**ACF Daily Quiz Bank - 14 Progressive Quizzes**

**How to Use This Quiz Bank**

• Set a 5-minute timer for each quiz

• Grade yourself immediately after

• Note concepts that need review

• Track your daily scores to see improvement

**Day 1: TVM Fundamentals**

**Topics:** Present Value, Future Value basics **Target Score**: 4/5 (80%)

1. **Calculation (1 min)**: What is the present value of $1,500 received in 3 years at 5% annual rate?

• a) $1,295.34

• b) $1,736.44

• c) $1,428.57

• d) $1,323.92

2. **Concept (1 min)**: Which factor does NOT affect time value of money?

• a) Inflation rate

•

⚫ b) Investment opportunity

• c) Historical cost

• d) Risk level

3. **Excel (1 min)**: To calculate PV in Excel with annual payments, which argument represents the

discount rate?

• a) nper

• b) rate

• c) pmt

• d) type

4. **Application (1 min)**: You can receive $500 today or $550 in one year. If your required return is 8%,

which should you choose?

• a) $500 today (PV of $550 = $509.26)

• b) $550 in one year

• c) They are equal in value

⚫d) Need more information

5. **Foundation (1 min)**: If the discount rate increases, present value:

• a) Increases

• b) Decreases

⚫ c) Stays the same

⚫d) Cannot determine

**Answer Key**: 1-a, 2-c, 3-b, 4-a, 5-b

**Day 2: TVM + Multiple Cash Flows**

**Topics:** PV/FV, Multiple periods **Target Score:** 4/5 (80%)

1. **Calculation (1 min)**: Find the total PV of: $100 in Year 1, $200 in Year 2, $300 in Year 3 (rate =

• a) $481.59

10%)

• b) $600.00

• c) $523.41

• d) $445.73

2. **Concept (1 min)**: When comparing investments with different time horizons, you should:

• a) Choose the one with highest total return

• b) Convert all to present value

• c) Choose the shortest duration

⚫ d) Calculate simple average returns

3. **Excel (1 min)**: The Excel function =FV(0.05,10,-1000) calculates:

• a) Present value of $1,000

• b) Future value of $1,000 annual payments

• c) Future value of $1,000 invested today

• d) Payment amount for a loan

4. **Application (1 min)**: A project costs $5,000 today and returns $2,000 annually for 3 years. At 8%

discount rate, the NPV is:

• a) Positive

• b) Negative

⚫ c) Exactly zero

d) Cannot determine

5. **Review (1 min)**: Compounding frequency affects returns because:

• a) More periods mean higher effective rate

• b) Banks charge more fees

• c) Risk increases over time

⚫d) Inflation compounds

**Answer Key**: 1-a, 2-b, 3-b, 4-a ($154.57), 5-a

**Day 3: Annuities Introduction**

**Topics**: Annuities, Perpetuities **Target Score**: 4/5 (80%)

1. **Calculation (1 min)**: What is the PV of $200 monthly payments for 5 years at 6% annual (0.5%

monthly)?

• a) $12,000

b) $10,345.11

• c) $8,654.32

• d) $11,234.78

2. **Concept (1 min)**: The main difference between an annuity and a perpetuity is:

• a) Payment amount

• b) Payment timing

c) Number of payments

⚫d) Interest rate used

3. **Excel (1 min)**: For an annuity due (payments at beginning), the 'type' argument in PV() should be:

• a) 0

• b) 1

• c) TRUE

• d) BEGIN

4. **Application (1 min)**: A perpetuity paying $1,000 annually at 5% discount rate is worth:

• a) $5,000

• b) $10,000

• c) $20,000

• d) $50,000

5. **TVM Review (1 min)**: To find the interest rate when you know PV, FV, and time, use:

• a) =PMT()

• b) =RATE()

• c) =NPER()

• d) =IRR()

**Answer Key**: 1-b, 2-c, 3-b, 4-c, 5-b

**Day 4: Portfolio Basics**

**Topics**: Expected Return, Basic Risk **Target Score**: 3/5 (60%)

1. **Calculation (1 min)**: Portfolio with 40% Stock A (E(R)=15%) and 60% Stock B (E(R)=10%):

• a) E(Rp) = 12.5%

• b) E(Rp) = 12%

• c) E(Rp) = 11.5%

•

d) E(Rp) = 13%

2. **Concept (1 min)**: Diversification reduces risk most when assets have:

a) High positive correlation

⚫ b) Low or negative correlation

⚫ c) No correlation exactly

• d) Similar returns

3. **Excel (1 min**): To calculate portfolio return with weights in A1:A5 and returns in B1:B5:

