)

	2019 Act.	2020 Prel.	2021 Proj.	2022 Proj.	2023 Proj.	2024 Proj.	2025 Proj.
	(In percent of GDP, unless otherwise specified)						
Revenue[1]	14.0	12.9	14.9	15.0	15.0	15.2	15.3
Taxes	12.5	12.0	13.4	13.5	13.7	14.0	14.2
Direct taxes	6.3	5.8	6.1	6.1	6.1	6.2	6.0
Indirect taxes	4.6	3.9	4.6	4.7	4.9	5.1	5.4
Trade taxes	1.5	2.3	2.7	2.7	2.7	2.7	2.7
Other tax revenues	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other revenue	1.2	0.2	1.0	1.1	1.0	1.1	0.9
Grants	0.3	0.6	0.4	0.3	0.3	0.1	0.1
Expenditure	21.2	28.2	28.9	25.4	24.5	24.5	23.4
Expense	19.5	25.5	25.5	22.8	22.1	22.5	21.7
Compensation of employees	6.2	7.3	6.9	6.6	6.2	6.2	6.1
Wages and salaries	5.5	6.4	5.8	5.7	5.3	5.3	5.3
Social contributions	0.7	0.9	1.0	1.0	0.9	0.9	0.9
Purchases of goods and services	1.7	3.3	1.7	1.5	1.4	1.4	1.4
Interest	5.5	6.4	8.0	9.1	9.3	9.6	9.4
Domestic	4.3	4.8	6.4	7.4	7.4	7.6	7.1
Foreign	1.3	1.6	1.7	1.7	1.9	2.0	2.2
Subsidies and transfers	1.0	2.7	2.7	1.0	1.0	1.0	1.0
Social transfers	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Grants to other government units	3.2	3.3	4.0	4.1	3.8	3.8	3.6
Other expenses[2]	1.9	2.5	2.1	0.3	0.2	0.3	0.0
o/w: financial sector related costs	1.7	2.1	1.2	0.0	0.0	0.0	0.0
Net acquisition of nonfinancial assets	1.7	2.6	3.4	2.6	2.4	2.0	1.7
Domestic financed	0.7	1.0	1.1	0.3	0.3	0.2	0.2
Foreign financed	1.0	1.6	2.3	2.4	2.2	1.8	1.5
Overall balance	-7.3	-15.2	-13.9	-10.5	-9.5	-9.3	-8.1
Overall balance excluding financial and energy sector related costs	-4.6	-11.4	-10.0	-9.5	-8.5	-8.2	-7.0
Discrepancy	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net financial transactions	7.3	15.2	13.9	10.5	9.5	9.3	8.1
Net acquisition of financial assets	0.1	0.1	-0.1	0.0	0.0	-0.1	0.0
Currency and deposits	0.0	0.0	-0.1	0.0	0.0	-0.1	0.0
Net incurrence of liabilities	7.4	15.4	13.9	10.5	9.5	9.2	8.1
Domestic	4.2	11.3	10.4	6.8	6.4	5.5	5.9
Bank of Ghana	0.0	2.6	0.0	0.0	0.0	0.0	0.0
Deposit Money Banks	3.2	3.8	3.9	2.6	2.4	2.1	2.2
Nonbanks	1.1	4.8	6.4	4.2	4.0	3.4	3.6
Foreign	3.2	4.1	3.5	3.7	3.2	3.7	2.2
Memorandum items:							
Public debt (gross)	62.9	78.9	83.5	84.9	86.4	87.4	87.0
Public debt amortization	8.5	9.5	10.4	8.9	13.2	12.6	14.1
Oil revenue	1.2	0.8	1.4	1.4	1.2	1.4	1.2
Proceeds from Energy Sector Levies Act (ESLA)	0.5	0.5	0.6	0.7	0.8	0.9	1.0
Primary balance (excl. discrepancy)	-1.7	-8.8	-5.9	-1.4	-0.2	0.3	1.3
Primary balance excluding energy and financial sector related costs	0.9	-4.1	-2.0	-0.3	0.8	1.4	2.3
Nominal GDP (millions of GHc)	356,544	383,486	446,662	510,652	573,143	643,429	722,163

Sources: Ghanaian authorities; and IMF staff estimates and projections.

