Macro I

Macroeconomics Basics and IMF Financial Programming

February 2024

Introduction

- Welcome
- Your instructors Julien Hartley, 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

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!

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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

Outline

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

I. What is Macroeconomics?

An introduction

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Name one macroeconomic policy

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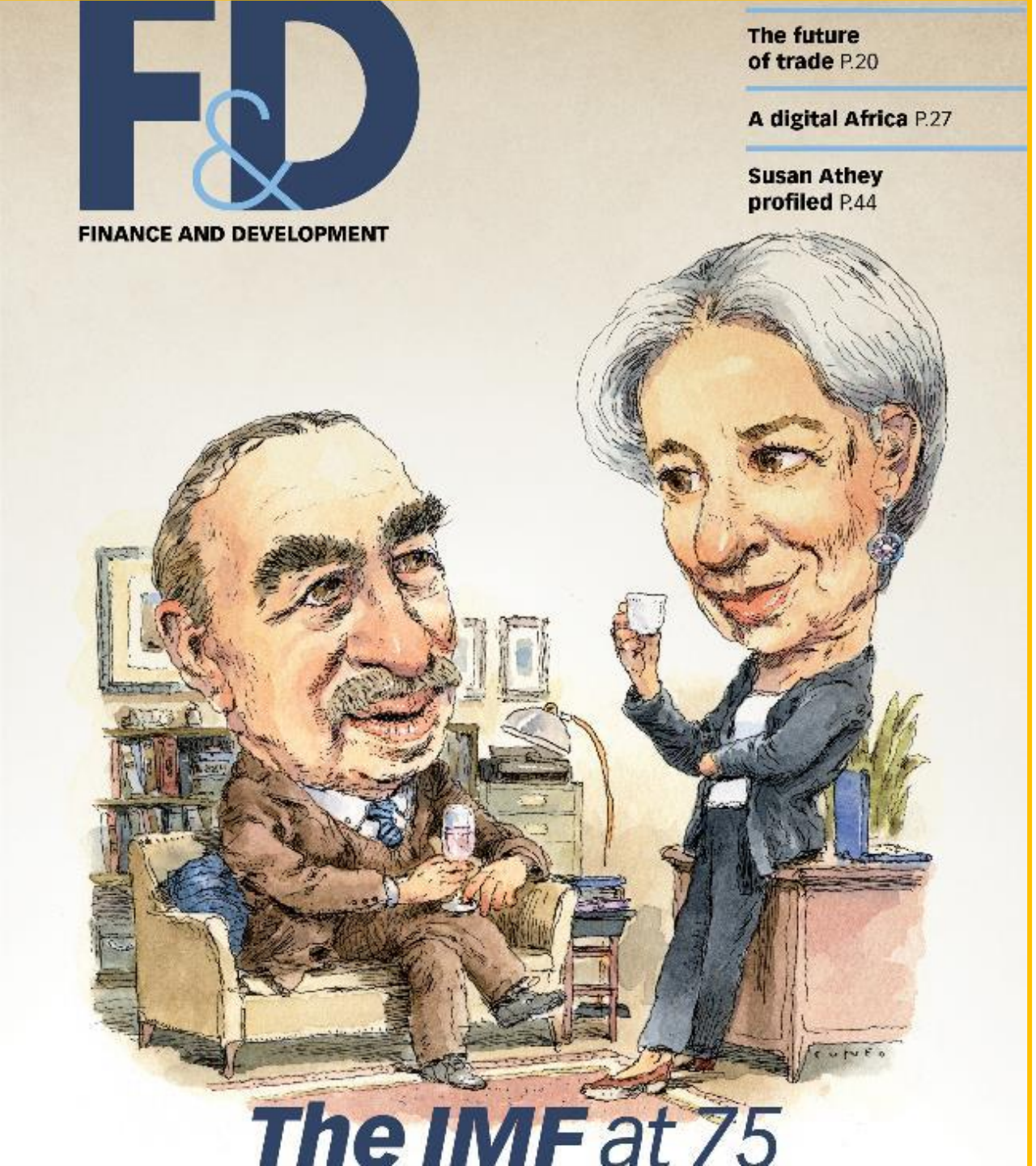
What is Macroeconomics? An Introduction

- Macroeconomics examines the **economy as a whole,** focusing on broad aggregates
- **While microeconomics** studies **individual decisions** made by firms and households, macroeconomics analyzes **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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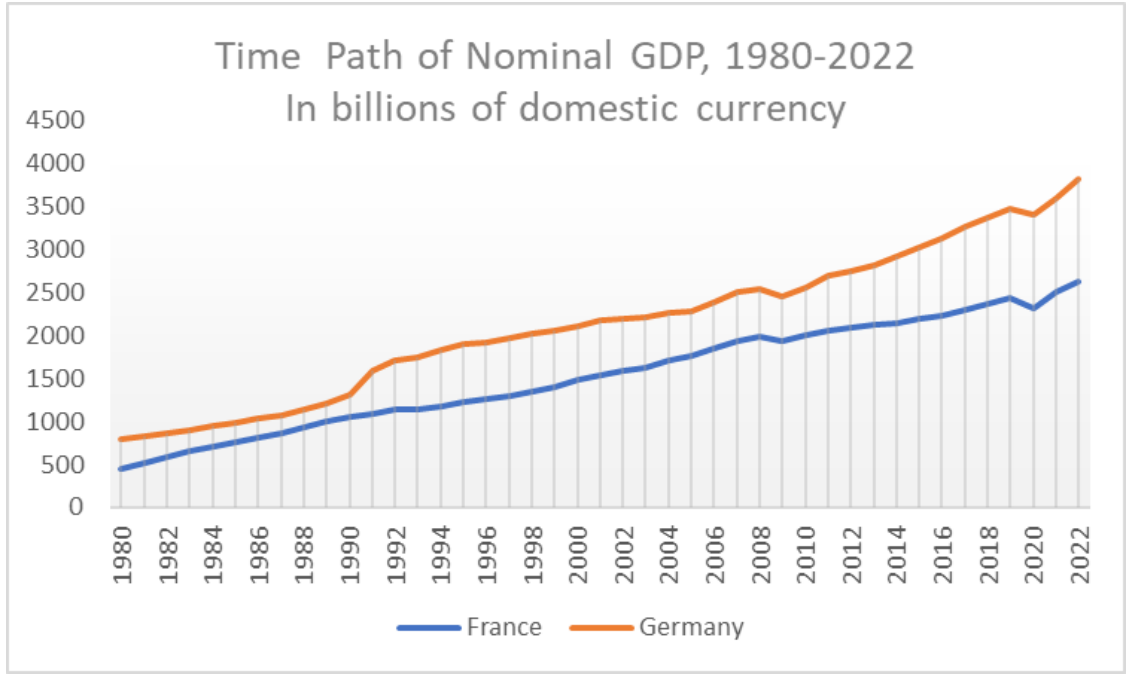
What are the Key Macroeconomics Questions?

- 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, adjusting for inflation



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What are the main sources of economic growth?

What Are the Main Sources of Economic Growth?

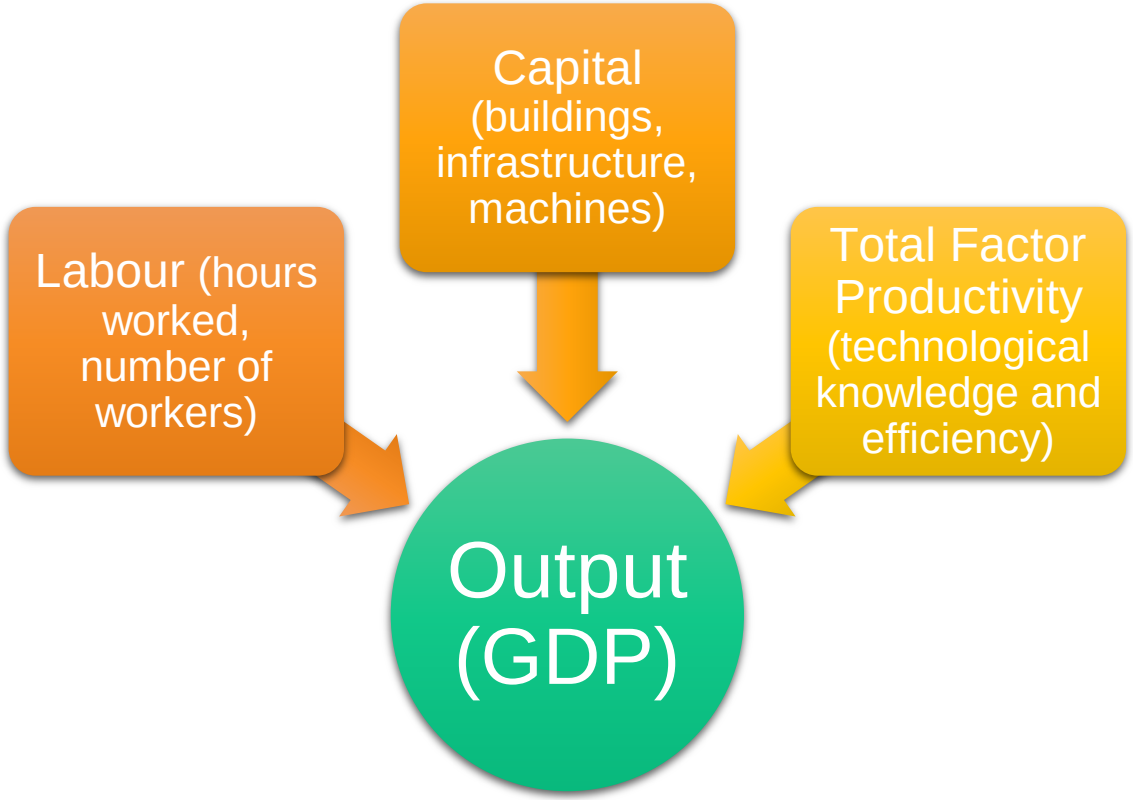
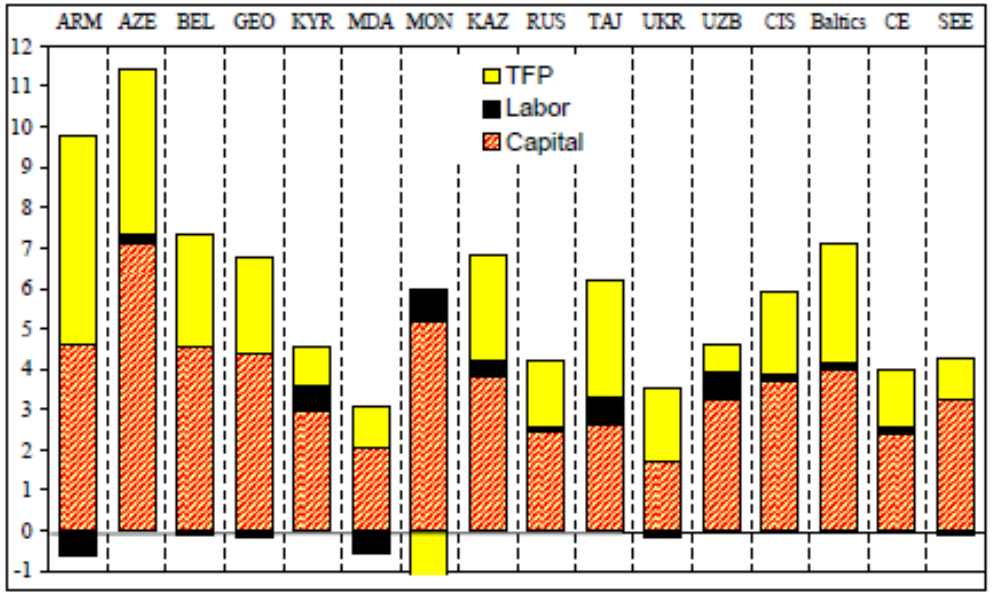


Figure 4. Sources of Growth in Transition Economies, 1996–2006
(In percentage points of GDP)



Sources: Authors' own calculations based on the IMF World Economic Outlook database.

