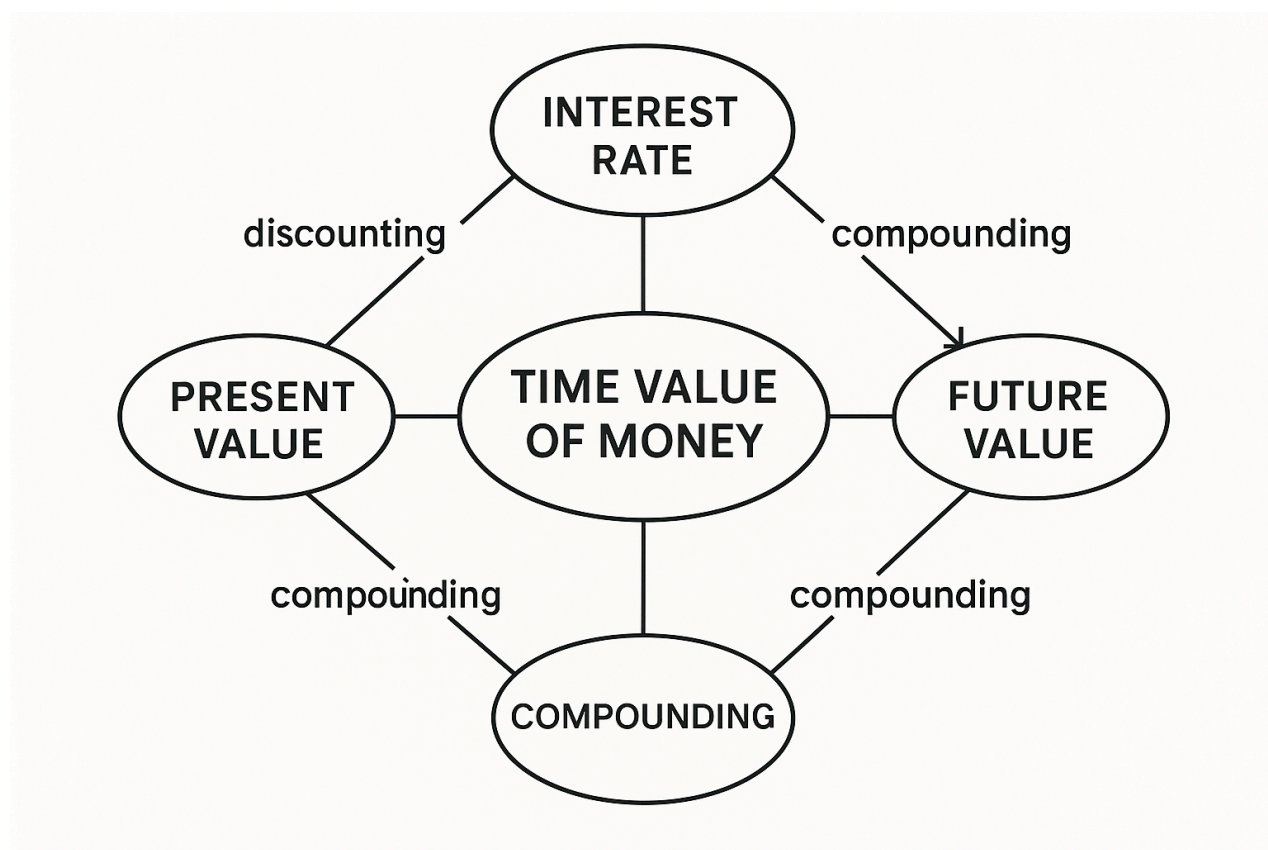


Accelerated Corporate Finance (ACF) Master Playbook

This playbook weaves together concise theory, worked-through Excel mini-models, and visual aids you can review quickly during the open-book exam. Scan the grey “Open Book Cue” panels in each module—those are the formulas, keystrokes, and diagrams you’ll want at your fingertips.

1 Time Value of Money (TVM)

! [Time Value of Money concept map]



Visual concept map illustrating time value of money principles

Core idea A dollar today can be invested and earn interest, so $PV < FV$ whenever $r > 0$.^[1]
^[2]

1.1 Cheat-Sheet Formulas

Situation	Formula	Excel
Single sum PV	$PV = \frac{FV}{(1 + r)^n}$	=PV(r, n, 0, -FV)

Situation	Formula	Excel
Single sum FV	$FV = PV(1 + r)^n$	=FV(r, n, 0, -PV)
Effective rate	$EAR = (1 + r/m)^m - 1$	=EFFECT(r,m)

Open Book Cue Clip the concept map above and the formula table to the first page of your notes.