[1] Revenues in staff's presentation differ from those of the authorities as the presentation reports net of retentions.

[2] Payments of cash arrears and promissory notes to statutory funds.

Fiscal accounts

- Above the line

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Fiscal accounts—Financing the Budget (below the line)

- Whenever net lending/borrowing <0 government requires financing from other sectors:
  - Domestic borrowing: financial sector (CB, SOB, Private banks, nonfinancial private sector
  - External borrowing (in local currency or fx), increase in foreign debt
- Foreign borrowing will amount to a capital inflow in the BoP and results in an increase in foreign debt

Table 2a. Ghana: Summary of Budgetary Central Government Operations, 2018–21
(GFS 2001, Cash basis, Percent of GDP)

	2018 Prel.	2019 Prel.	2020 Proj.	2021 Proj.
Overall balance	-7.0	-7.5	-9.5	-5.0
Overall balance excluding financial and energy sector related costs	-3.7	-4.7	-6.4	-4.0
Discrepancy	0.0	0.0	0.0	0.0
Net financial transactions	-7.0	-7.5	-9.5	-5.0
Net acquisition of financial assets	-3.6	0.1	0.1	0.0
Currency and deposits	-4.0	0.0	0.0	0.0
Loans [3]	0.8	...	...	...
Net incurrence of liabilities	3.4	7.6	9.6	5.0
Domestic	3.8	3.9	3.6	3.5
Nonbanks	2.4	2.9	2.7	2.6
Unidentified financing	0.0	0.0	1.7	0.0
Foreign	-0.3	3.8	5.5	1.5
Exceptional financing (IMF, WB)	0.0	0.0	2.1	0.0
Memorandum items:				
Oil revenue	1.5	1.2	0.5	1.3
Proceeds from Energy Sector Levies Act (ESLA)	0.6	0.5	0.5	0.4
Revenue excl. oil, grants, and ESLA (percent of non-oil GDP)	12.6	12.9	12.5	13.4
Primary balance (excl. discrepancy)	-1.4	-1.8	-4.1	0.0
Primary balance excluding financial sector related costs	1.9	0.9	-1.0	1.0
Nominal GDP (millions of GHc)	300,596	347,187	385,251	441,791

Fiscal Policy and Macroeconomic Stabilization

- **Fiscal policy** is use of government spending and taxation to influence the economy through level and types of taxes, extent and composition of spending, and the degree and form of borrowing (remember: GDP = C + I + **G** + NX)
- Governments provide a steady flow of public goods and services but cyclical downturns reduces the country's income and its tax base so instead of cutting spending and maintaining budget in balance usually finances the tax revenue shortfall by borrowing
- Fiscal policy that increases aggregate demand through increase of spending called expansionary or 'loose'
- Contractionary or 'tight' if reduces demand via lower spending
- In long run government may aim to foster sustainable growth with actions on infrastructure or education

QUESTIONS?

Fiscal Accounting

CASE STUDY

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Reminders

- In the exercise, figures are to be inserted in yellow cells.
- All transactions require *two entries* as sources and uses of funds are identical.
- Any transaction recorded in ‘above the line’ must have an offsetting transaction ‘above the line’ (hence, with zero impact on the fiscal balance) or an offsetting transaction ‘below the line’ (hence, with some impact on the fiscal balance).
- Accounting convention:

Expenditures + Financing Needs = Revenues + Financing Sources

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QUESTIONS?

Quiz 4

Let’s go to Menti!

Mentimeter

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VI. IMF Approach to Macroeconomics and Introduction to Financial Programming

Can you name the sectors of the economy?