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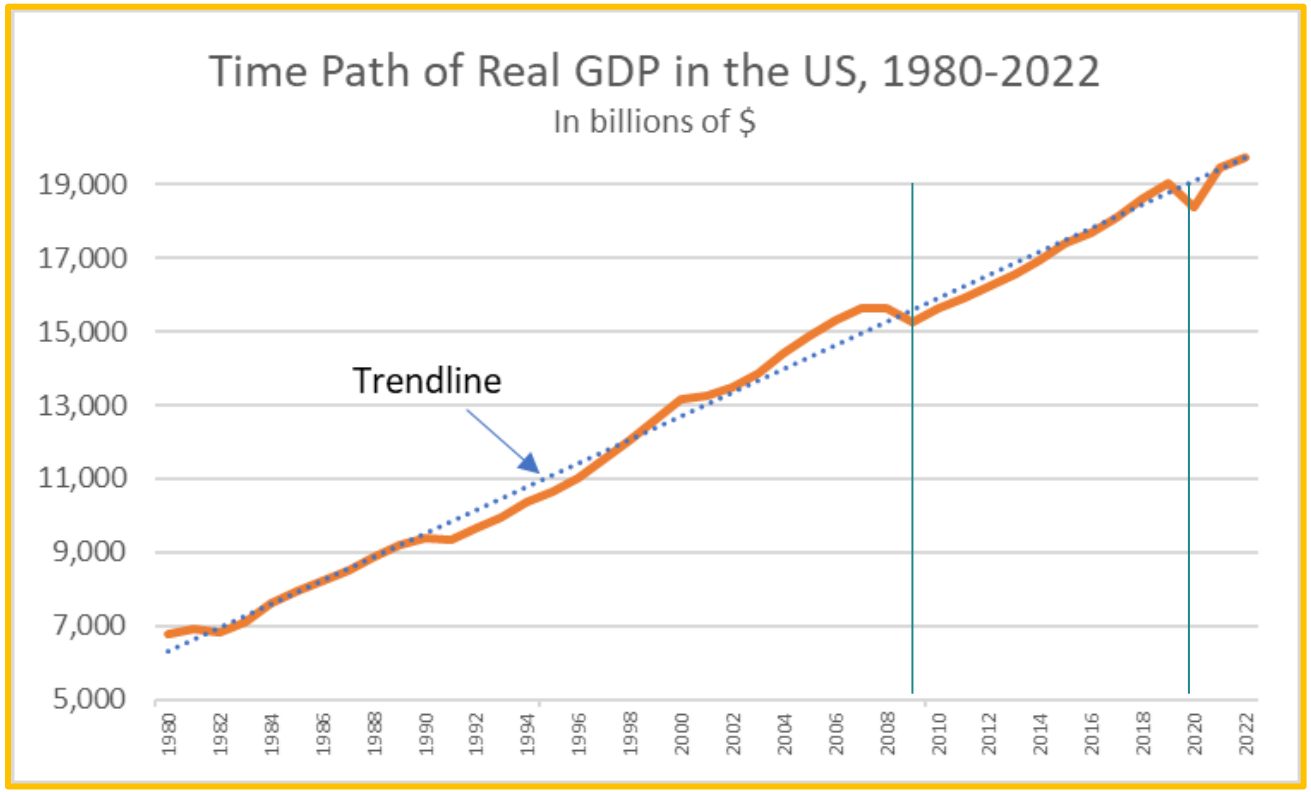
Understanding Business Cycles



- 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

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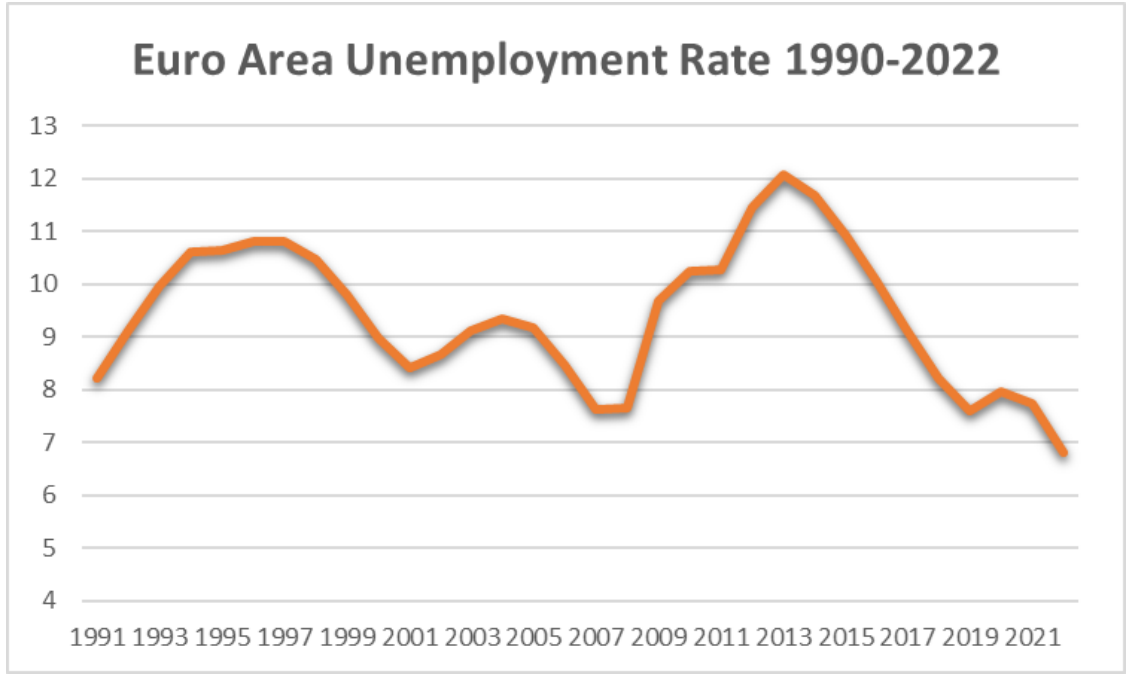
Understanding Unemployment

- **Definition:** Unemployment is the number of people actively seeking employment, expressed as a proportion of the total labour force (unemployment rate)
- Unemployment is associated with *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?

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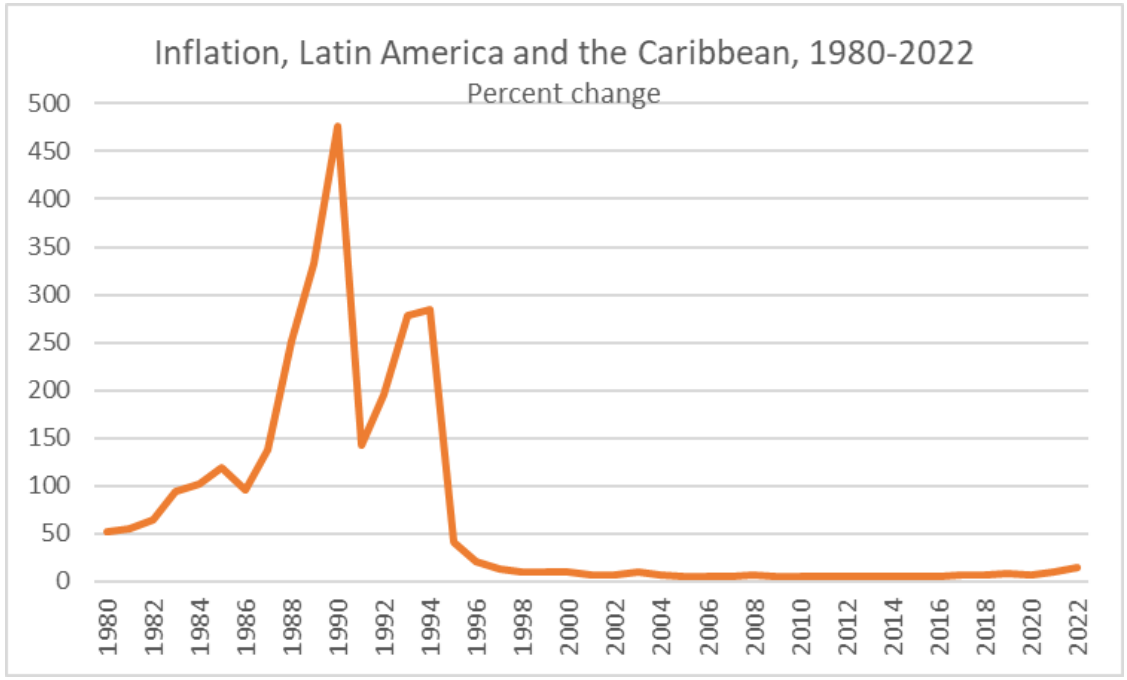
Understanding Inflation



- **Definition: The inflation rate** measures the percentage change in the general price level of goods and services over time in the economy.
- **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 behavior 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.

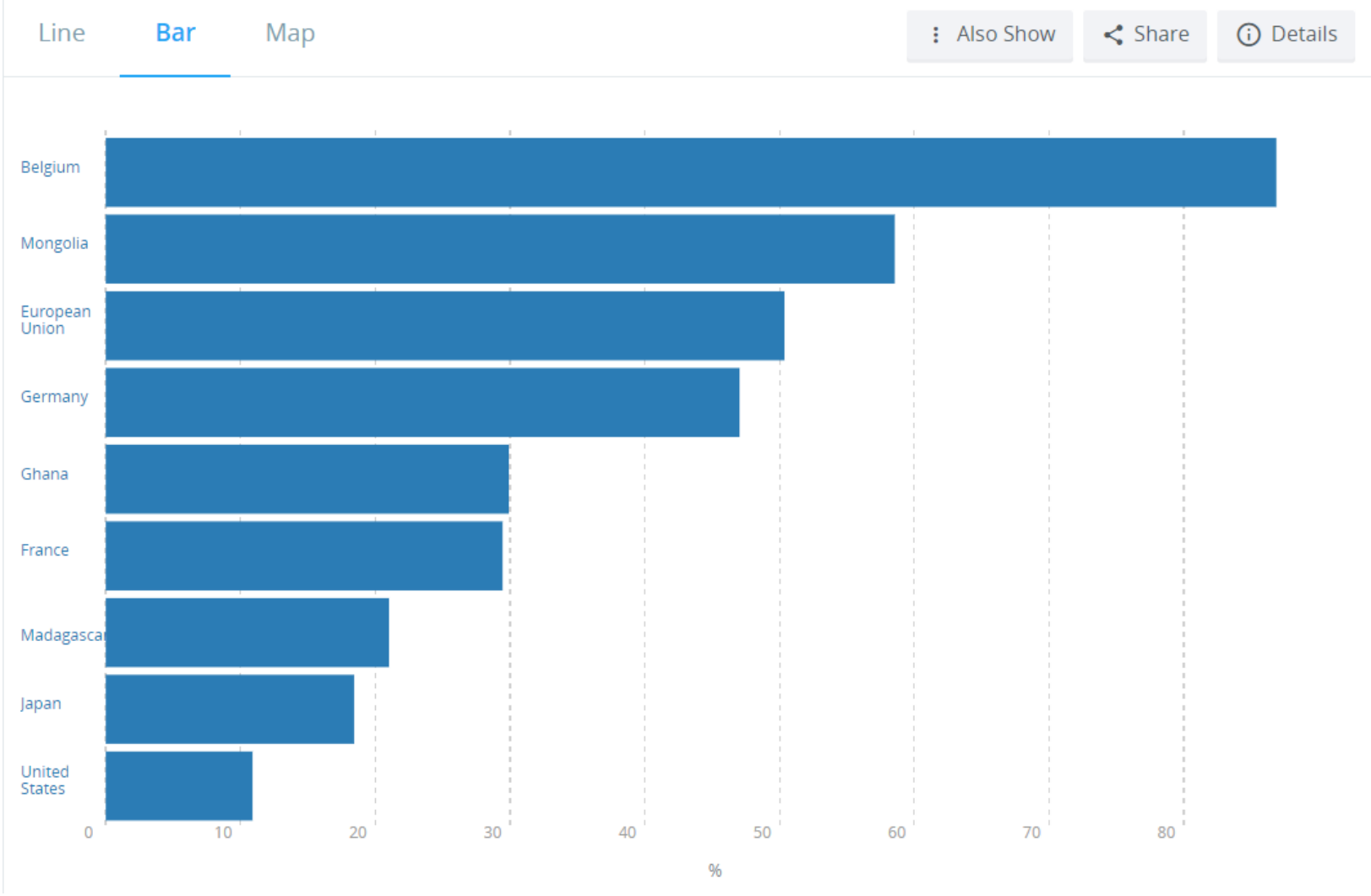
Openness

- **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 to the **Rest of the World** (RoW) minus its imports
  - A trade surplus occurs when exports exceed imports, while a trade deficit happens when imports exceed exports
- **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

How would you measure openness?

