Introduction to the balance sheet

FINANCIAL FORECASTING IN PYTHON

Victoria Clark
CGMA Financial Analyst

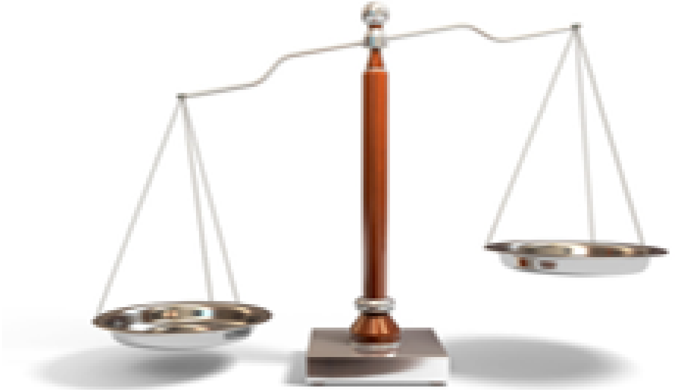
Types of financial statements

1. Income Statement

Income and Expenses

2. Balance Sheet

Assets, Liabilities and Capital



3. Cash Flow Statement

4. Statement of Shareholder's Equity

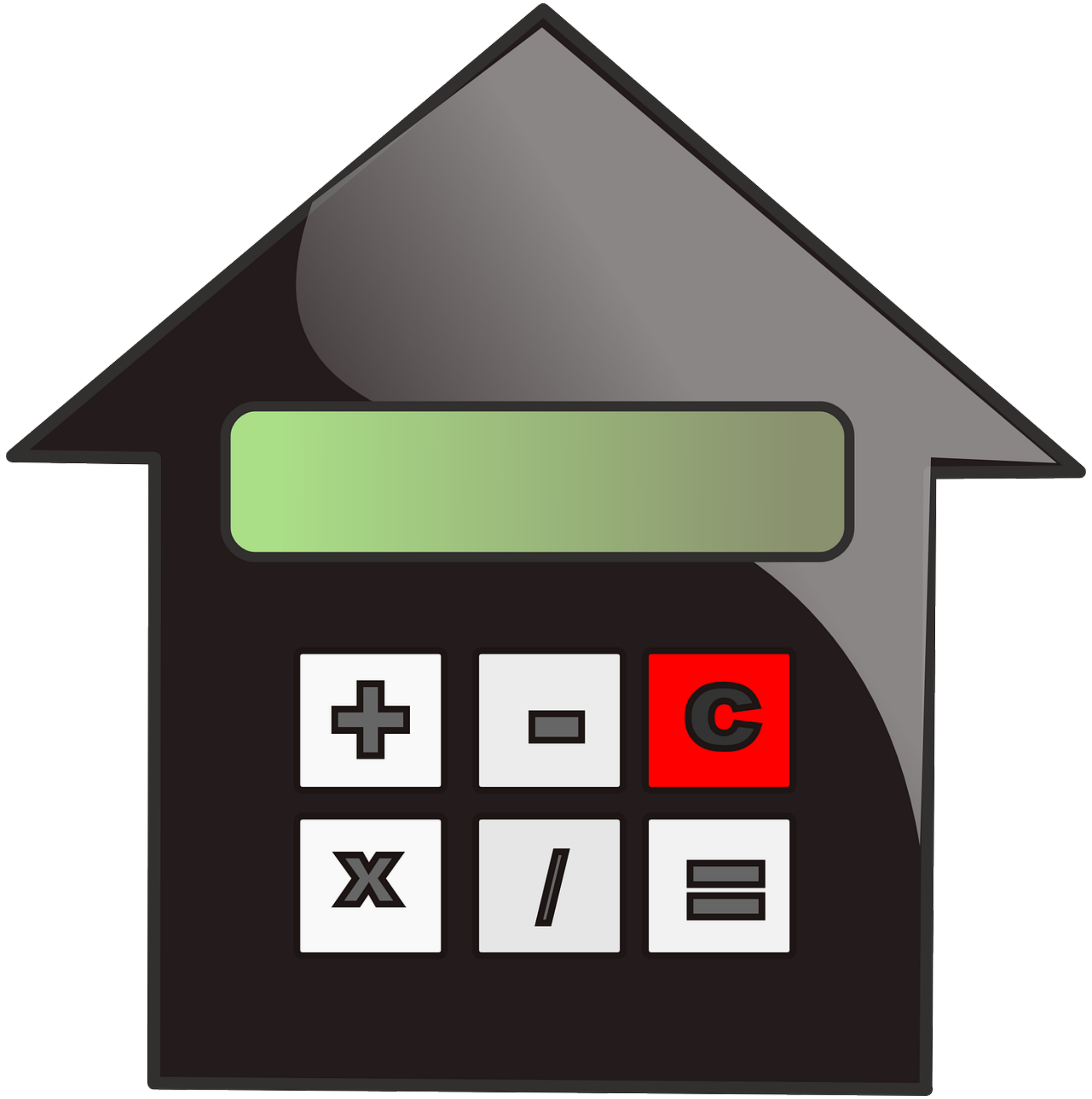
Assets and liabilities

Asset = Economic Resource

- Can be used to make money

Liability = Economic Obligation

- Usually the obligation to pay something



```
equity = assets - liabilities
```

Equity: portion of owner's interest in a property or business

```
# House example
house_cost = 100000
down_payment = 20000
mortgage = 80000
tot_equity = house_cost - mortgage
```

```
# Balance sheet
owners_equity = assets - liabilities
```

Income Statement

Mark's Gadget Shop		
Sales		1,000
Costs of Goods Sold	-	600
Gross Profit		**400**
Operating Expenses		
Selling and Admin	-	100
R&D Expense	-	30
Training	-	20
Total Operating Expenses	-	**150**
Net Profit		**250**

Balance Sheet

Mark's Gadget Shop	
Assets	
Bank	200
Debtors	50
Total Assets	**250**
Equity	**100**
Liabilities	
Loans	50
Creditors	100
Total Equity and Liabilities	**250**

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Let's practice!