IMF Approach to Macroeconomics and Financial Programming

- The IMF employs a comprehensive approach to macroeconomics, categorizing the economy into four fundamental sectors:

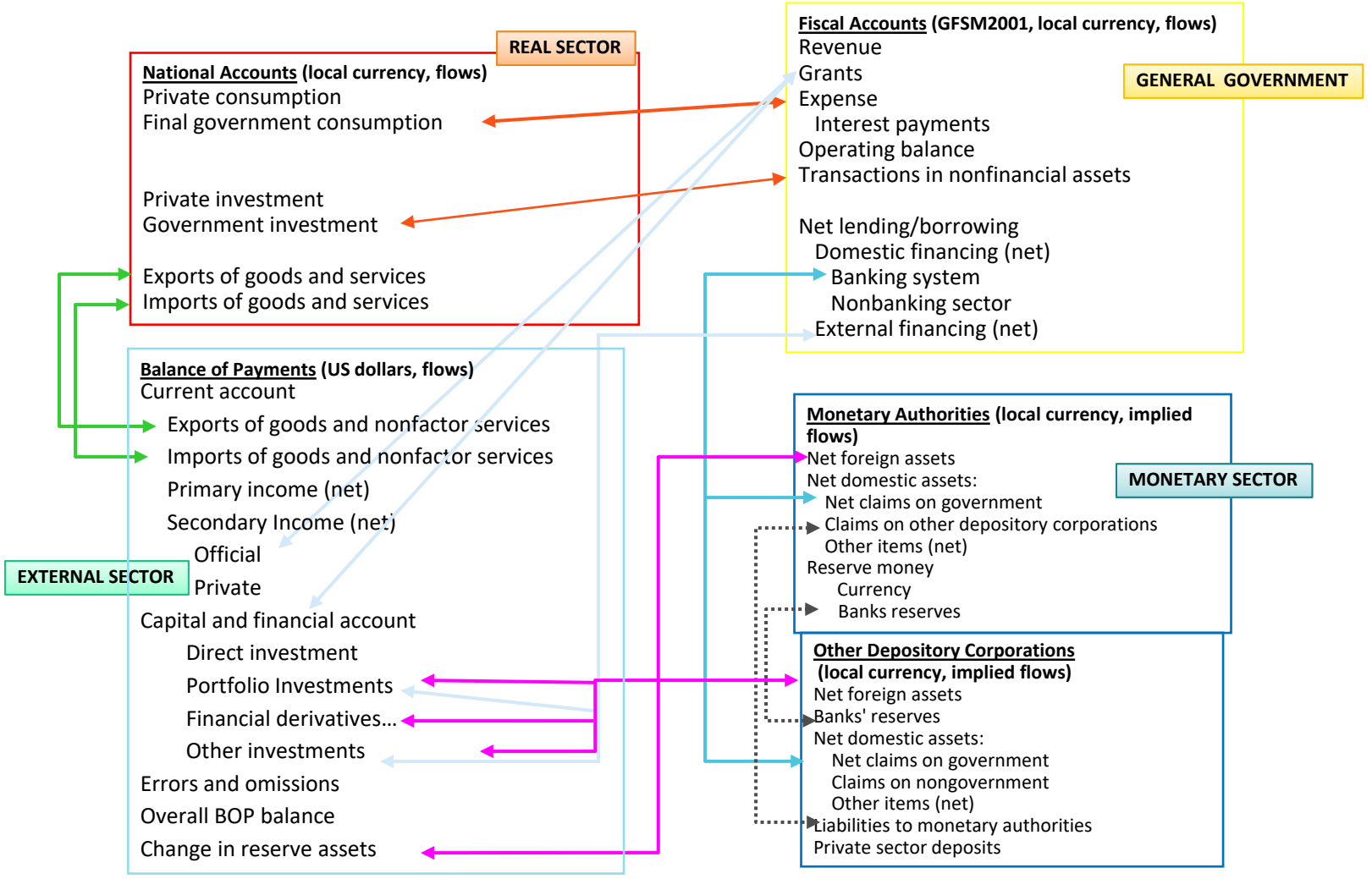
1. **Real (output) Sector:**
   - Encompasses all units engaged in production and consumption
   - Often referred as the 'aggregate economy'
2. **General Government Sector**:
   - Includes central and local governments, along with public corporation
   - Frequently the largest single agent of the economy
3. **Monetary Sector** (incl. banks):
   - Encompasses monetary and financial activities,
   - Integrates banking institutions
4. **External Sector** (rest of the world):
   - Encompasses transactions with the rest of the world
   - Spans trade and financial interactions