Openness (Ratio of Exports to GDP, %)

Source: World Bank national accounts data



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Long-Run Economic Growth

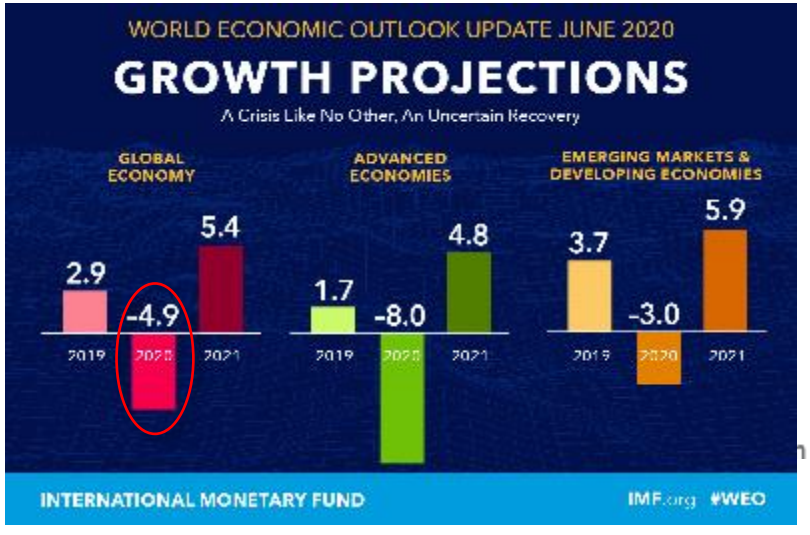
- **Catch-up** (convergence) : countries that are initially poorer tend to grow faster, while those with higher initial GDP experience slower growth
- **Human capital**: Knowledge possessed by individuals becomes an additional factor of production, and educated workers play a significant role in economic 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

The Impact of Interest Rate

- **Crucial role of interest rates:** Influencing borrowing costs, spending decisions of households and businesses
- **Effect of Lower and Higher Interest Rates:**
  - Lower rates incentivize households to borrow, such as taking out mortgages, and encourage businesses to invest in equipment and hire more workers
  - While 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
- **Central banks' Role:** Central Banks play a vital role in influencing interest rates through monetary policy

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

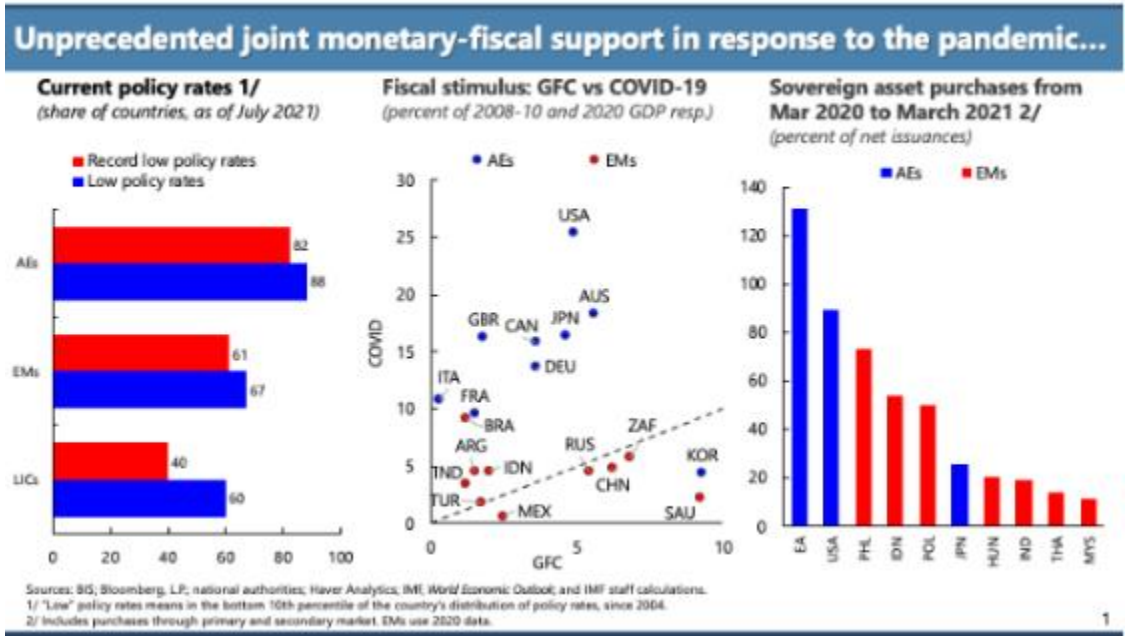


Macroeconomic Policies—Demand and Supply Sides

- Macroeconomics categorizes events 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
  - **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
- **Aggregate Demand Management Policies:** Governments can offset or smooth out fluctuations in total spending to stabilize the economy
- **Policy Instruments:** Fiscal and monetary policies aim to achieve stable growth and maintain price stability.

What Are Macroeconomic Policy Instruments?

- **Instruments in Macroeconomics:** Demand Management (fiscal and monetary 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
- **Supply side policies:** represent the government's effort to increase the overall efficiency of the economy
- **Goals:** Achieve stable economic growth and maintain price stability.



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What is Macroeconomic Stability?

- **Definition:** Characterized by achieving internal and external balance in the economy
- **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
- **Crisis impact**: Economic crises result from both external shocks and inadequate policy responses
- **Balancing Acts: Internal balance (**full employment with stable prices) and e**xternal balance (**equilibrium in the Balance of Payments (BoP), i.e. the Current Account (CA) financed in an orderly manner
- Policy Response: Swift and effective responses crucial to ensure sustainable economic growth and reduces vulnerability to economic fluctuations.

Shocks and Crisis

- **Causes of Economics Instability:**
  - **Domestic factors**, including inappropriate fiscal and monetary policies, exchange rate fluctuations, weaknesses in the financial system, political instability, and weak institutions
  - **External factors** can also trigger instability, such as external shocks like natural disasters, fluctuations in commodity prices, shifts in market sentiment, and pandemics such as Covid
- **Manifestations:** Output falls, unemployment rises, high inflation erodes purchasing power, banking sector crises that can impact financial stability, currency depreciation, and in acute cases, sovereign debt defaults or restructuring can occur
- **Policy Responses:** Swift and effective responses crucial to mitigating impact and restoring stability

Ghana raises interest rates to 22% in biggest move for 20 years

Central bank seeks to counter soaring inflation and depreciating currency

Inflation in Ghana rose in July for the 11th consecutive month to 31.7%, its highest level since November 2003 © Cristina Aldehuela/Bloomberg

Aanu Adeoye in Lagos AUGUST 18 2022

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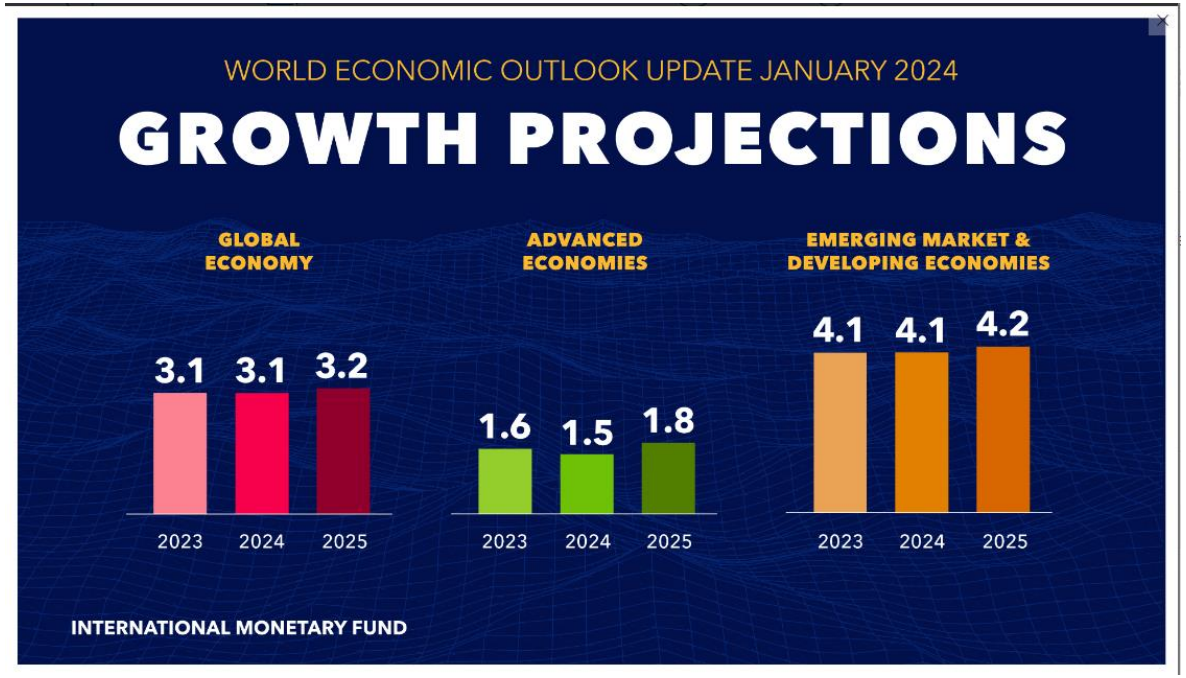
Ghana's central bank has raised interest rates by 300 basis points to 22 per cent, its largest increase since 2002, as it seeks to tame soaring inflation and a fast-depreciating local currency.

The rise was announced late on Wednesday after an emergency meeting of the bank's monetary policy committee. The committee, which usually meets every two months, convened to address the "strong underlying inflationary pressures", it said in a statement.

The move comes after the central bank unexpectedly held interest rates last month. The bank has bumped benchmark rates by 850bp since November, having previously held them at 13.5 per cent since 2015.

Global Economic Developments (2024-2025)

- **Growth Projection**: 3.1% (2024), 3.2% (2025) *Revised up by 0.2% due to U.S. resilience*
- **Factors Impacting Growth**: Central bank rates, fiscal withdrawal, low productivity.
- **Inflation Outlook**: 5.8% (2024), 4.4% (2025) (downward revision)
- **Risks & Challenges**: Balanced global growth risks. Upside: Faster disinflation, looser fiscal policy. Downside: Geopolitical shocks, inflation persistence.
- **Policy Recommendations**: Monetary calibration, fiscal consolidation. Structural reforms for growth. Multilateral coordination for debt and climate.



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External Shock: Ghana 2020

IMPACT OF THE COVID-19 PANDEMIC AND MEDIUM-TERM OUTLOOK

Ghana: Key Macroeconomic Indicators, 2018-21

	2018	2019	2020		2021	
	Est.	Prel.	2019 AIV	Proj.	2019 AIV	Proj.
	(annual percentage change, unless otherwise indicated)					
GDP at constant prices	6.3	6.1	5.8	1.5	4.0	5.9
Consumer price index (annual average)	9.8	7.2	7.6	9.7	7.3	8.5
Overall fiscal balance (in percent of GDP)	-7.0	-7.5	-6.4	-9.5	-5.4	-5.0
Overall balance excluding financial and energy sector related costs (in percent of GDP)	-3.7	-4.7	-4.9	-6.4	-4.4	-4.0
Central government debt (gross, in percent of GDP)	59.0	63.2	63.3	68.7	63.1	67.2
Domestic debt	30.1	30.8	30.1	30.1	31.0	32.8
External debt	28.9	32.4	33.2	38.6	32.1	34.4
Current account balance (in percent of GDP)	-3.1	-2.7	-3.6	-4.5	-3.6	-3.0
Gross international reserves (millions of US$)	5,317	6,634	5,015	5,310	5,066	5,538
in months of prospective imports of goods and services	2.6	3.4	2.3	2.7	2.3	2.7

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

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QUESTIONS?

Quiz 1

Let’s go to Menti!

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II. Real Sector

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What is GDP?

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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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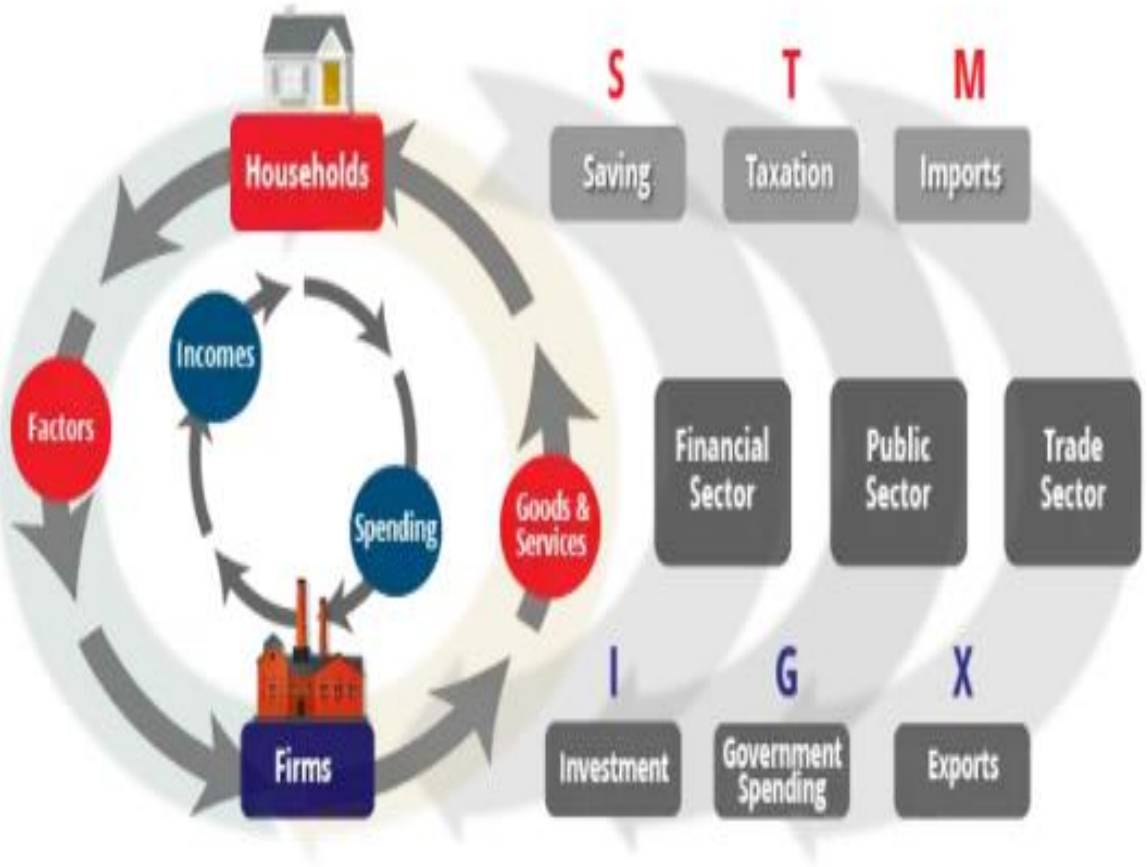
What is the Real Sector?