• a) =SUM(A1:A5\*B1:B5)

• b) =AVERAGE(B1:B5)

• c) =SUMPRODUCT(A1:A5, B1:B5)

• d) =STDEV(B1:B5)

4. **Application (1 min)**: Adding a risk-free asset to a risky portfolio will:

• a) Always reduce return

• b) Always reduce risk

• c) Reduce both risk and return proportionally

⚫d) Have no effect

5. **Prior Review (1 min)**: The PV of a 10-year annuity is $5,000. If the discount rate doubles, PV will:

• a) Double

b) Halve

• c) Decrease by less than half

• d) Decrease by more than half

**Answer Key**: 1-b, 2-b, 3-c, 4-c, 5-c

**Day 5: Portfolio Risk & Return**

**Topics**: Variance, Standard Deviation, Correlation **Target Score**: 3/5 (60%)

1. **Calculation (1 min)**: Two assets with σ=20% each, correlation=0.5, equal weights. Portfolio a is

approximately:

• a) 20%

• b) 17.3%

• c) 14.1%

• d) 10%

2. **Concept (1 min)**: The efficient frontier represents portfolios with:

• a) Highest return for given risk

⚫ b) Lowest risk overall

•

c) Equal weights

• d) No correlation

3. **Excel (1 min)**: To find correlation between returns in columns A and B:

• a) =CORREL(A:A,B:B)

• b) =VAR(A:A,B:B)

• c) =COVAR(A:A,B:B)

• d) =STDEV(A:A)\*STDEV(B:B)

4. **Application (1 min)**: A portfolio's Sharpe ratio measures:

⚫ a) Total return

• b) Risk-adjusted return

⚫c) Maximum loss

• d) Correlation with market

5. **Integrated (1 min)**: You need $50,000 in 10 years. At 6% annual return, how much to invest today?

• a) $27,919.74

• b) $31,234.56

• c) $25,000.00

• d) $29,543.88

**Answer Key**: 1-b, 2-a, 3-a, 4-b, 5-a

**Day 6: Financial Statements Basics**

**Topics**: Balance Sheet, Income Statement **Target Score**: 4/5 (80%)

1. **Classification (1 min)**: Which is a current liability?

• a) Equipment

b) Patents

• c) Accounts payable

• d) Retained earnings

2. **Concept (1 min)**: The accounting equation states:

• a) Revenue - Expenses = Net Income

• b) Assets

Liabilities + Equity

⚫ c) Cash In = Cash Out

⚫ d) Debits = Credits

3. **Excel (1 min)**: To sum only positive values in a range A1:A10:

• a) =SUMIF(A1:A10,">0")

• b) =SUM(A1:A10>0)

• c) =POSITIVE(A1:A10)

• d) =MAX(A1:A10,0)

4. **Application (1 min)**: Net income of $100,000 with $30,000 dividends increases retained earnings by:

• a) $100,000

• b) $30,000

• c) $70,000

• d) $130,000

5. **Integrated (1 min)**: A perpetuity's value is $10,000 at 5% rate. Annual payment must be:

• a) $200

• b) $500

• c) $2,000

• d) $5,000

**Answer Key**: 1-c, 2-b, 3-a, 4-c, 5-b

**Day 7: Integration Review**

**Topics:** All Week 1 Topics **Target Score**: 4/5 (80%)

1. **TVM (1 min)**: Investment doubles in 9 years. Approximate annual return? (Rule of 72)

• a) 6%

• b) 8%

• c) 9%

• d) 12%

2. **Portfolio (1 min)**: Minimum variance portfolio of two assets occurs when:

• a) Weights are equal

• b) Derivative of variance with respect to weight = 0

⚫ c) Correlation = 1

• d) Returns are equal

3. **Statements (1 min)**: Depreciation expense affects:

• a) Only income statement

•

b) Only balance sheet

• c) Both statements

d) Neither statement

4. **Excel (1 min)**: NPV function assumes first cash flow occurs:

• a) Today (time 0)

⚫ b) End of period 1

c) Beginning of period 1

⚫ d) Depends on 'type' argument

5. **Application (1 min)**: Company with current ratio = 2.0 pays off current liabilities with cash. New

current ratio:

• a) Increases

• b) Decreases

⚫c) Stays at 2.0

• d) Becomes 1.0

**Answer Key**: 1-b, 2-b, 3-c, 4-b, 5-a

**Day 8: Bond Basics**

**Topics:** Bond Pricing, Yields **Target Score:** 3/5 (60%)

1. **Calculation (1 min)**: $1,000 face bond, 5% coupon, 3 years, YTM=6%. Price is approximately:

a) $973

• b) $1,000

• c) $1,027

• d) $950

2. **Concept (1 min)**: When market interest rates rise, bond prices:

• a) Rise

• b) Fall

c) Stay constant

• d) Depends on coupon

3. **Excel (1 min**): To calculate bond price with semi-annual coupons:

• a) Double the YTM

• b) Halve the YTM and double periods

• c) Keep YTM same

⚫ d) Double periods only

4. **Application (1 min)**: Current yield vs YTM for premium bond:

• a) Current yield > YTM

• b) Current yield < YTM

• c) Current yield = YTM

⚫ d) Cannot determine

5. **Review (1 min)**: Portfolio of 3 stocks with equal expected returns but different risks should use

weights that:

• a) Are equal (1/3 each)

•

⚫ b) Favor lowest risk stock

⚫ c) Depend on correlations

• d) Favor highest risk stock

**Answer Key**: 1-a, 2-b, 3-b, 4-a, 5-c

**Day 9: Advanced Bonds**

**Topics**: Duration, Convexity basics **Target Score**: 3/5 (60%)

1. **Concept (1 min)**: Duration measures a bond's:

• a) Time to maturity

• b) Price sensitivity to yield changes

c) Credit quality

• d) Coupon rate

2. **Calculation (1 min**): Zero-coupon bond maturing in 5 years has duration of:

• a) 0 years

• b) 2.5 years

• c) 5 years

• d) 10 years

3. **Excel (1 min)**: DURATION function returns:

• a) Modified duration

• b) Macaulay duration

• c) Dollar duration

⚫d) Effective duration

4. **Application (1 min)**: To immunize a 7-year liability, use bonds with:

a) 7-year maturity

• b) 7-year duration

• c) 7% yield

⚫ d) Any maturity

5. **Integrated (1 min)**: Monthly payment on $200,000 mortgage, 30 years, 6% annual rate is closest to:

• a) $1,199

• b) $1,432

• c) $956

• d) $1,667

**Answer Key**: 1-b, 2-c, 3-b, 4-b, 5-a

**Day 10: Ratio Analysis**

**Topics**: Liquidity, Leverage ratios **Target Score**: 4/5 (80%)

1. **Calculation (1 min)**: Current assets=$500K, Inventory-$200K, Current liabilities=$250K. Quick ratio?

• a) 2.0

• b) 1.2

• c) 0.8

• d) 1.6

2. **Concept (1 min)**: High debt-to-equity ratio indicates:

• a) Strong liquidity

•

⚫ b) Financial leverage

• c) Profitability

• d) Efficiency

3. **Excel (1 min)**: To calculate days sales outstanding with sales in A1 and receivables in B1:

• a) =B1/A1\*365

• b) =A1/B1\*365

• c) =365/(A1/B1)

• d) =(B1\*365)/A1

4. **Application (1 min)**: Company with interest coverage ratio of 1.5:

a) Is highly profitable

b) Has comfortable debt levels

⚫c) May struggle with debt payments

• d) Should take on more debt

5. **Review (1 min**): Bond with modified duration of 8 years. If yields rise 1%, price changes

approximately:

• a) -8%

• b) +8%

• c) -1%

• d) -4%

**Answer Key**: 1-b, 2-b, 3-d, 4-c, 5-a

**Day 11: Advanced Ratios**

**Topics:** Profitability, Efficiency ratios **Target Score**: 3/5 (60%)

1. **Concept (1 min)**: ROE can be decomposed into (DuPont):

• a) Margin × Turnover x Leverage

b) Sales x Assets > Equity

• c) Profit

Equity

• d) EPS x P/E ratio

2. **Calculation (1 min)**: Sales=$1M, Net income=$100K, Assets=$2M. Asset turnover?