Macroeconomic Linkages through Key Accounting Identity

1. **Macroeconomics accounts linked as economics agents engage in transactions with each other**
2. **The GDP identity is a good illustration of this:** **$Y = C + I + G + (X - M)$ represents the key GDP accounting identity**
3. **Accounting links:**

- Government Expenditures Increase → Higher Aggregate Demand → Potential Economic Growth.
  - Impact on Other Sectors:
    - Increased Government Spending → New Business Opportunities.
    - Higher Government Spending → Influence on Interest Rates & Private Investment.
- Government Increases Total Transfers During a Shock (Recession) → Automatic Stabilizer → Support Individuals Affected by Downturn.
- Global Shock → Decrease in Exports (X) → Lower Net Exports (X - M) → Reduced Aggregate Demand & Economic Output.
- Central Bank Decreases Policy Rate → Lower Interest Rates → Stimulate Consumption & Investment → Increased Aggregate Demand & Possible Inflationary Pressures.

Interrelations Among Macroeconomic Accounts



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IMF Quantitative Framework – Financial Programming

1. **Definition of Financial Programming:**
   - *Financial programming* is a quantitative framework utilized by the IMF to design economic policies aiming at achieving macroeconomic stability
   - Policies are categorized into three pivotal groups:
     - Fiscal policy: Government revenues and spending affecting the economy
     - Monetary and Exchange Rate Policies: Actions by the central bank to influence the money supply, credit availability, interest rates, and exchange rates.
     - Structural policies: Regulations and institutions determining economic operations
2. **Purpose of Financial Programming:**

- *Financial programming* serves as a framework for designing policies aimed at achieving or maintaining economic stability.

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Sequential Steps in IMF Financial Programming

1. **Diagnosis of the Current State of the Economy**:
   - Evaluates inflation control and overall economic health based on macroeconomic accounts
   - Considers the impact of economic policies and external shocks
2. **Projections for the Foreseeable Future**:
   - Estimates the economy's future based on different policy scenarios
   - Analyzes outcomes with *no policy changes*, assessing implications for growth and inflation
3. **Setting Medium-Term Objectives (Three to Five Years Ahead):**
   - Defines clear objectives such as reducing inflation, boosting growth, poverty reduction, and enhancing shock resilience
4. **Determining Changes to Economic Policies:**
   - Identifies necessary adjustments to policies to achieve the set objectives

Sectoral Accounts—Key to Economic Analysis

1. Main Features of the Accounts of the Four Main Sectors:
   - The section will focus on the main features of the accounts of the four main sectors of the economy
2. Examination of Economic Data:
   - Explore how these accounts record economic data
   - Guides on interpreting and understanding the interrelationships among these sectoral accounts
3. Focus on Reading, Interpreting, and Analyzing Sectoral Accounts
   - Our emphasis lies in developing skills for reading, interpreting, and analyzing sectoral accounts
   - Explicitly avoids delving into the process of making projections