- **Real economic transactions** in the economy
- Main economic agents are:
  - Households
  - Enterprises
  - Financial intermediaries
  - Government
  - Non-residents (Rest of the World)

Circular Flow of Production, Expenditure and Income



- Households: Own production factors and provide them to firms and government
- Firms and Government: Produce goods and services using factors of production from households and compensate them, generating incomes
- Expenditures (C, I, G, X-M): Firms, government, and households purchase goods and services, financing their expenditures through incomes or borrowing
- Rest of the World (RoW): Provides imports and purchases exports
- Additional Income Flows: Occur outside the market, such as direct taxes and government transfers. Disposable income is affected by these factors, leading to savings

Macroeconomic Accounts: Gross Domestic Product (GDP)

- It represents the market value of all final goods and services produced within a country during a given period (e.g., year, quarter).
- GDP is a flow variable and provides insight into the country's economic performance.

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How is GDP measured? Three approaches

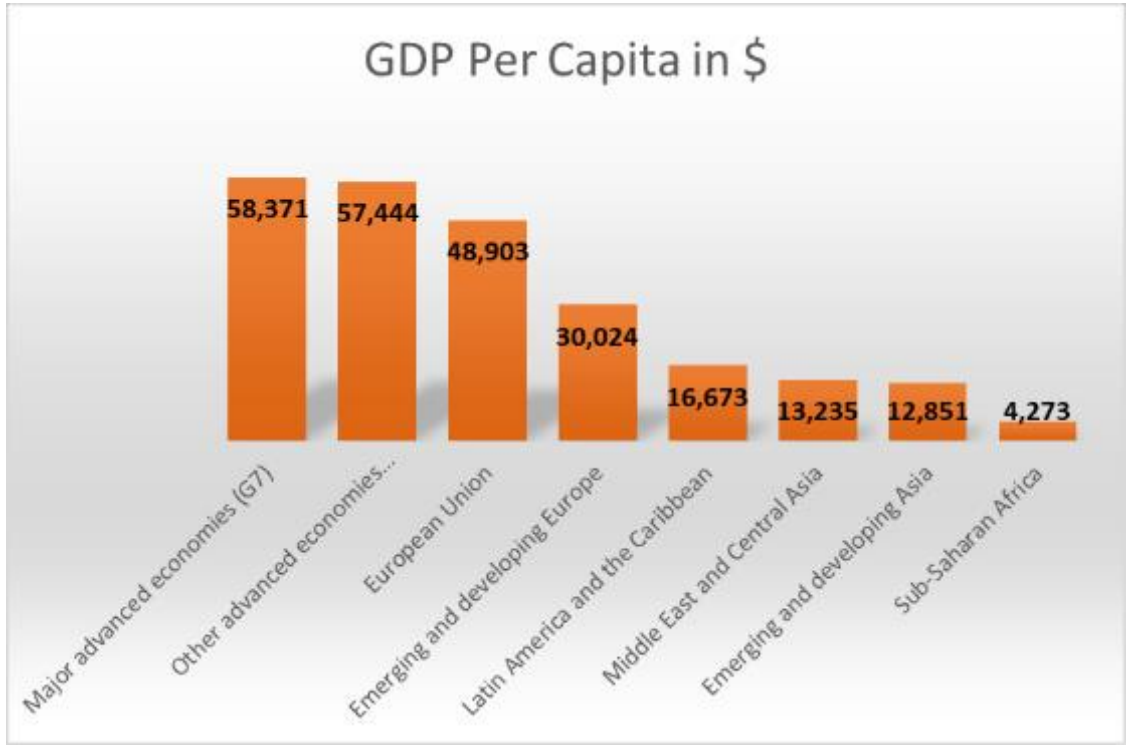
1. **Expenditure Approach** (**demand side**) : it measures the sum of all *final demands* for output in the economy at market prices, including consumption by households (C), government spending (G), private investment (I), and net exports (X-M): GDP = C + G + I + (X - M)
2. **Production Approach** (**supply side**): It measures the sum of value added across sectors (primary, secondary, tertiary) of the economy, representing the difference between output value and intermediate goods used in production
3. **Income Approach:** It adds up incomes of all factors (labor and capital) that contribute to the production process.

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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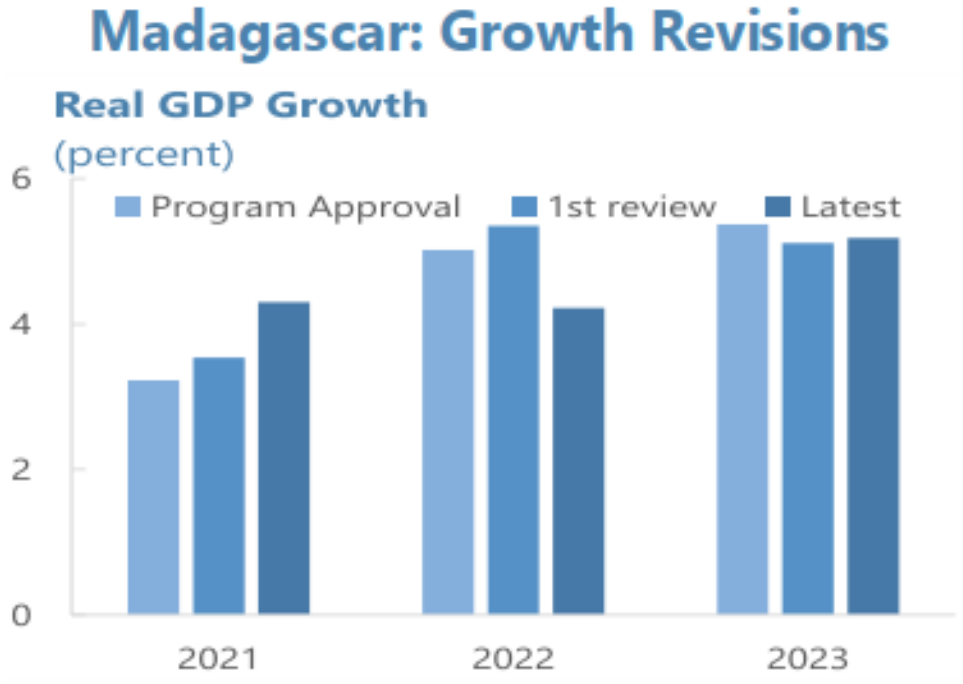
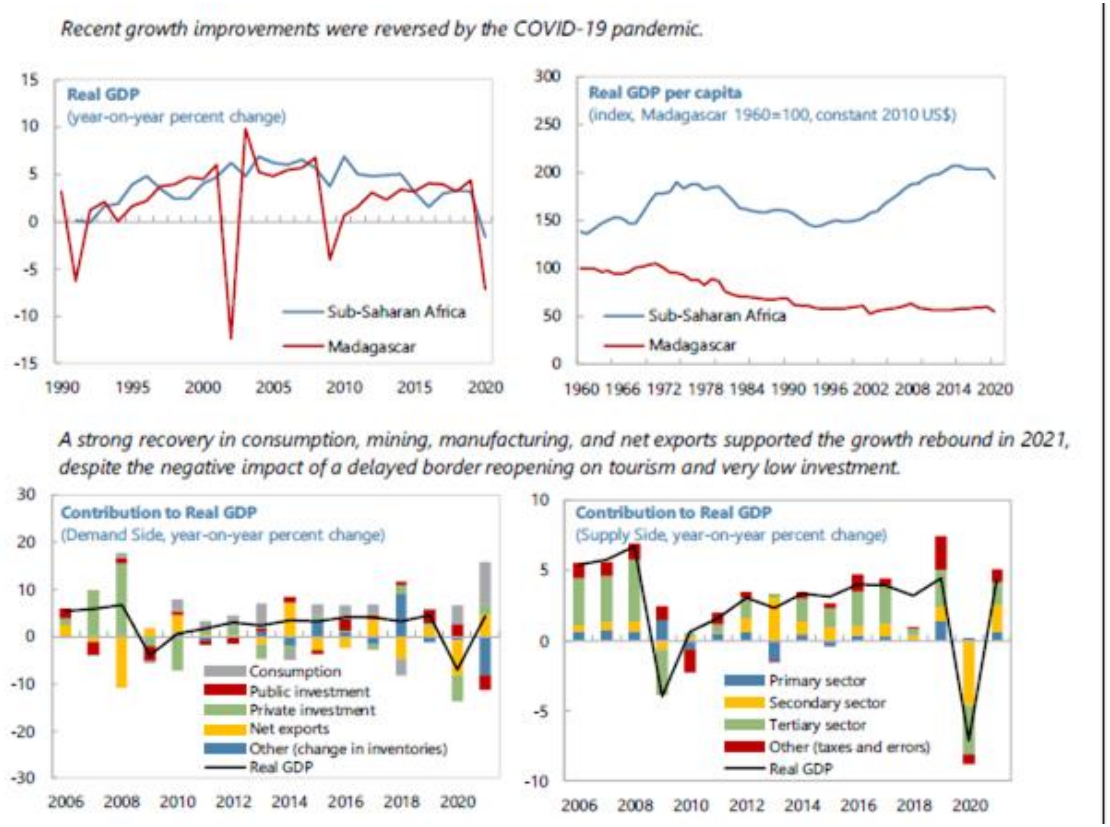
Measuring Economic Growth in a Country Nominal vs Real GDP

- 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

Measuring Economic Growth in a Country
Nominal vs Real GDP – Madagascar IMF CR 2022



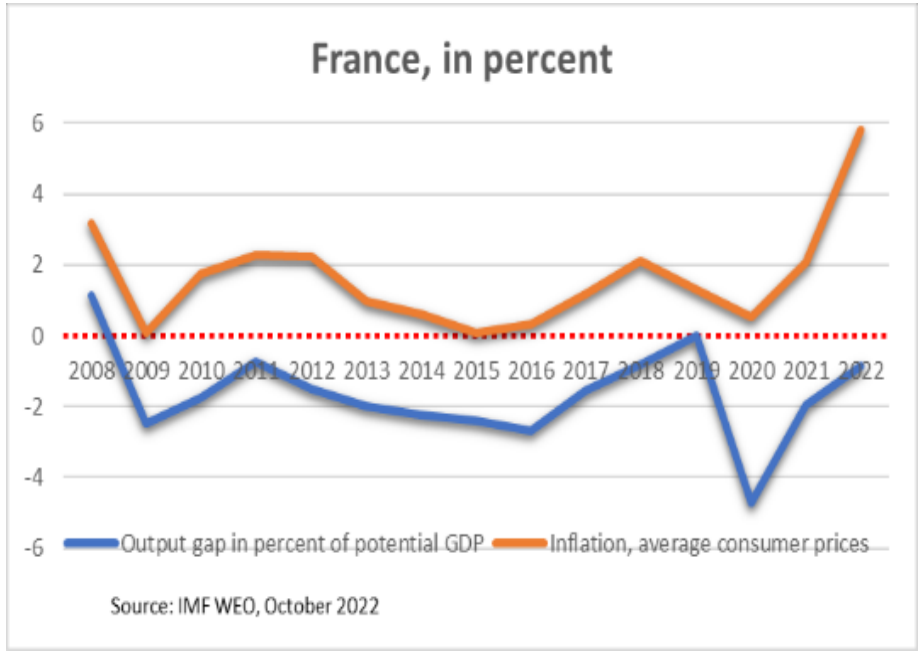
Sources: Malagasy Authorities; and IMF staff projections.



European Commission

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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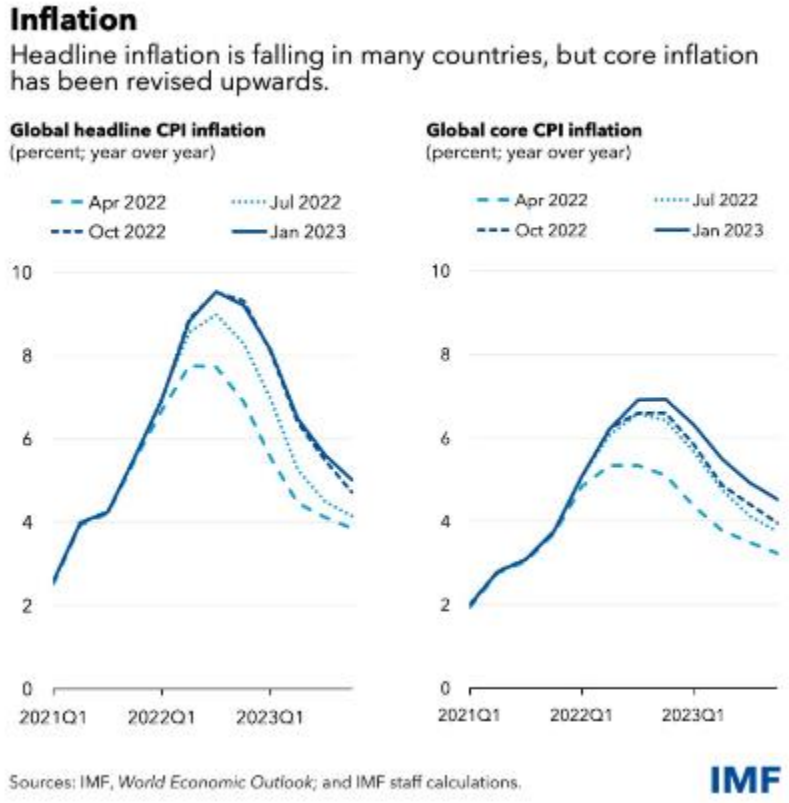
Inflation

=> 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



European Commission

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

- $Y = \underbrace{C + I}_{\text{Dom.Abs.}} + \underbrace{(X-M)}_{\text{Trade Balance}}$
- $Ydom = Ynat + Rx \quad ; \quad Sdom = Ydom - C \quad ; \quad Snat = (Ydom - Rx) - C$
- From NA identities:
- $Sdom = Ydom - C = I + (X-M)$ and $Snat = Ydom - Rx - C = I + \underbrace{(X-M-Rx)}_{\text{Current Account Balance}}$

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

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QUESTIONS?

