FOUNDATION LESSON

WEEK 6 · LESSON 3

Liquidity and leverage ratios

Liquidity compares near-term resources with obligations; leverage compares defined debt with a stated capital base.

THE MENTAL MODEL

MENTAL MODEL

The mental model

Liquidity compares near-term resources with obligations; leverage compares defined debt with a stated capital base.

THREE LIQUIDITY VIEWS

CODE WALKTHROUGH W06-L03-S03

```
current_assets=300; inventory=100; cash=80
current_liabilities=200
print("Current ratio:",current_assets/current_liabilities)
print("Simplified quick ratio:",
      (current_assets-inventory)/current_liabilities)
print("Cash ratio:",cash/current_liabilities)
```

WHAT TO TRACK

Three liquidity views

PREDICT THE RESULT

Predict the output.
Explain each operation.
Pause before continuing.

THREE LIQUIDITY VIEWS · RESULT

CODE WALKTHROUGH W06-L03-S04

```
current_assets=300; inventory=100; cash=80
current_liabilities=200
print("Current ratio:",current_assets/current_liabilities)
print("Simplified quick ratio:",
      (current_assets-inventory)/current_liabilities)
print("Cash ratio:",cash/current_liabilities)
```

WHAT TO TRACK

Three liquidity views

VALIDATE THE RESULT

```
Current ratio: 1.5
Simplified quick ratio: 1.0
Cash ratio: 0.4
```

DEBT AND INTEREST COVERAGE

CODE WALKTHROUGH W06-L03-S05

```
01  interest_bearing_debt=240; equity=160; assets=500
02  annual_operating_profit=60; annual_interest=12
03  print("Debt/equity:",interest_bearing_debt/equity)
04  print("Debt/assets:",interest_bearing_debt/assets)
05  print("Annual interest coverage:",
06        annual_operating_profit/annual_interest)
```

WHAT TO TRACK

Debt and interest coverage

PREDICT THE RESULT

Predict the output.
Explain each operation.
Pause before continuing.

DEBT AND INTEREST COVERAGE · RESULT

CODE WALKTHROUGH W06-L03-S06

```
01  interest_bearing_debt=240; equity=160; assets=500
02  annual_operating_profit=60; annual_interest=12
03  print("Debt/equity:",interest_bearing_debt/equity)
04  print("Debt/assets:",interest_bearing_debt/assets)
05  print("Annual interest coverage:",
06        annual_operating_profit/annual_interest)
```

WHAT TO TRACK

Debt and interest coverage

VALIDATE THE RESULT

```
Debt/equity: 1.5
Debt/assets: 0.48
Annual interest coverage:
5.0
```

NONPOSITIVE EQUITY AND ZERO INTEREST

CODE WALKTHROUGH W06-L03-S07

```
01  def positive_ratio(n,d):
02      return None if d<=0 else n/d
03  print("Debt/equity:",positive_ratio(100,-20))
04  print("Interest coverage:",positive_ratio(50,0))
```

WHAT TO TRACK

Nonpositive equity and zero interest

PREDICT THE RESULT

Predict the output.
Explain each operation.
Pause before continuing.

NONPOSITIVE EQUITY AND ZERO INTEREST · RESULT

CODE WALKTHROUGH W06-L03-S08

```
01  def positive_ratio(n,d):
02      return None if d<=0 else n/d
03  print("Debt/equity:",positive_ratio(100,-20))
04  print("Interest coverage:",positive_ratio(50,0))
```

WHAT TO TRACK

Nonpositive equity and zero interest

VALIDATE THE RESULT

```
Debt/equity: None
Interest coverage: None
```

GUIDED PRACTICE

LEARNER PRACTICE

Guided practice

At one date, current assets are 180, inventory 30, liabilities 90. Calculate current and simplified quick ratios.

PREDICT · MODIFY · RUN

01 Restate the supplied rules.

02 Predict the result.

03 Modify and run the code.

04 Compare actual output.

05 Explain any difference.

INDEPENDENT PRACTICE

LEARNER PRACTICE

Independent practice

Debt is 80 and equity is zero. Print Undefined: nonpositive equity rather than dividing.

PREDICT · MODIFY · RUN

01 Restate the supplied rules.

02 Predict the result.

03 Modify and run the code.

04 Compare actual output.

05 Explain any difference.

CHECK YOUR UNDERSTANDING

MENTAL MODEL

Check your understanding

Diagnostic: Is debt-to-assets automatically total liabilities divided by assets in this course? No. The numerator here is explicitly interest-bearing debt.

RECAP AND NEXT STEP

Recap and next step

Align dates and periods, define debt and quick assets, and guard denominator boundaries. These simplified ratios require contextual interpretation.

UNDERSTAND APPLY VALIDATE EXPLAIN