



**STATISTICS**



# **Financial Accounts Workshop**

**FINANCIAL INSTRUMENTS, VALUATIONS**

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# Outline

- ✓ **Economic Assets**
- ✓ **Financial Assets and Instruments**
- ✓ **Special Cases**
- ✓ **Valuation**
- ✓ **Other Changes in Asset Account**

# Economic Assets

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- **What is an economic asset ?**
  - *Economic assets are resources over which ownership rights are enforced and are a store of value from which future economic benefits may flow to the owner by holding or using them over time. These benefits include:*
    - the ability to use assets, such as buildings or machinery, in production;
    - the generation of property incomes: for example, interest and dividends received by the owners of financial assets; and the potential to sell and thus realize holding gains.
    - There are two categories of economic assets:  
**nonfinancial and financial assets.**



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## Classification of Transactions in Non-financial Assets

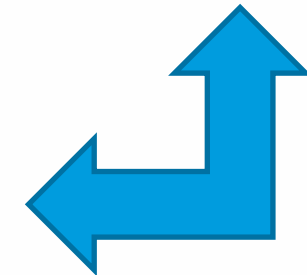
- Transactions in non-financial assets occur in the capital account, another component of the accumulation accounts

Capital account	
Changes in assets	
Code	Transactions and balancing items
P5g	Gross capital formation
P5n	Net capital formation
P51g	Gross fixed capital formation
P511	Acquisitions less disposals of fixed assets
P5111	Acquisitions of new fixed assets
P5112	Acquisitions of existing fixed assets
P5113	Disposals of existing fixed assets
P512	Costs of ownership transfer on non-produced assets
P51c	Consumption of fixed capital
AN11	<i>Gross fixed capital formation by type of asset</i>
P52 AN12	<i>Changes in inventories</i>
P53 AN13	<i>Acquisitions less disposals of valuables</i>
NP	Acquisitions less disposals of non-produced assets
NP1 AN21	Acquisitions less disposals of natural resources
	Acquisitions less disposals of contracts, leases and
NP2 AN22	licences
NP3 AN23	Purchases less sales of goodwill and marketing assets
B9	<i>Net lending (+) / net borrowing (-)</i>

Capital account transactions represent acquisitions less disposals

Revaluation account and other changes in assets account	
Changes in assets	
Code	Other flows
AN	Non-financial assets
AN1	Produced non-financial assets
AN11	Fixed assets
AN12	Inventories
AN13	Valuables
AN2	Non-produced non-financial assets
AN21	Natural resources
AN22	Contracts, leases and licences
AN23	Goodwill and marketing assets

Balance Sheet	
Opening and closing stocks	
Code	Stocks and changes in assets
AN	Non-financial assets
AN1	Produced non-financial assets
AN11	Fixed assets
AN12	Inventories
AN13	Valuables
AN2	Non-produced non-financial assets
AN21	Natural resources
AN22	Contracts, leases and licences
AN23	Goodwill and marketing assets



# Financial Assets and Instruments

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## Financial assets and Instruments

A financial asset is:

- ▶ A *claim* on another party, i.e., there is a counterpart liability
  - ◆ The existence of the counterpart liability distinguishes financial assets from other economic assets, such as land, dwellings, machinery, equipment, etc.
- ▶ Plus, the *gold bullion* component of monetary gold
  - ◆ when held as monetary gold, gold bullion is a financial asset that is not created by an instrument and that does not represent a claim on another entity. It is a financial asset **because of its role as a means of international payments and store of value for use in reserves.**

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## Financial assets and Instruments

### Financial Assets

- Some are financial assets by convention:
  - ▶ Monetary gold and SDRs
  - ▶ Shares, which do not impart predetermined claims on corporations
  - ▶ Financial derivatives that do not involve creditor/debtor relationships
- “Financial assets” cover both financial assets and liabilities, except when the distinction is needed







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## Financial assets and Instruments