Quiz 2

Let’s go to Menti!

Mentimeter

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III. External Sector

Balance of Payments (BoP)

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

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

Double-Entry Accounting

Credits	Debits
Exports of G&S	Imports of G&S
Disposal of assets (Gold and claims)	Acquisition of gold and claims on RoW
Incurrence of liabilities	Decrease in liabilities
Donations received	Donations made

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

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) Reserve assets
d) Errors and omissions
e) Overall Balance (= a+b+c+d)

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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 (+)
  - Disposal of assets (gold and claims) on the world
  - Incurrence of liabilities to the world
- Debits (-)
  - Acquisition of gold and claims on the world
  - Decrease in liabilities to the world

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')

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

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BoP Analytical Presentation

- 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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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.

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)

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?

Table 5a. Madagascar: Balance of Payments, 2018-27

	2018	2019	2020		2021			2022		
	Actuals	Est.	ECF	Est.	Program approval	1st review	Est.	Program approval	1st review	Proj.
					(Millions of SDRs)					
Current account	70	-234	-651	-504	-503	-543	-494	-478	-541	-606
Goods and services	-335	-482	-901	-841	-891	-1,011	-1,011	-749	-870	-985
Trade balance of goods	-324	-611	-654	-645	-647	-588	-679	-631	-683	-640
Exports, f.o.b.	2,143	1,891	1,387	1,402	1,673	1,884	1,904	1,963	1,973	2,390
of which: Mining	594	551	257	262	441	542	542.5	633	637	809
of which: Vanilla	605	423	366	367	371	423	434	383	401	399
Imports, f.o.b.	-2,467	-2,502	-2,041	-2,046	-2,320	-2,472	-2,583	-2,594	-2,656	-3,029
of which: Petroleum products	*-387*	*-403*	*-256*	*-256*	*-337*	*-339*	*-339*	*-337*	*-424*	*-525*
of which: Food	*-373*	*-327*	*-323*	*-324*	*-363*	*-455*	*-464*	*-379*	*-436*	*-500*
of which: Intermediate goods and capital	*-997*	*-1,014*	*-805*	*-810*	*-852*	*-1,056*	*-1,063*	*-1,055*	*-987*	*-1,247*
Services (net)	-11	129	-247	-197	-245	-423	-332	-119	-187	-345
Receipts	935	1,036	436	444	669	396	449	910	755	573
of which: Travels	*489*	*538*	*103*	*103*	*291*	*42*	*69*	*483*	*339*	*166*
Payments	-946	-907	-683	-641	-914	-819	-781	-1,029	-942	-918
Income (net)	-281	-329	-300	-276	-154	-217	-180	-286	-261	-251
Receipts	40	44	35	32	43	32	30	45	40	31
Payments	-321	-373	-335	-308	-197	-249	-210	-331	-301	-283
of which: interest on public debt	*-22*	*-29*	*-22*	*-22*	*-21*	*-21*	*-20*	*-18*	*-42*	*-38*
Current transfers (net)	686	578	550	613	543	685	698	557	590	630
Official transfers	126	86	97	105	70	22	22	51	24	9
of which: Budget aid [1]	*85*	*73*	*83*	*83*	*54*	*0*	*0*	*34*	*0*	*0*
Private transfers	560	491	453	509	472	662	675	507	566	621
Capital and financial account	41	150	517	370	508	769	677	536	545	568
Capital account[1]	171	241	221	153	178	169	56	167	222	278
of which: Project grant [1]	*171*	*241*	*221*	*153*	*178*	*169*	*56*	*167*	*222*	*278*
Financial account	-14	-52	296	172	330	600	622	368	323	290
Foreign direct and portfolio investment	351	270	176	180	225	153	171	265	203	186
Other investment	-364	-322	120	-9	105	447	450	103	120	105
Government	154	131	107	158	366	354	197	378	357	417
Drawing	204	182	165	216	430	409	255	474	457	493
Project drawings [1]	167	177	151	201	297	308	154	440	422	484
Budgetary support [1]	37	5	14	15	133	101	101	34	35	8
Amortization	-50	-50	-58	-58	-64	-56	-58	-95	-100	-76
Monetary authority and private sector	-156	-244	-121	-122	-98	347	247	-245	-246	-121
Banks	38	-12	-37	-95	0	4	8	0	0	50
Other (inc. unrepatriated export revenues)	-407	-221	171	50	-163	-249	13	-30	9	-141
Errors and omissions	-116	-38	0	45	0	0	0	0	0	0
Overall balance	110	-83	-134	-134	5	226	184	57	4	-38

Madagascar CR

- CAB
- Capital and Financial accounts
- E&0
- Errors and Omissions

European Commission

Madagascar BoP 'below the line'

Table 5a. Madagascar: Balance of Payments, 2018-27

	2018	2019	2020		2021			2022		
	Actuals	Est.	ECF	Est.	Program approval	1st review	Est.	Program approval	1st review	Proj.
Overall balance	110	-83	-134	-134	5	226	184	57	4	-38
Financing	-110	83	134	134	-5	-226	-228	-57	-4	38
Use of IMF credit (net)	24	59	25	25	85	49	49	30	82	82
Other assets, net (increase = –)[2]	-135	25	-141	-141	-111	-296	-292	-91	-90	-48
Exceptional financing-Grant for debt relief under CCRT[3]	*0*	*0*	*6*	*6*	*12*	*12*	*6*	*3*	*3*	*3*
Exceptional financing-G-20 DSSI			*0*	*0*	*9*	*9*	*9*		*0*	*0*
Exceptional financing-RCF disbursement			*244*	*244*						
Residual financing gap (unidentified financing)	0	0	0	0	0	0	44	0	0	0

European Commission

QUESTIONS?

Quiz 3

Let’s go to Menti!

Mentimeter

European Commission

BoP Accounting

CASE STUDY

European Commission

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

IV. Government Sector

FISCAL POLICY

European Commission

Can you name some activities of the government sector?

Mentimeter

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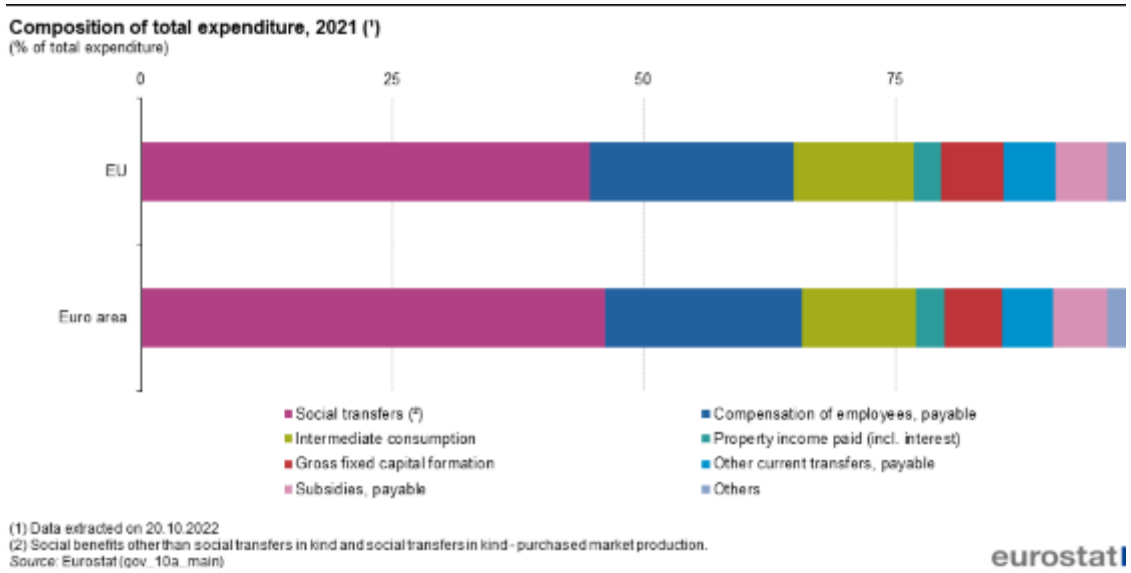
Government Sector Activities

- 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

European Commission

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?

Quiz 4

Let’s go to Menti!

Mentimeter

European Commission

Fiscal Accounting

CASE STUDY

European Commission

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

European Commission

V. Monetary and Financial Sector

European Commission

What happens when a central bank increases interest rates?

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**

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)

Economic Functions of Money

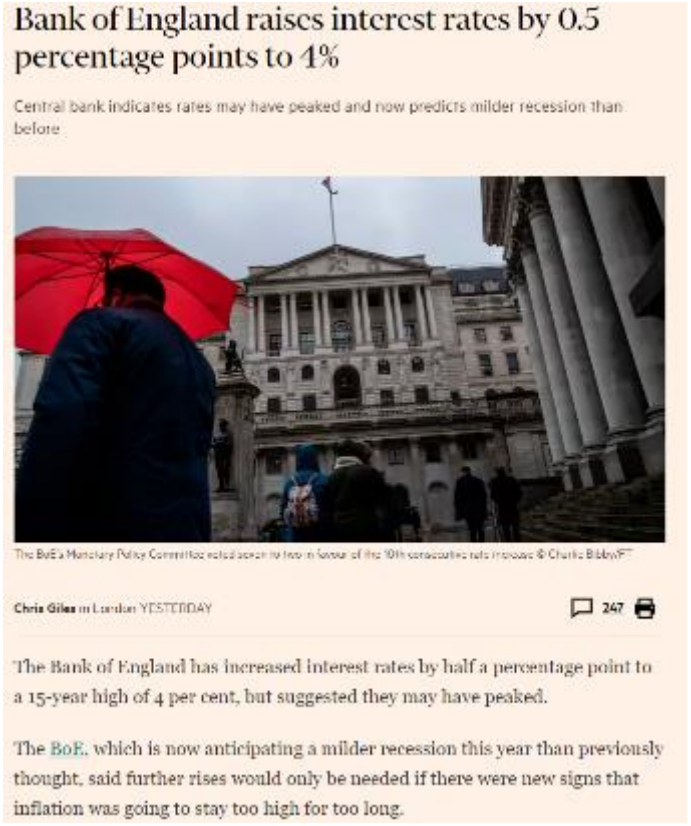
- **Medium of Exchange:** Facilitates the exchange of goods and services, widely accepted as a medium of transaction
- **Unit of Account**: Serves as a benchmark for pricing all other goods
- **Store of Value and Standard of Deferred Payment**:
  - Functions as an asset, allowing wealth to be held in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

The Role of the Interest Rate

- Nominal interest rate is **paid by borrowers** on loans or bonds denominated in monetary terms
- Nominal interest rates matters as they represent the **opportunity cost** for households and firms to hold wealth in the form of money. Since money has a zero nominal interest rate, it must be compared with the nominal rate available for other assets
- Holding money foregoes potential nominal interest, leading to a decline in **money demand** as interest rates rise
- Central banks use interest rate changes as a **key monetary policy** tool to influence economic activity, inflation, and overall financial conditions
- Changes in interest rates **also impact investment decisions**, influencing economic activities and financial markets

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 BoE's Monetary Policy Committee voted seven to two in favour of the 10th consecutive rate increase © Chris Ratcliffe/PT

Chris Giles in London YESTERDAY

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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.

Money Creation

- Central banks create the monetary base, regulating overall money supply
- Money creation occurs through activities such as purchasing government securities, financing deficits, buying foreign exchange, and lending to the domestic banking sector

The Money Multiplier and the Creation of Money—Role of Central Banks and Banks

- 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

Money and Inflation

- An undesired increase in the stock of money can lead to higher inflation
- By effectively controlling the stock of money in the economy, the CB can also control inflation
- Thus, if the CB can control the growth of the monetary base, it can regulate the growth of credit to the private sector
- An undesired increase in the stock of money should lead to higher inflation in the economy, making managing the money supply crucial for the Central Bank (CB) to regulate inflation based on the Quantity Theory of Money

Other Depository Corporations (ODCs)

- The ODCs are **deposit-taking** financial institutions
- ODCs mobilize savings and **foster economic growth** by channeling funds to productive sector
- 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

Importance of 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

QUESTIONS?

Quiz 5

Let’s go to Menti!