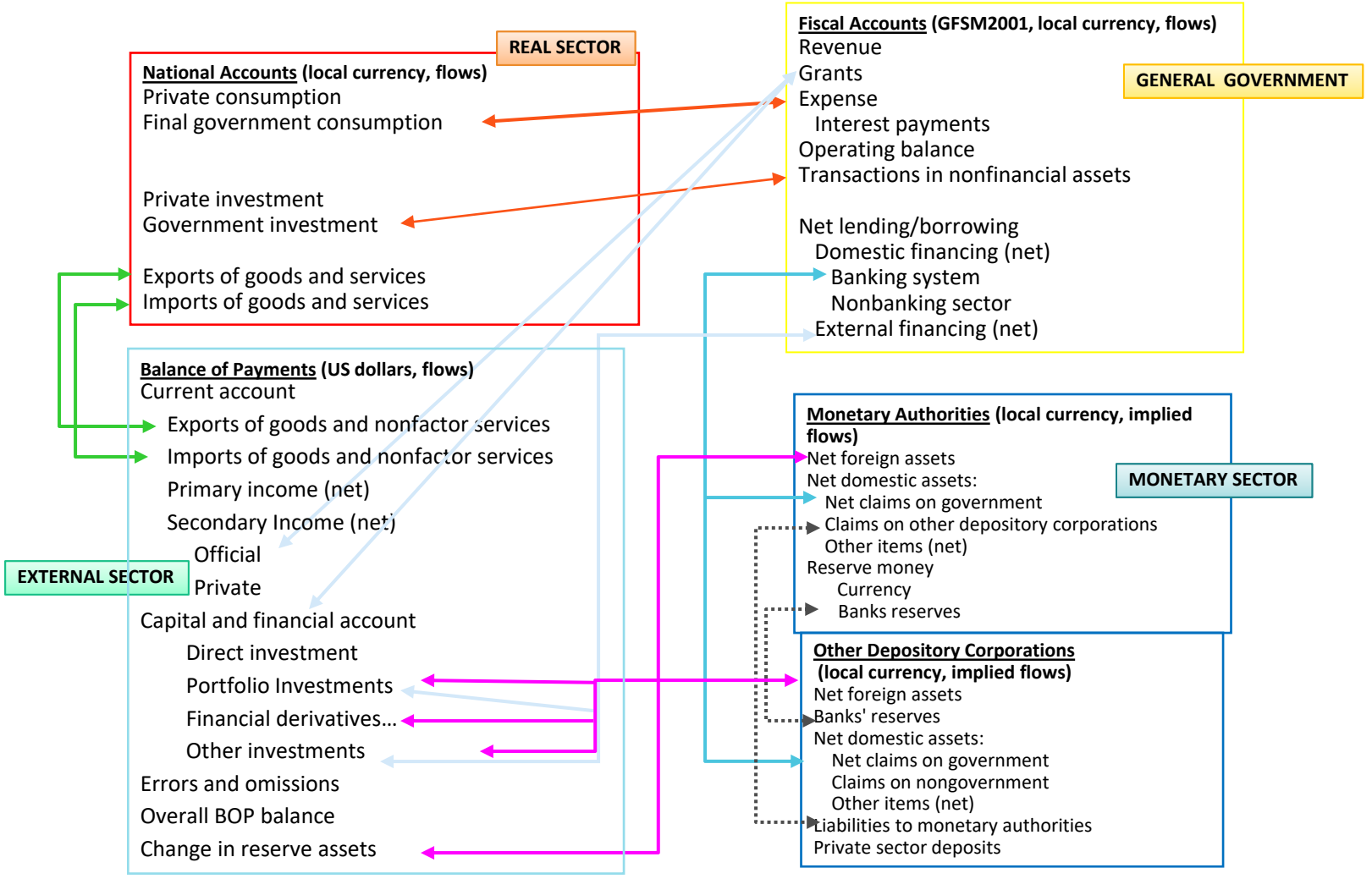
Key Accounting Relationships in Macroeconomic Analysis

Key relationships at the heart of macroeconomic analysis

GDP (Y) identity links aggregate supply and demand for G&S

- **Y= C + I + (X - M)**
  - Consumption (C) = Cp + Cg
  - Investment (I) = Ip + Ig
- Aggregate Domestic Demand (A) = C + I
- Current Account Balance (CAB) = S - I

Interrelations Among Macroeconomic Accounts



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QUESTIONS?

VII. Country case study

Madagascar

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Madagascar IMF report (2025)

- What does the IMF report says about economic growth prospect in Madagascar?
- What does it say about inflation? In this respect, is the current monetary policy adequate?
- What does the IMF say about the Fiscal deficit?
- What is the IMF recommendation to reduce the fiscal deficit: Increase revenue or reduce government consumption and/or investment? What is the rationale for that recommendation?
- What is the the Current Account of the country? How is it financed? Does this look sustainable?