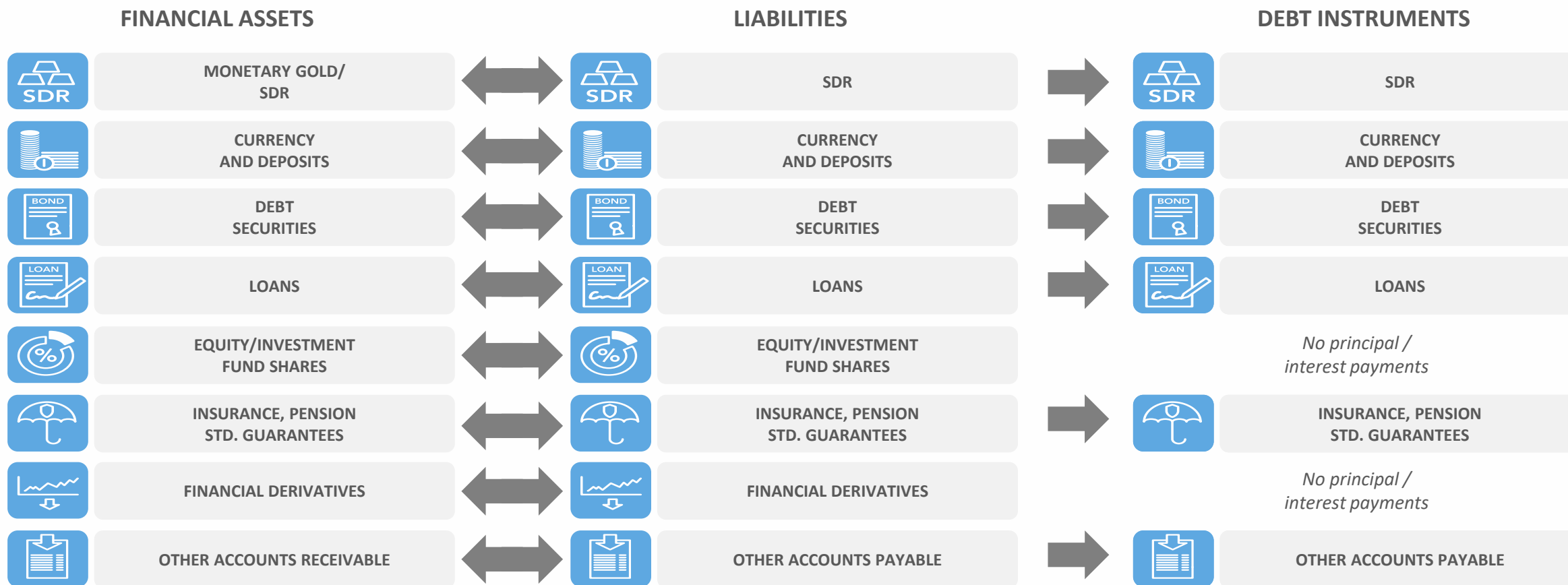
### Other Financial Instruments

- Besides financial assets, there are other financial instruments, which are **contingent** assets and liabilities.
- Contingent assets are **not recognized as economic assets** because they do not give rise to unconditional requirements either to make payments or to provide other objects of value.
- One-off guarantees of payment by third parties are contingent since payment is only required if the principal debtor defaults.
- Lines of credit, letters of credit, and loan commitments assure that funds will be made available, but no financial asset (i.e., loan) is created until funds are advanced.

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## Financial assets and Instruments

### Link between financial assets, liabilities and debt



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## Equity and Investment Fund Shares

- **A residual claim on the value of assets, rather than a principal-and-interest type claim.**
- Equity is treated as a liability of the issuing corporation or other unit.
- **Equity securities** comprise listed shares and unlisted shares. Listed shares are those listed on an exchange. Unlisted shares can also be called private equity.
- **Other equity** is equity not in the form of securities (i.e., not in portfolio investment or direct investment when deriving data from the IIP).
- **Investment funds** are collective investment undertakings through which investors pool funds for investment in financial and/or nonfinancial assets.