Mentimeter

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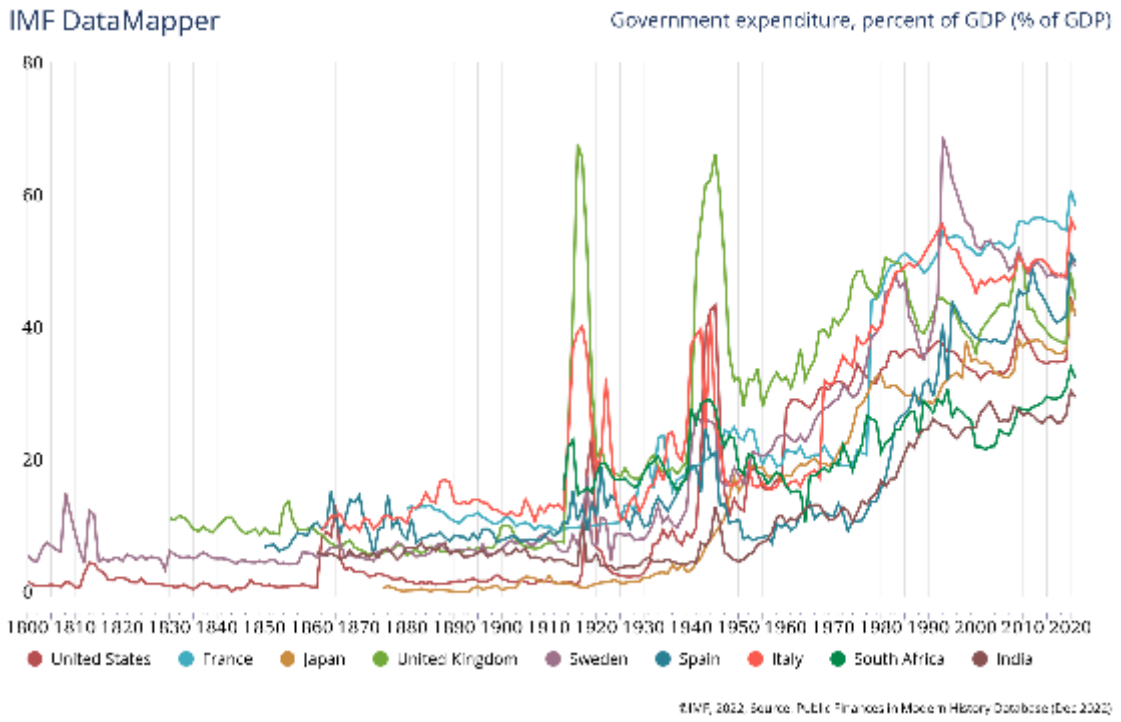
VI. IMF Approach to Macroeconomics and Introduction to Financial Programming

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



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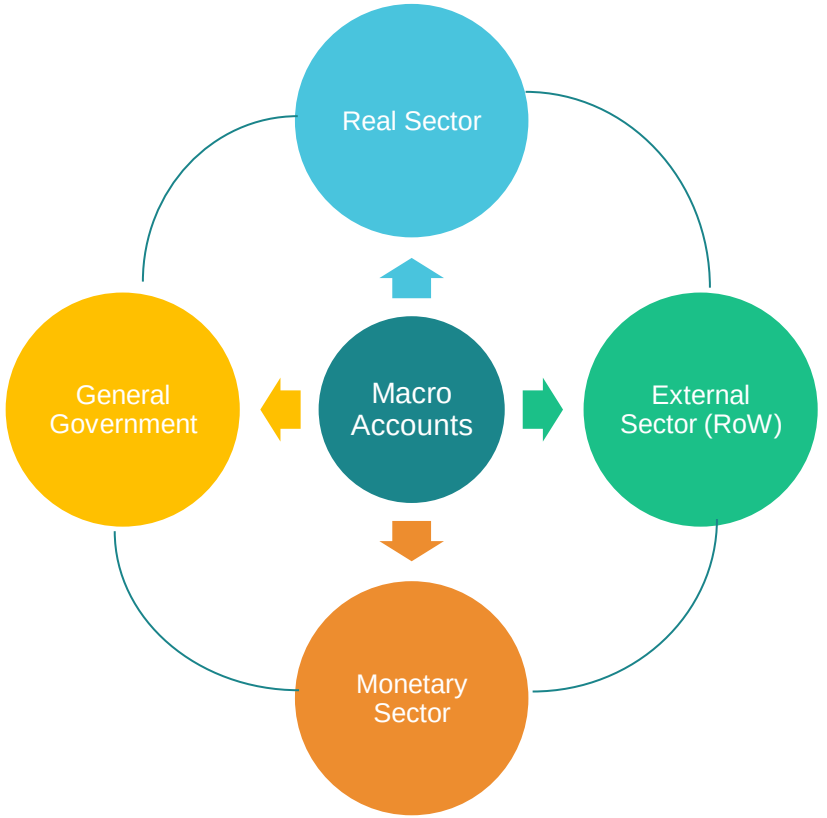
The Four Main ‘Accounts’ in Financial Programming

1. **Foundation of Financial Programming:**
   - Rooted in the four accounts representing the main sectors of the economy
2. **Definition of Accounts:**
   - **Real :** National Accounts representing the production and utilization of goods and services
   - **Government:** Fiscal accounts delineating government financial operations
   - **Monetary:** Monetary Survey capturing assets and liabilities of banks
   - **External sector :** Balance of Payments (BoP) and International Investment Position (IIP)



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Crucial Role of Sectoral Accounts

- Analyze accounting links to understand connections between various accounts.
- Build a coherent picture to construct a comprehensive macroeconomic framework.
- Scenario assessment to evaluate hypothetical shocks for informed decision-making.

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.

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 Demand (A) = C + I
- Current Account Balance (CAB) = S - I

Numerical exercise

Plenary discussion

European Commission

Numerical Example: Macroeconomic Impact Analysis

1. **Key Accounting Relationship:**
   - $Y + M = Cp + Cg + Ip + Ig + X$
2. **Scenario Analysis:**
   - Government expenditures increase by $10
3. **Objective:**
   - Evaluate macroeconomic impact of hypothetical shocks.
4. **Analysis:**
   - Identify changes in:
     - private consumption (Cp),
     - government consumption (Cg),
     - private investment (Ip),
     - government investment (Ig),
     - net exports (X)

Conclusion:

- Understand the interconnected relationships among economic sectors and the broader implications for aggregate demand and economic output

Interconnected Real Sector and Fiscal Accounts

Real sector components

- Private consumption
- Government consumption
- Government investment

General government

- Expenses:
  - G&S
  - Salaries

Understanding the intricate connections between the real sector and government finances aids the IMF in formulating policies that promote sustainable economic growth

Real Sector Dynamics and Balance of Payments

Real Sector

- Exports of G&S
- Imports of G&S

External Sector

- Current account
  - Exports of G&S
  - Import of G&S

The balance between real sector dynamics and BoP considerations is crucial for the IMF to assess a country's external position and vulnerabilities

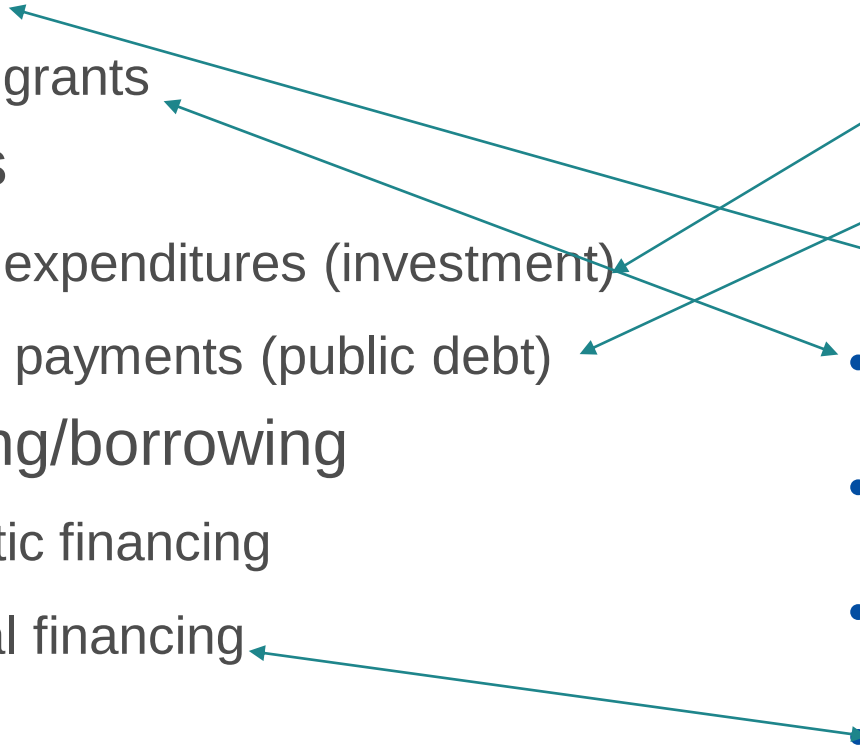
Fiscal Operations Impact on the Balance of Payments

General government fiscal components

- Revenue & grants
  - Grants
  - Project grants
- Expenses
  - Capital expenditures (investment)
  - Interest payments (public debt)
- Net lending/borrowing
  - Domestic financing
  - External financing

External sector

- Current account
  - Exports of G&S
  - Imports of G&S
  - Primary income
  - Secondary income
- Capital account
- Financial account
- Portfolio investments
- Other investments



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Monetary and External Sector Dynamics

Monetary Sector

- Central Bank
  - Net foreign assets
  - Net domestic assets

External sector

Current account

Capital and financial account

- Direct investment
- Portfolio investment
- Other

Change in reserve assets

The IMF's scrutiny of the monetary sector's interaction with the external sector is pivotal for assessing a country's financial stability and exchange rate policies