VIII. Country case study

South Africa

European Commission

South-Africa IMF report (2025)

- What does the IMF report says about economic growth prospect in South-Africa?
- What are the main challenges for the economy? Are they structural-long term issues or short-term issues?
- According to your reading of the report, which sector is the more likely to pose long term problem to the economy? (real sector, external sector, financial sector or government sector).
- Regarding the external sector, what do you think of the size of the current account deficit? How is it financed? Is this type of financing of the CA deficit good for growth?

Annex

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The Real Sector

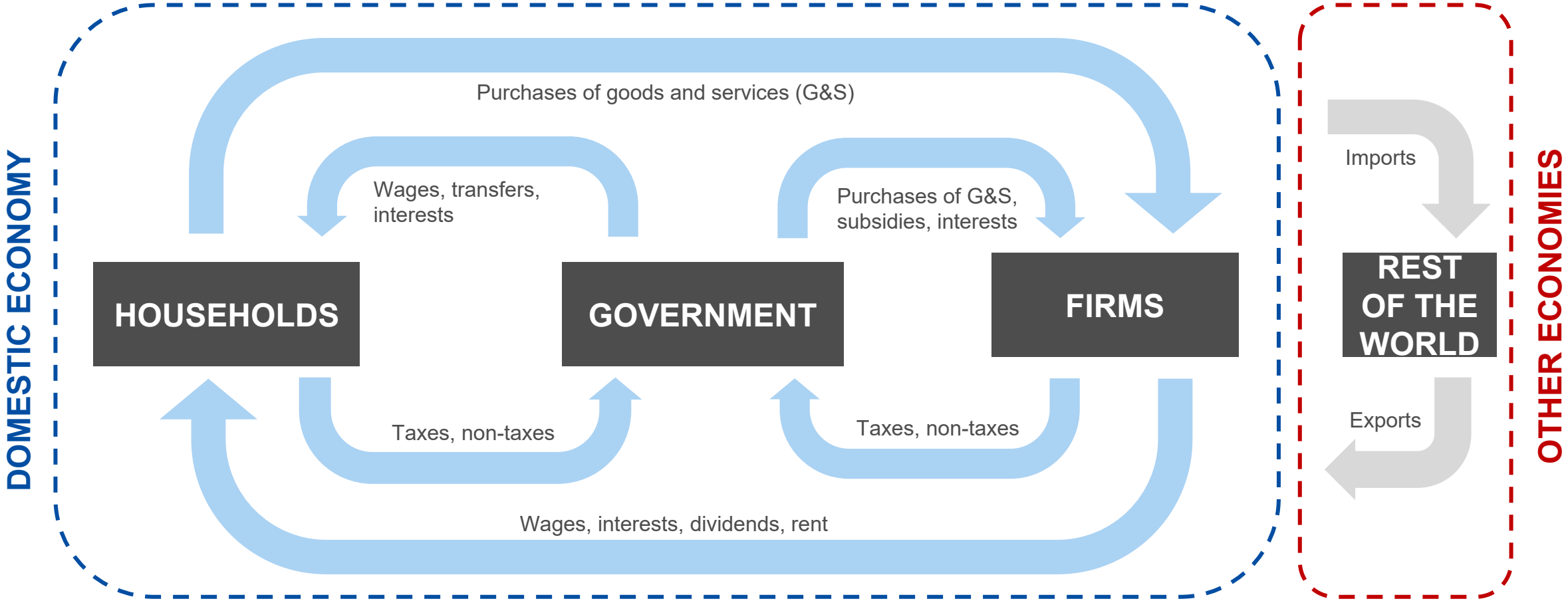
NEW SLIDE

WHAT ECONOMIC ACTIVITIES ARE ANALYZED?

Production of G&S, final-use of G&S (consumption, investment, exports, imports), generation of incomes, employment & prices, savings & investment

WHAT ECONOMIC AGENTS ARE ANALYZED? ('INSTITUTIONAL SECTORS')

Households, government, financial and non-financial companies ('firms'), and the 'rest of the world' (non-resident agents)



NEW SLIDE

The Gross Domestic Product (GDP)

GDP is the **monetary value** of the **goods & services (G&S) for final-use** produced in **an economy** in **a year**.