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## Debt Instruments

- **Debt instruments are those instruments that require the payment of principal and/or interest at some point(s) in the future.**
- Debt instruments comprise:
  - ▶ Special Drawing Rights
  - ▶ Currency and deposits
  - ▶ Debt securities
  - ▶ Loans
  - ▶ Insurance technical reserves and provision for calls under standardized guarantees
  - ▶ Other accounts receivable/payable

# Special Cases

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## Treatment of Loan Loss Provisions and Write-offs

**Provisions:** According to the SNA charges of loan losses to the outstanding loan balance are not transactions, and should, therefore not be included in the core accounts.

The sectoral balance sheets of the (MFS) show the balances of loans, gross of loan loss provisions, which are shown separately. The total gross figure is recorded in the SNA financial accounts.

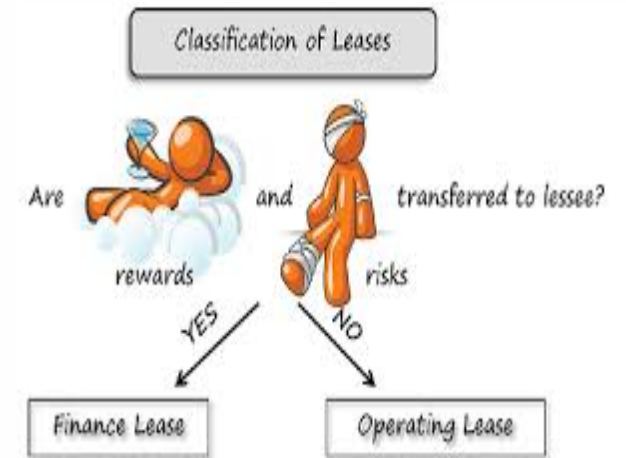
**Write offs:** The actual charges to income for loans written off during the period are included in the profit and loss statement. These write-offs should be added back to the closing balances for loans when calculating transactions during the period.

For example, if the loan balance at the beginning of the period is 1,000 and 1,200 at the end, and there has been a charge of 50 to a loan deemed uncollectable (that is, it has been written off), assuming these loans are denominated in domestic currency, the transactions are 250, that is,  $1,200 \text{ minus } 1,000 \text{ plus } 50$ .

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## Treatment of Leases

- Financial lease (FL) is a contract under which the **lessor** (as legal owner of the asset) conveys substantially all the risks and rewards of ownership of the asset to the **lessee**
- The financial lease entails a financial claim which is an asset of the lessor and the liability of the lessee.
  - ▶ *An operating lease is a service.*
- Financial leases are included under loans because these arrangements are taken as presumptive evidence that an economic change in the ownership of goods has occurred.
  - ▶ *The financial lease is essentially a method by which the lessee finances the purchase of goods.*





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## treatment of Leases \_Financial vs Operating

	Financial Lease	Operating Lease
<b>Tax treatment</b>	As trade of goods	As trade of services
<b>Financial Aspect</b>	Long-term loans	Long-term lease
<b>Legal Ownership</b>	Lessor	Lessor
<b>Economic Ownership</b>	Lessee	Lessor
<b>User Tax Savings</b>	Depreciation and interest	Rent
<b>Risks of Using</b>	Lessee	Lessor
<b>Lease Period</b>	Optional	→ 75% of asset economic life
<b>VAT Invoicing</b>	At inception on total value of asset + VAT on interest	On individual rental (net rental + VAT)
<b>Ownership Transfer (after contract expiry)</b>	Upon payment of final installment lessee bec. owner	Upon contract expiry, lessee has the right to purchase at market value
<b>Suitable Form of Leasing</b>	Where user wants to become the asset owner	Where user does not want to own leased asset, lessor bears all risks
<b>Statistical Treatment</b>	Asset with economic owner + Imputation of a Loan	Recorded as Service Payment

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## treatment of Leases \_Financial vs Operating

		IAS 17				IFRS 16		
Financial statement	Section	Lessor		Lessee		Lessor		Lessee
		Finance leases	Operating leases	Finance leases	Operating leases	Finance leases	Operating leases	All leases
Balance sheet	Assets	Receivable (net Investment in the lease)	Property, plant and equipment subject to operating leases	Right-of-use asset		Receivable (net investment in the lease)	Property, plant and equipment subject to operating leases	Right-of-use asset
	Liabilities			Lease liability				Lease liability
Income statement	Revenues	Interest income	Rental income			Interest income	Rental Income	
	Operating expenses		Depreciation expense	Depreciation expense	Rental payment		Depreciation expense	Depreciation expense
	Finance expenses			Interest expense				Interest expense