Interrelations Among Macroeconomic Accounts

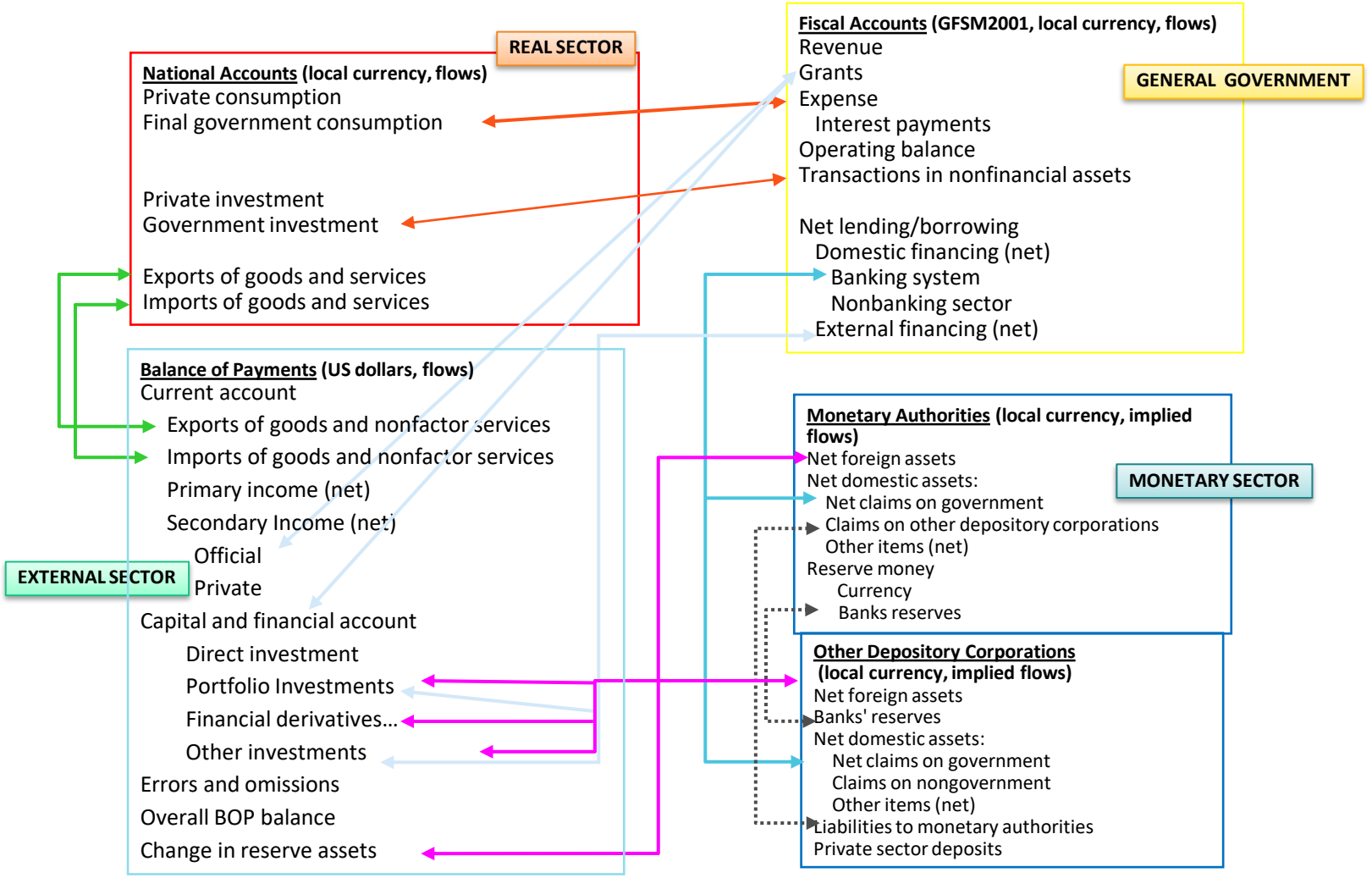

Table 1. Selected Economic Indicator, 2019-24

	2019	2020	2021	2022	2023	2024
	Est.		Proj.			
	(Percent change; unless otherwise indicated)					
National account and prices						
GDP at constant prices	4.4	-7.1	4.3	4.2	5.2	5.2
GDP deflator	6.5	4.4	6.1	9.1	8.3	6.8
Consumer prices (end of period)	4.0	4.6	6.2	12.0	9.7	8.7
Money and credit						
Broad money (M3)	7.3	12.1	12.2	32.5	12.9	13.2
	(Growth in percent of beginning-of-period money stock (M3))					
Net foreign assets	-2.6	2.1	1.0	4.4	0.4	3.0
Net domestic assets	9.9	10.0	11.2	28.1	12.5	10.2
of which: Credit to the private sector	10.3	5.6	11.1	9.0	7.6	7.9
	(Percent of GDP)					
Public finance						
Total revenue (excluding grants)	10.8	9.9	10.7	11.6	12.2	12.8
of which: Tax revenue	10.6	9.5	10.4	11.3	11.9	12.6
Grants	3.1	2.5	0.6	2.5	2.0	2.0
of which: budget grants	0.7	0.9	0.0	0.0	0.1	0.3
Total expenditures	15.4	16.3	14.1	20.5	19.0	19.5
Current expenditure	9.5	9.6	8.9	11.2	10.0	10.0
Capital expenditure	5.8	6.8	5.2	9.3	9.0	9.5
Overall balance (commitment basis)	-1.4	-4.0	-2.9	-6.5	-4.8	-4.7
Domestic primary balance[1]	0.3	-1.9	-0.3	-1.4	0.0	0.3
Total financing	1.3	3.5	3.1	6.5	5.1	5.0
Foreign borrowing (net)	1.3	1.8	2.2	3.7	3.4	3.9
Domestic financing	0.0	1.7	0.9	2.8	1.7	1.0
Financing gap[2]	0.0	0.0	0.0	0.0	0.0	0.0
Savings and investment						
Investment	18.3	15.0	14.9	19.4	20.4	22.2
Gross national savings	17.5	8.2	9.9	14.0	15.3	17.1
External sector						
Exports of goods, f.o.b.	18.5	15.0	19.0	21.3	21.5	20.9
Imports of goods, c.i.f.	26.9	24.3	29.2	30.2	28.5	28.6
Current account balance (exc. grants)	-5.4	-7.9	-5.5	-7.9	-7.1	-7.0
Current account balance (inc. grants)	-2.3	-5.4	-4.9	-5.4	-5.1	-5.1

Madagascar CR-2022

- SEI: summary of the four main accounts and sectors of the economy in Madagascar
- Relationships among these sectors and consistency

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Madagascar—Program Conditionality

Table 1. Madagascar: Quantitative performance criteria and indicative targets, September 2021-June 2023
(Billions of MGA, unless otherwise specified)

(Billions of Ariary; unless otherwise indicated)

	Sep-21			Dec-21			Mar-22			Jun-22	Sep-22	Dec-22	Mar-23	Jun-23
	Target	Actual	Status	Target	Actual	Status	Target	Actual	Status	Target	Target	Target	Target	Target
Continuous Performance Criteria														
Ceiling on accumulation of new external payment arrears	0	0	**Met**	0	0	**Met**	0	0	**Met**	0	0	0	0	0
Ceiling on new external debt contracted or guaranteed by the central government or BFM, in present value terms (US$ millions)[1]	800	246	**Met**	800	518	**Met**	800	551	**Met**	800	800	800	800	800
Performance Criterion	**IT**			**PC**				**IT**		**PC**	**IT**	**PC**	**IT**	**PC**
Floor on domestic primary balance[2]	-1,324	136	**Met**	-1,426	-178	**Met**	-157	-59	**Met**	-293	-660	-888	115	-45
Ceiling on net domestic assets (NDA) of BFM	2,578	1,794	**Met**	2,838	2,148	**Met**	1685 Adjusted: 2795	2,472	**Met with adjustor**	2,135	2,630	3,010	2,610	2,950
Floor on net foreign assets (NFA) of BFM (millions of SDRs)	623	633	**Met**	645 Adjusted: 559	634	**Met**	836 Adjusted: 635	532	**Not met**	816	571	686	727	727
Indicative Targets														
Floor on gross domestic tax revenue	2,453	2,373	**Not met**	3,384	3,225	**Not met**	942	706	**Not met**	2,068	2,600	3,800	990	2,250
Floor on gross customs tax revenue	1,785	1,829	**Met**	2,550	2,657	**Met**	704	746	**Met**	1,439	2,400	3,380	950	1,800
Floor on social spending[3]	282	140	**Not met**	513	299	**Not met**	71	7	**Not met**	178	300	527	96	240
Memorandum Items														
Official external budget support (grants, millions of SDRs)[4]		0			0		0	0		0	1	1	3	5
Official external budget support (loans, millions of SDRs)[4]		101			101		110	101		110	101	109	109	142
Program exchange rate (MGA/SDR)	5,509			5,509			5,509			5,509	5,509	5,509	5,509	5,509

European Commission

QUESTIONS?

VII. Country case study

Ghana

European Commission

Case Study—Ghana

- Ghana entered crisis relatively well prepared with favorable macroeconomic and financial conditions.
- Ghana has tapped **international capital markets** and issuance a US$3 billion Eurobond in February 2020.
- However, Ghana was **severely impacted by the pandemic** through a **collapse in oil prices** mainly, and a tightening of financing conditions deepening fiscal and current account deficits resulting in a higher debt path.

Impact of Covid-19 Pandemic and Medium-term Outlook

Ghana: Key Macroeconomic Indicators, 2018-21

	2018	2019	2020		2021	
	Est.	Prel.	2019 AIV	Proj.	2019 AIV	Proj.
	(annual percentage change, unless otherwise indicated)					
GDP at constant prices	6.3	6.1	5.8	1.5	4.0	5.9
Consumer price index (annual average)	9.8	7.2	7.6	9.7	7.3	8.5
Overall fiscal balance (in percent of GDP)	-7.0	-7.5	-6.4	-9.5	-5.4	-5.0
Overall balance excluding financial and energy sector related costs (in percent of GDP)	-3.7	-4.7	-4.9	-6.4	-4.4	-4.0
Central government debt (gross, in percent of GDP)	59.0	63.2	63.3	68.7	63.1	67.2
Domestic debt	30.1	30.8	30.1	30.1	31.0	32.8
External debt	28.9	32.4	33.2	38.6	32.1	34.4
Current account balance (in percent of GDP)	-3.1	-2.7	-3.6	-4.5	-3.6	-3.0
Gross international reserves (millions of US$)	5,317	6,634	5,015	5,310	5,066	5,538
in months of prospective imports of goods and services	2.6	3.4	2.3	2.7	2.3	2.7

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

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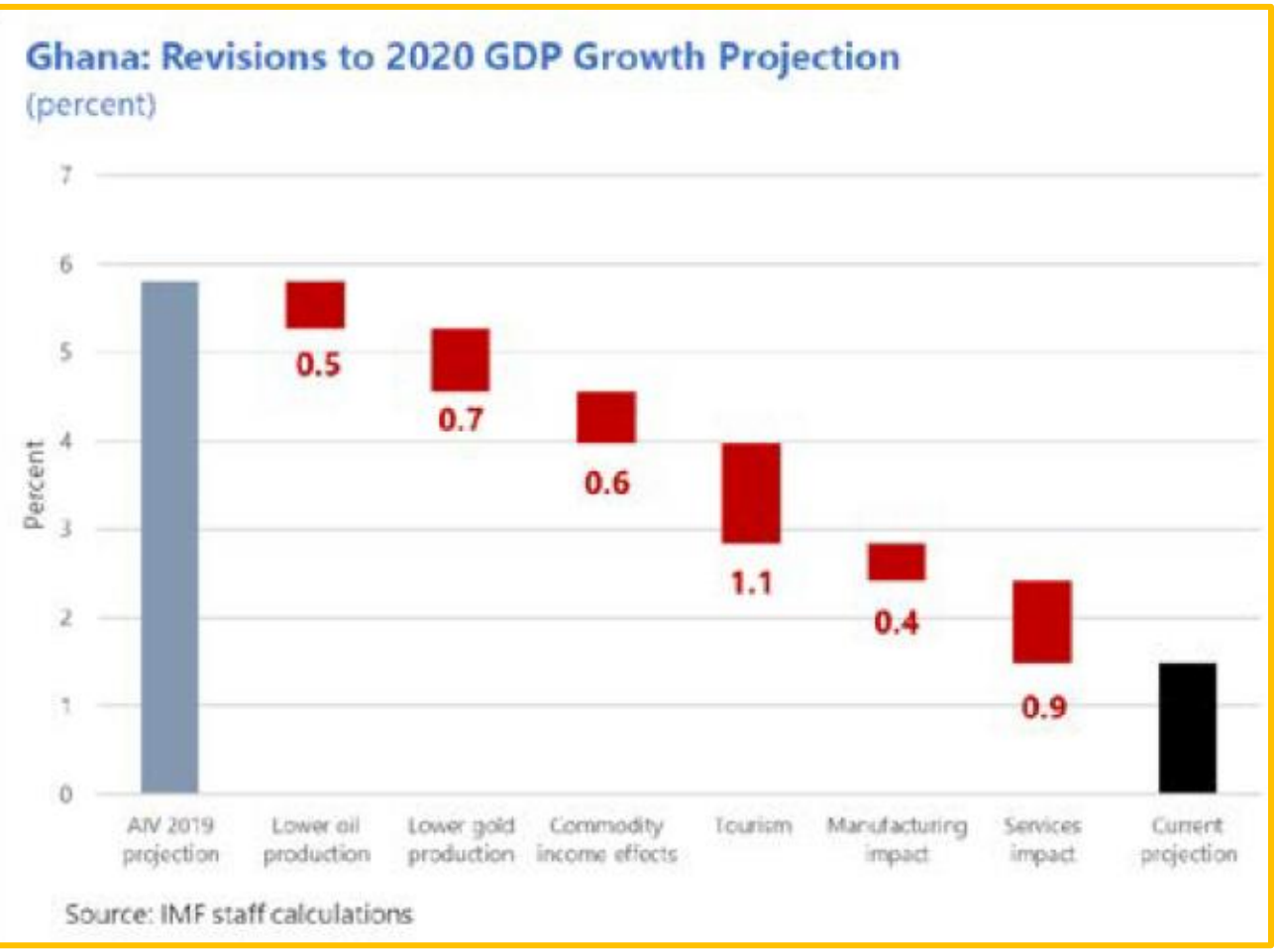
Ghana—Shocks and Macro Outlook



- Growth is projected to fall to 1.5 percent, compared to December 2019 Art. IV projection of 5.8 percent, driven by lower oil production, weak global aggregate demand, global supply chain disruptions, and a steep decline in international travel, trade and retail and hospitality services

Ghana National Accounts and Prices

Table 1. Ghana: Selected Economic Indicators, 2018–25

	2018 Est.	2019 Prel.	2020 Proj.	2021 Proj.	2022 Proj.	2023 Proj.	2024 Proj.	2025 Proj.
	(Annual percentage change; unless otherwise indicated)							
National accounts and prices								
GDP at constant prices	6.3	6.1	1.5	5.9	3.3	7.1	4.4	4.3
Non-oil GDP	6.5	5.2	1.8	5.8	4.4	4.8	4.8	4.8
Oil and gas GDP	3.6	17.0	-2.1	6.1	-9.0	38.4	0.0	-1.3
Real GDP (nonoil)	6.5	5.2	1.8	5.8	4.4	4.8	4.8	4.8
Real GDP per capita	4.1	4.0	-0.5	4.2	0.8	4.5	1.7	1.7
GDP deflator	10.2	8.8	9.3	8.3	7.3	6.4	6.5	6.4
Consumer price index (annual average)[1]	9.8	7.2	9.7	8.5	7.8	6.8	6.1	6.0
Consumer price index (end of period)[1]	9.4	7.9	9.9	8.2	7.4	6.2	6.0	6.0

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VIII. Country case study

Chad

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Chad — Background

- Fiscal deficits and below-the-line financing needs led to a significant level of debt even prior to COVID-19 pandemic. Expensive financial arrangement (e.g., loan from an oil company).
- Currently, Chad engaged in G20 Common Framework negotiations.