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Balance sheet efficiency ratios - Part 1

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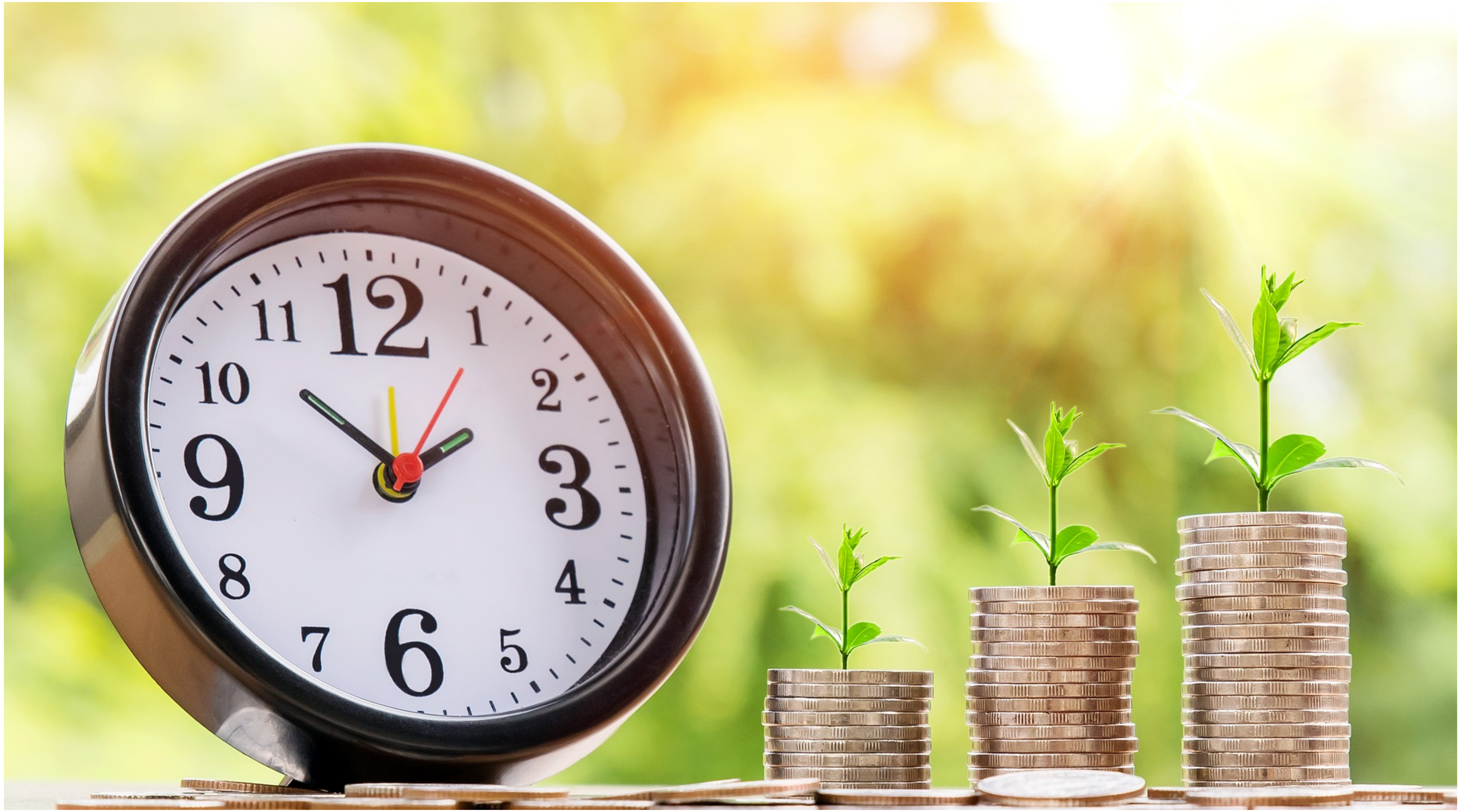
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1
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Debtors and creditors

- Sell now, get paid later
  - `debtors`
- Buy now, pay later
  - `creditors`

The debtor days ratio

- How many days to receive payment from debtors
- Lower ratio is better
- Formula:
  - $Debtor\ Days = \frac{EndingBalanceDebtors}{Sales}\ x\ DaysInFinancialYear$

```
ddays_ratio = (debtors_end/sales_tot) * 365
```

Days payable outstanding (DPO ratio)

- How many days to pay our creditors
- Higher ratio is better
- Formula:
  - $DPO = \frac{EndingBalanceCreditors}{TotalCostOfGoodsSold} \ x \ DaysInFinancialYear$

```
dpo = (creditors_end/cogs_tot)*365
```

Let's practice!

FINANCIAL FORECASTING IN PYTHON

Balance sheet efficiency ratios - Part 2

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Days in inventory

The inventory question:

How much stock is too little, and how much is too much?

- How many days to sell our inventory
- Days in inventory ratio:
  - $DII = \frac{AverageInventory}{TotalCostOfGoodsSold}\ x\ DaysInFinancialYear$
- Desired level depends on the industry

Asset turnover ratio

- Assets compared to sales generated
- Highly dependent on the industry
- Formula:
  - $Asset\ Turnover = \frac{Sales}{Total Average Assets}$
- **Production company:** high level of assets & low ratio
- **Tech start up:** low level of assets & high ratio

Let's practice!

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