# Valuation

**Market value is the preferred valuation method in the SNA.**

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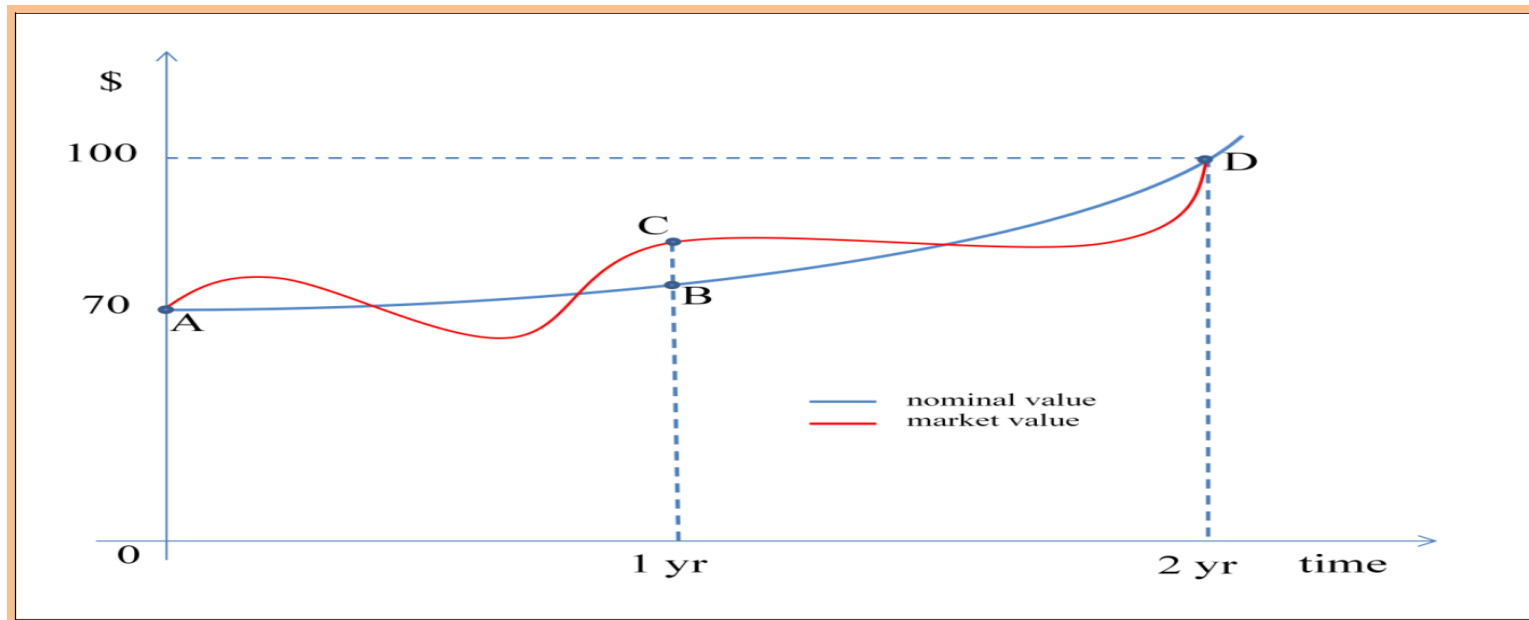
## Comparison of market value and nominal value

- At any specific point in time, the market value of a financial instrument may deviate from its nominal value due to **revaluations arising from market price changes** (changes in market rate of interest / perceived credit worthiness of issuer of debt)
- For positions in debt securities:
  - ▶  $\text{Market value} = \text{nominal value} + \text{cumulative revaluations arising from market price changes}$

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## Market, Nominal and Face values

- A two-year government bond, with a face value of 100 and is issued at discount of 30
- Issue price 70 – actual amount received by the government
- Time 0 –market and nominal values same; Time 1-market and nominal values differ; Time 2- market, nominal, and face value are all the same



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## Interest on debt securities: Debtor approach versus creditor approach

- Defining and measuring interest for traded debt securities is not straightforward!
- **Debtor approach** – perspective of the issuer of securities:
  - ▶ Interest is equal to the amounts the debtors will have to pay to their creditors over and above the repayment of the amounts advanced by the creditors. Interest accrual on a debt instrument is determined for the entire life by the conditions set at inception of the instrument.
- **Creditor approach** – perspective of the holder of securities:
  - ▶ Interest is the income that follows from applying, at any point in time, the discount rate of future receivables implicit in the instrument's market value. The accrual of interest under this approach reflects current market conditions and expectations.