Chad – Government's Flow of Funds and Debt Accumulation in 2019

- For the two activities in this case study, please use data from the tables in the next slide (which are included in the IMF Country Report No 20/231).
- **Activity #1**: Construct a simple flow of funds for the Chadian Government in 2019 and compute the fiscal balances

Chad - Data Sources

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Table 1. Chad: Selected Economic and Financial Indicators, 2017–24

	2017	2018	2019
	Prel.	Prel.	Est.
Total debt (in percent of GDP)[4]	50.3	49.1	44.3
Of which : domestic debt	24.7	23.2	19.7
Memorandum items:			
Nominal GDP (billions of CFA francs)	5,855	6,127	6,406
Of which: non-oil GDP	4,830	4,961	5,130
Nominal GDP (billions of US$)	10.1	11.0	10.9

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

[1]Net of cash calls and transportation costs linked to the oil public enterprise (SHT) participation in private oil companies.

[2] includes subsidies to the electricity company starting from 2020.

[3]Includes projects financed by the BDEAC, but the corresponding loans (in CFAF) are counted as domestic financing.

[4]Total revenue, less grants and oil revenue, minus total expenditures, less interest payments and foreign financed investment.

[5]Difference between committed and cash expenditure, and errors and omissions.

[5]Recognized arrears, as registered by the Treasury in the "restes à payer"

[7]Other arrears include unrecognized arrears, the total of which will be specified after the audit of arrears, and the clearance in 2018 of CFAF 54 billio
then public company Coton Tchad owed to domestic banks.

[8]Bilateral or multilateral loans in CFAF (e.g. BDEAC, loan from Cameroon in 2016).

[9]All debt to BEAC was consolidated and rescheduled in September 2017 into long term securities.

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Table 2. Chad: Fiscal Operations of the Central Government, 2019–21

(In billions of CFAF, unless otherwise indicated)

	2019
	Est.
Total revenue and grants	885
Revenue	806
Oil[1]	326
Non-oil	480
Tax	461
Non-tax	19
Grants	79
Budget support	7
Project grants	72
Expenditure	924
Current	639
Wages and salaries	360
Civil Service	248
Military	111
Goods and services	83
Transfers and subsidies[2]	133
Interest	64
Domestic	21
External	43
Of which: Glencore loan (after restructuring)	*31*
Investment	285
Domestically financed	153
Foreign financed[3]	132
Overall balance (incl. grants, commitment)	-39
Non-oil primary balance (excl. grants, commitment)[4]	-249
Float from previous year[5]	-49
Float at end of period[5]	90
Var. of Arrears[6]	-64
Repayment of other arrears[7]	0
Overall balance (incl. grants, cash)	-62
Non-oil primary balance (excl. grants,cash)	-272
Financing	65
Domestic financing	38
Bank financing	179
Central Bank (BEAC)	179
Deposits	105
Advances (net)	0
IMF	74
Commercial banks (deposits)	0
Other financing (net), of which:	-141
Amortization	*-74*
Commercial banks loans	*0*
Non-bank loans (gross) [8]	*2*
Treasury bills (net)	*-70*
Treasury Bonds (gross)	*0*
Bank Recapitalization	*0*
Stabilization Funds	*0*
Privatization and other exceptional receipts	0
Foreign financing	27
Loans (net)	-1
Disbursements	72
Budget borrowings	13
Project loans	59
Amortization	-73
Of which: Glencore loan (after restructuring)	-24
Debt relief/rescheduling (HIPC)	28
Financing Gap	-2
RCF-1	
Prospective RCF	
Prospective financing from World Bank	
Prospective financing other development partners	
CCRT	
DSSI	
Residual financing gap	
Memorandum items:	
Non-oil GDP	5,130
Poverty-reducing social spending	241
Bank deposits (including BEAC)	149
(In months of domestically-financed spending)	2.3
BEAC advances[9]	480

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Chad – Government's Flow of Funds in 2019

The Flow of Funds states that:

Sources of Funds = Uses of Funds

Revenues + Borrowings + Other Financing Sources = Expenditures + Amortizations

What is the Flow of Funds in 2019? Complete the equation above using data from Table 2 (figures in CFAF billions).

Hints:

Revenues = 885

Borrowings = 148 = On-lending from BEAC of IMF loans (net) + Non-bank Loans + Disbursement of Foreign Loans = 74+2+72

Other Financing Sources = 105 = *Withdrawals* of Deposits at BEAC

Expenditure (cash) = 947 = Expenditure (accrual) – Change in Float Stock – Change in Arrears Stock = 924 – (90–49) – (-64)

Amortizations (cash) = 189 = Amortization T-Bonds and Non-bank Loans + Amortization T-Bills (net of issuances) + Amortization of Foreign Loans – HIPC Debt Relief/Rescheduling = 74 + 70 + 73 - 28

What are the fiscal balances in 2019? Calculate the indicators below using data from Table 2 (figures in CFAF billions).

Overall Fiscal Balance (cash) = Revenues – Expenditures (cash) □ -62 = 885 – 947 (***overall deficit***)

Primary Fiscal Balance (cash) = Revenues – (Expenditure (cash) – Interests) □ 2 = 885 – (947 – 64) (***primary surplus***)

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Chad – Solutions

The Flow of Funds in 2019 is:

Sources of Funds = Uses of Funds

Revenues (885) + Borrowings (148) + Other Financing Sources (105) ≈ Expenditures (cash) (947) + Amortizations (cash) (189)

Note: There is a Residual of 2

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IX. Country case study

Madagascar

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Case study—Madagascar (CR April 2021)

- Background:
  - The **pandemic has hit Madagascar** hard and has taken a **large toll on economic prospects** in the near and medium term, causing scarring and reversing recent progress in per capita income and poverty reduction.
  - Real GDP contracted; current account deficit significantly widened.
  - Authorities requested an ECF arrangement to recovery from the pandemic, anchor reform implementation, and catalyze aid commitments.
  - Considerable progress was achieved during the 2016-20 ECF arrangement, but the reform agenda remains unfinished and slowed down in the context of the pandemic.

Case study—Madagascar (CR April 2021)

- The **program design addressed Madagascar's fragilities**, including its high exposure to climate-related shocks, and focused on mitigating the economic impact of the pandemic, maintaining macroeconomic stability, and reviving the reform momentum to raise and sustain growth and reduce poverty.
- Program also **considered mitigating fiscal risks** related to SOEs.
- Given largen infrastructure needs, scaling up of foreign-financed investment was expected under the program.
- External financing will continue to be primarily on concessional terms and grants.

Table 1. Selected Economic Indicator, 2019-24

	2019	2020	2021	2022	2023	2024
	Est.		Proj.			
	(Percent change; unless otherwise indicated)					
National account and prices						
GDP at constant prices	4.4	-7.1	4.3	4.2	5.2	5.2
GDP deflator	6.5	4.4	6.1	9.1	8.3	6.8
Consumer prices (end of period)	4.0	4.6	6.2	12.0	9.7	8.7
Money and credit						
Broad money (M3)	7.3	12.1	12.2	32.5	12.9	13.2
	(Growth in percent of beginning-of-period money stock (M3))					
Net foreign assets	-2.6	2.1	1.0	4.4	0.4	3.0
Net domestic assets	9.9	10.0	11.2	28.1	12.5	10.2
of which: Credit to the private sector	10.3	5.6	11.1	9.0	7.6	7.9
	(Percent of GDP)					
Public finance						
Total revenue (excluding grants)	10.8	9.9	10.7	11.6	12.2	12.8
of which: Tax revenue	10.6	9.5	10.4	11.3	11.9	12.6
Grants	3.1	2.5	0.6	2.5	2.0	2.0
of which: budget grants	0.7	0.9	0.0	0.0	0.1	0.3
Total expenditures	15.4	16.3	14.1	20.5	19.0	19.5
Current expenditure	9.5	9.6	8.9	11.2	10.0	10.0
Capital expenditure	5.8	6.8	5.2	9.3	9.0	9.5
Overall balance (commitment basis)	-1.4	-4.0	-2.9	-6.5	-4.8	-4.7
Domestic primary balance[1]	0.3	-1.9	-0.3	-1.4	0.0	0.3
Total financing	1.3	3.5	3.1	6.5	5.1	5.0
Foreign borrowing (net)	1.3	1.8	2.2	3.7	3.4	3.9
Domestic financing	0.0	1.7	0.9	2.8	1.7	1.0
Financing gap[2]	0.0	0.0	0.0	0.0	0.0	0.0
Savings and investment						
Investment	18.3	15.0	14.9	19.4	20.4	22.2
Gross national savings	17.5	8.2	9.9	14.0	15.3	17.1
External sector						
Exports of goods, f.o.b.	18.5	15.0	19.0	21.3	21.5	20.9
Imports of goods, c.i.f.	26.9	24.3	29.2	30.2	28.5	28.6
Current account balance (exc. grants)	-5.4	-7.9	-5.5	-7.9	-7.1	-7.0
Current account balance (inc. grants)	-2.3	-5.4	-4.9	-5.4	-5.1	-5.1
Public debt	40.6	50.8	53.1	53.8	53.1	53.6
External Public Debt (inc. BFM	27.0	36.7	39.2	41.5	42.3	43.4
Domestic Public Debt	13.6	14.1	13.9	12.3	10.8	10.2
	(Units as indicated)					
Gross official reserves (millions of SDRs)	1196	1338	1630	1677	1641	1696
Months of imports of goods and services	4.2	6.0	5.8	5.1	4.8	4.7
GDP per capita (U.S. dollars)	532	478	507	522	540	562

Sources: Malagasy authorities; and IMF staff estimates and projections.
[1] Primary balance excl. foreign-financed investment and grants. Commitment basis.
[2] A negative value indicates a financing gap to be filled by budget support or other financing still to be committed

Madagascar Case Study

- What are your views on growth rate over the medium term
- What do you think might explain the overall fiscal deficit? Views on a country like Madagascar?
- Why is investment higher than savings?
- What is the link with the external sector?
- What underlies debt dynamics over the medium-term?

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Post-Course Questionnaire (Test-out)

Participants’ feedback

Thank you

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Annex

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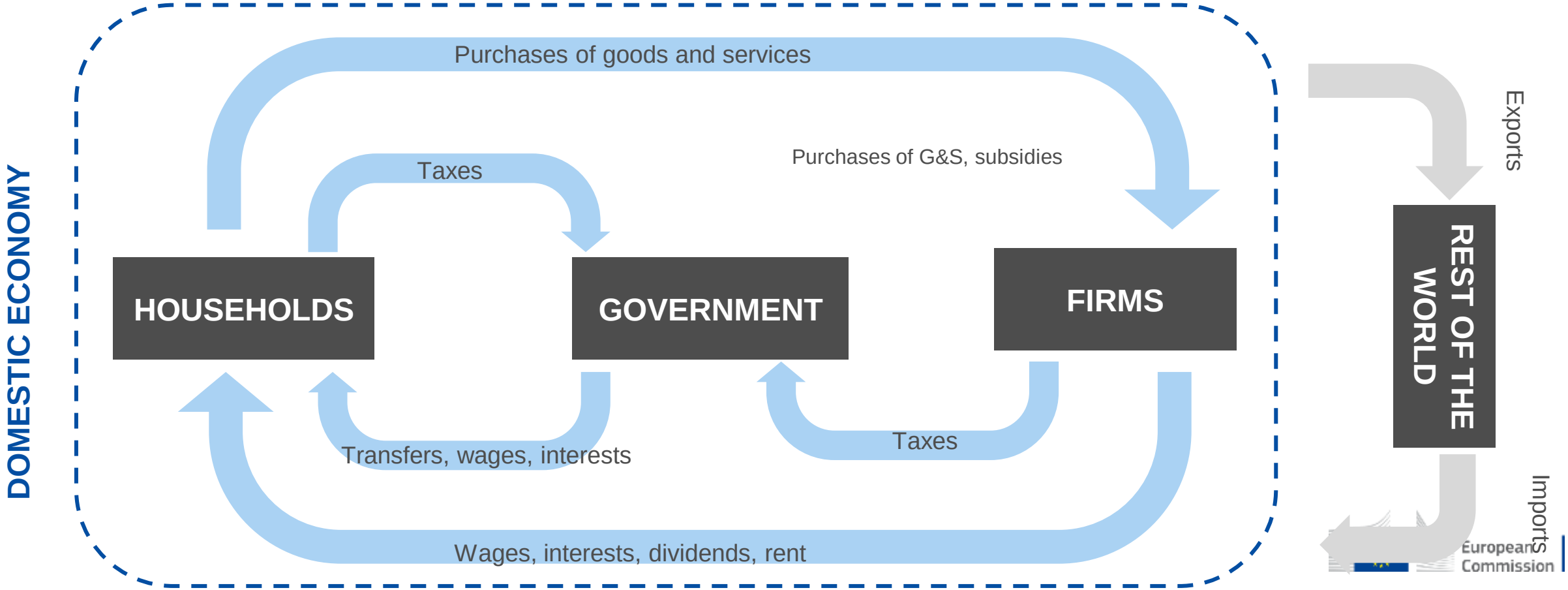
The Real Sector

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, 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 sum of the 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 throughut 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.

The Gross Domestic Product (GDP)

The final output approach and the value-added approach

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’)

TOTAL ECONOMY

		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**

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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How is GDP measured? Three approaches

1. **Expenditure Approach** (**demand side**) : it measures the sum of all *final demands* for output in the economy at market prices, including consumption by households (C), government spending (G), private investment (I), and net exports (X-M): GDP = C + G + I + (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 output value and intermediate goods used in production
3. **Income Approach:** It adds up incomes of all factors (labor and capital) that contribute to the production process.

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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