• a) 0.05

• b) 0.5

• c) 2.0

• d) 10.0

3. **Excel (1 min)**: To calculate average collection period with formulas in cells:

• a) Use AVERAGE function

b) Create linked formula

• c) Use DAYS function

⚫ d) Manual calculation only

4. **Application (1 min)**: Increasing inventory turnover while maintaining sales indicates:

a) Declining efficiency

• b) Improved efficiency

c) Higher profits

• d) Lower liquidity

5. **Integrated (1 min)**: NPV is $1,000 at 10% discount rate. At 12% rate, NPV will be:

• a) Higher

• b) Lower

• c) Same

• d) Negative for sure

**Answer Key**: 1-a, 2-b, 3-b, 4-b, 5-b

**Day 12: Capital Budgeting**

**Topics:** NPV, IRR basics **Target Score**: 4/5 (80%)

1. **Calculation (1 min)**: Project: -$1,000 initial, +$600 Year 1, +$600 Year 2. IRR is approximately:

• a) 10%

• b) 13%

• c) 20%

• d) 60%

2. **Concept (1 min)**: NPV decision rule says accept projects when:

• a) NPV > 0

• b) IRR > 0

• c) Payback < 3 years

• d) PI > 0

3. **Excel (1 min)**: IRR function requires:

• a) Discount rate

• b) Cash flow array

• c) Time periods

⚫ d) Initial guess only

4. **Application (1 min)**: When choosing between mutually exclusive projects:

• a) Pick highest IRR

• b) Pick highest NPV

• c) Pick shortest payback

• d) Accept both if NPV > 0

5. **Review (1 min)**: Current ratio is 1.5. Taking a short-term loan to buy inventory will:

• a) Increase current ratio

• b) Decrease current ratio

c) No change

⚫d) Make it 1.0

**Answer Key**: 1-b, 2-a, 3-b, 4-b, 5-c

**Day 13: Advanced Capital Budgeting**

**Topics**: Complex NPV, Real options thinking **Target Score**: 3/5 (60%)

1. **Concept (1 min)**: Real options in capital budgeting include:

• a) Option to expand

• b) Option to abandon

• c) Option to delay

• d) All of the above

2. **Calculation (1 min)**: Project with uneven cash flows. Which Excel approach is best?

⚫a) Sum individual PVs

• b) Use NPV function

• c) Use XNPV for exact dates

• d) Average the flows

3. **Application (1 min)**: Profitability Index of 1.15 means:

• a) 15% return

• b) NPV = 15% of investment

• c) Creates $1.15 per $1 invested

• d) 115% IRR

4. **Integration (1 min)**: Company with D/E = 1.0 issues more equity. D/E ratio will:

• a) Increase

• b) Decrease

⚫ c) Stay at 1.0

• d) Become negative

5. **Comprehensive (1 min)**: 5-year project with equal annual flows of $1,000. If NPV=0 at 10%, initial

investment was:

• a) $3,791

• b) $4,000

• c) $5,000

• d) $6,209

**Answer Key**: 1-d, 2-c, 3-c, 4-b, 5-a

**Day 14: Final Comprehensive Review**

**Topics**: All topics integrated **Target Score**: 5/5 (100%)

1. **Integration (1 min)**: Company with 40% tax rate, EBIT=$100K, Interest-$20K. Net income?

• a) $80K

• b) $60k

• c) $48K

• d) $32K

2. **Complex (1 min)**: Portfolio optimization seeks to:

• a) Maximize return only

• b) Minimize risk only

⚫ c) Maximize risk-adjusted return

d) Equal-weight all assets

3. **Application (1 min)**: Zero-coupon bond trading at 60% of face value, 5 years to maturity. YTM

closest to:

• a) 8.5%

• b) 10.8%

• c) 12.3%

• d) 15.2%

4. **Excel Mastery (1 min)**: To find break-even point where NPV = 0:

• a) Goal Seek

• b) VLOOKUP

• c) Pivot Table

⚫d) IF function

5. **Comprehensive (1 min)**: All else equal, which increases firm value most?

• a) Decrease WACC by 1%

• b) Increase growth by 1%

• c) Increase margin by 1%

• d) Depends on baseline values

**Answer Key**: 1-c, 2-c, 3-b, 4-a, 5-d

**Progress Tracking**

**Your Daily Scores:**

• Day 1: \_/5

• Day 2: 5

/5

• Day 3: \_/5

• Day 4: \_/5

Day 5: \_\_\_\_/5

• Day 6:

/5

• Day 7: \_ /5

• Day 8:

/5

*/5*

• Day 9: 5

• Day 10: \_\_/5

• Day 11:

/5

• Day 12: \_\_*/5*

• Day 13: \_\_/5

• Day 14:

**Total:**\_\_**/70**

/5

**Score Interpretation**

• 63-70 (90%+): ACF Ready!

• 56-62 (80-89%): Almost there, review weak areas

• 49-55 (70-79%): Solid progress, focus on problem topics

⚫ Below 49: Extend study time, revisit fundamentals