G&S for final-use versus intermediate-use**.** Concept & examples. G&S for intermediate-use are excluded from GDP to avoid double counting of value and availability of G&S.

Monetary value combines types and quantities of G&S produced and their prices. Valuation uses 'market prices' or 'cost incurred'. Valuation permits 'aggregation'. Current vs constant prices. Domestic vs international prices.

Economy and **year** refer to geographic area and time period. GDP can be national or local; time could be year or quarter.

A widely-used indicator of economic activity and income generation; economic growth and development; comparable across time and countries?; a proxy for welfare?

GROSS DOMESTIC PRODUCT (GDP) = How much final-use G&S are produced? = How much final-use G&S are spent and used for? = How much income is earned?

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NEW SLIDE

How is GDP measured? Three approaches

Production Approach (**supply side**)
GDP measures the sum of 'value added' across 'production sectors' (e.g., agriculture, manufacturing, services) of the economy.
Value added is the difference between 'value of output' and 'value of intermediate-use G&S' used in production (*intuitively, invoicing to customers minus payables from suppliers*)
GDP = Sum of VA across sectors

Expenditure Approach (**demand side**)
GDP measures the sum of all expenditures to purchase final-use G&S in the economy.
Expenditures include private consumption by households (Cp), private investment by households and firms (Ip), government spending in consumption and investment (Cg + Ig), exports (X), minus imports (M)
GDP = Cp + Ip + Cg + Ig + X - M

Income Approach
GDP measures all incomes generated by owners of 'production factors' (labor and capital) that participate in the production activity.
Intuitively, the value added is used to fund salaries, profits, interests, direct taxes, etc.
GDP = Sum of Incomes Generated

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NEW SLIDE

GDP by Production and Expenditure Approaches

Example: An economy produces wheat, flour and bread in one year. Wheat is used to produce flour, and flour to produce bread. Wheat is sold at $ 100, Flour at $ 200 and Bread at $ 250 ('current prices').

TOTAL ECONOMY

		Inputs Purchases of G&S (intermediate)	Outputs Sales of G&S (intermediate or final)	Value-added (difference)
Farmer	Wheat	0	100	**100**
Mill	Flour	100	200	**100**
Bakery	Bread	200	250	**50**
GDP		**300**	**550**	**250**

WHEAT $ 100 **FLOUR $ 200** **BREAD $ 250**

Intermediate-use G&S **Final-use G&S**

Production Approach: GDP is the sum of the value-added in each stage (wheat, flour, bread) = **$ 250**
Expenditure Approach: GDP is the sum of the value of final goods (bread) = **$ 250**

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NEW SLIDE

GDP by Income Approach

Example: An economy produces wheat, flour and bread in one year. Wheat is used to produce flour, and flour to produce bread. Wheat is sold at $ 100, Flour at $ 200 and Bread at $ 250 ('current prices').

		TOTAL ECONOMY			TOTAL ECONOMY		
		Inputs Purchases of G&S (intermediate)	Outputs Sales of G&S (intermediate or final)	Value-added (difference)	Wages	Gross Operating Surplus (profits, interests, etc.)	Value-added
Farmer	Wheat	0	100	**100**	20	80	**100**
Mill	Flour	100	200	**100**	50	50	**100**
Bakery	Bread	200	250	**50**	40	10	**50**
GDP		**300**	**550**	**250**	**110**	**140**	**250**

WHEAT $ 100 **FLOUR $ 200** **BREAD $ 250** **Wages $ 110** **GOS $ 140**

Intermediate-use G&S **Final-use G&S** **Incomes Generated**

Income Approach: GDP is the sum of the incomes generated in each stage = **$ 250**

Intuition: sales (output) proceeds are used to fund purchases of intermediate-use G&S, hire labor, and make GOS

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Post-Course Questionnaire (Test-out)

Thank you

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