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## Valuation of Equity and Investment Fund Shares

### Market Value

Market value includes accrued income:

- On equity: dividends (until securities go ex-dividend)
- On investment funds: dividends and reinvested earnings

### Listed Shares

- Regularly traded on stock exchanges or other organized financial markets, current price available
- Same value adopted for both the asset side and liabilities side
- Valued at representative mid-market price observed in a stock exchange
- For a large corporation listed on many exchanges, market price based on representative stock exchange or average of market prices from stock exchanges

### Unlisted Shares

- Not traded on exchanges
- Market prices/transaction values not readily available
- → Estimation required

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## Valuation of Equity and Investment Fund Shares

When actual market values are not available, an estimate is required. Alternative methods of approximating market value of shareholders' equity include the following:

Estimation Approach	Description	Remarks
<b>Recent Transaction Price</b>	Use most recent observed transaction price	Good indicator to the extent that conditions are unchanged
<b>Net Asset Value</b>	Assessment of total asset value less liabilities	Valuations should be recent and include intangible assets
<b>Present Value/ Price-to-Earnings Ratios</b>	Approximated by applying a market or industry price-to-earnings ratio to the (smoothed) recent past earnings of the unlisted enterprise	
<b>Market Capitalization</b>	Adjustment of reported book values at an aggregate level with ratios based on suitable price indicators or by revaluing assets to current period prices	



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## Valuation of Equity and Investment Fund Shares

When actual market values are not available, an estimate is required. Alternative methods of approximating market value of shareholders' equity include the following:

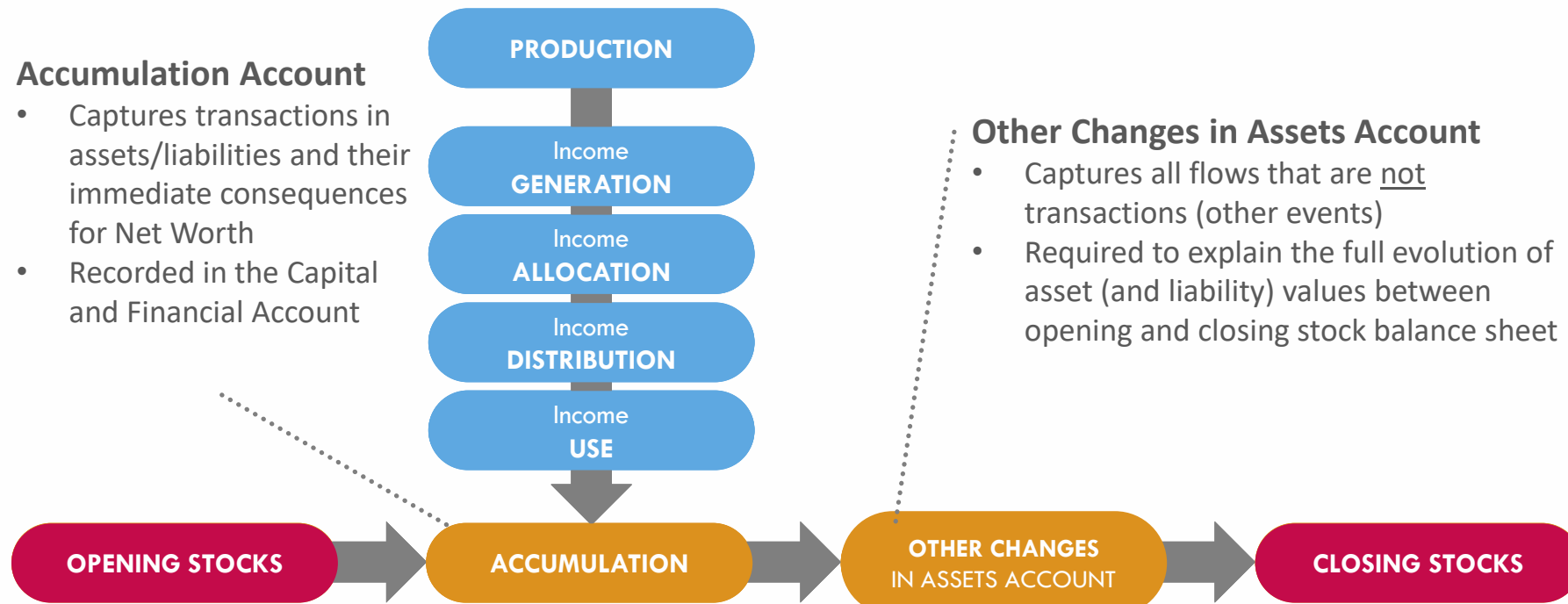
Estimation Approach	Description	Remarks
<b>Own Funds at Book Value (OFBV)</b>	<ul style="list-style-type: none"> <li>• Based on the accounting values as reported in the financial reports of the corporation.</li> <li>• Unlisted shares are thus value reflecting the book value.</li> <li>• Calculated as paid-up capital and all types of reserves identified as equity in the enterprise's balance sheet plus cumulated reinvested earnings plus holding gains or losses included in own funds in the accounts</li> </ul>	In some circumstances, a strict application of this method can lead to an inconsistent valuation of cross-border assets and liabilities of one institutional unit (and consequently to distortions in a country's IIP).

# Other Changes in Asset Account

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## The Other Changes in Asset Accounts

### THE POSITION OF THE OTHER CHANGES IN ASSET ACCOUNT



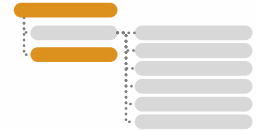
Other changes are not just residuals but show significant changes in Net Worth and the value and composition of balance sheet items.

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## The Other Changes in Asset Accounts

### EXERCISE: REVALUATION DUE TO EXCHANGE RATE CHANGES

#### Information provided



	Q4 2015	Q1 2016
<i>Deposits (DC)</i>	1,000	1,300
<i>Exchange Rate (period end - DC to FC)</i>	0.6	0.5
<i>Exchange Rate (period average - DC to FC)</i>		0.55
<i>Transactions in FC</i>		50

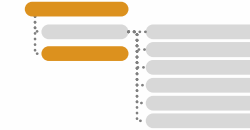
#### Task

- Calculate the transactions and exchange rate changes from position data
- Deposits are denominated in foreign currency (FC) and reported in domestic currency (DC)

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## The Other Changes in Asset Accounts

### EXERCISE: REVALUATION DUE TO EXCHANGE RATE CHANGES



#### Solution

	<i>Formula</i>	<i>Unit</i>	<b>Position Q4 2015 (end)</b>	<b>Transaction s Q1 2016</b>	<b>Revaluatio n Q1 2016</b>	<b>Position Q1 2016 (end)</b>
(1) Deposits in DC (converted)	$(1) = (3) / (2)$	DC	<b>1,000</b>			<b>1,300</b>
(2) Exchange Rate (FC/DC)	given		<b>0.6</b>	<b>0.55</b>	<b>0.55</b>	<b>0.5</b>
(3) Deposits FC	$(3) = (1) * (2)$	FC	<b>600</b>			<b>650</b>
(4) Transactions in FC	given	FC		<b>50</b>		
(5) Transactions in DC (converted)	$(5) = (4) / (2)$	DC		<b>90.9</b>		
(6) Revaluation	$(6) = (1)_{t1} - (1)_{t0} - (5)$	DC			<b>209.1</b>	
<b>IIP Report</b>						
Other Investments, Deposits		DC	<b>1,000</b>	<b>90.9</b>	<b>209.1</b>	<b>1,300</b>

# Questions?

Thank you for your participation!