1.2 Mini-Model in Action

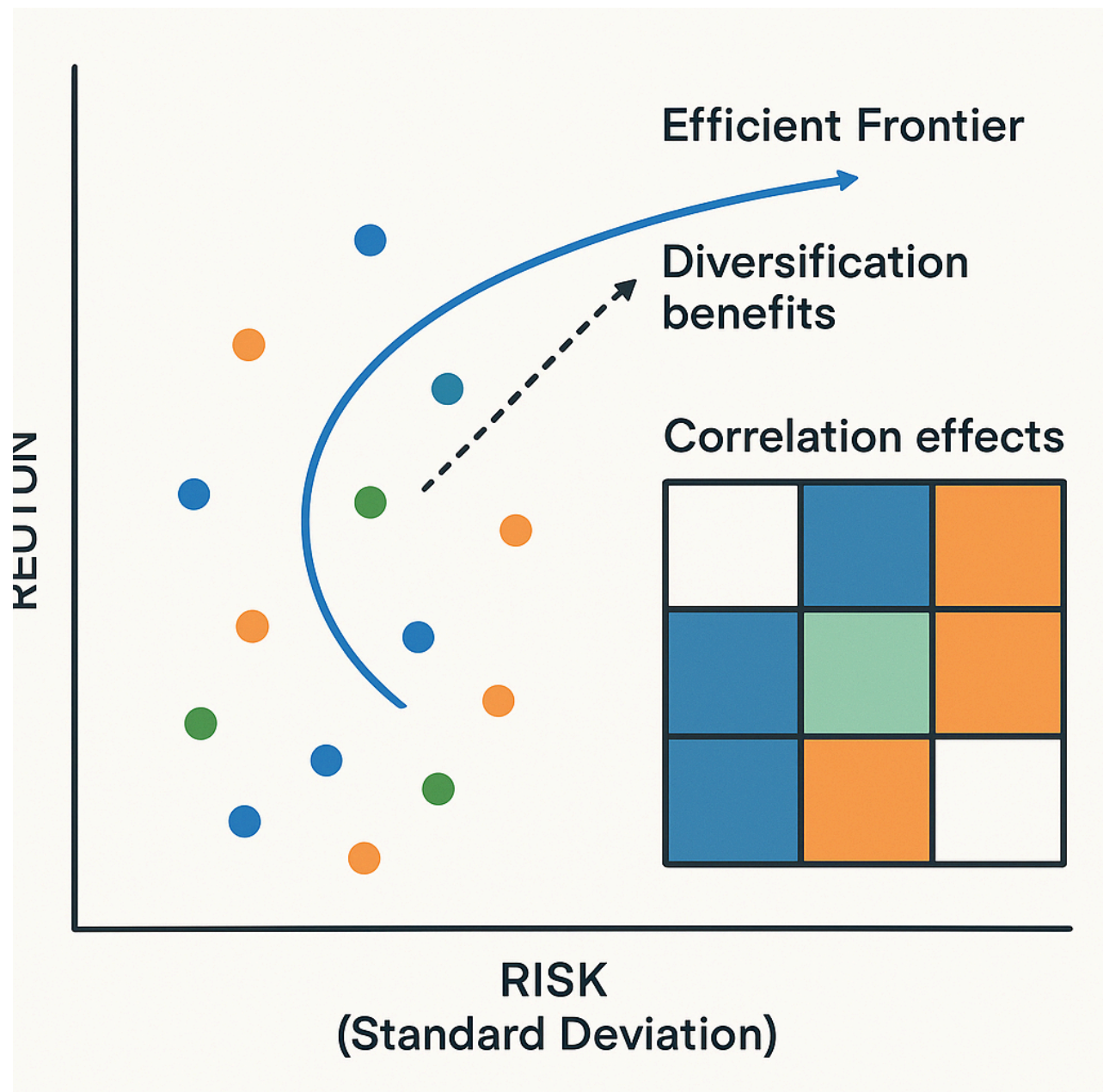
"How much is \$10,000 received in 4 years worth today at 6%?"
 =PV(0.06,4,0,-10000) → \$7,920.14

1.3 Animated Refreshers

- Khan Academy "Intro to Bonds" shows discounting step-by-step .^[3]
- TED-Ed 3-min "Time Value of Money" for a rapid reconceptualization .^[2]

2 Portfolio Theory & Diversification

![[Efficient-frontier & correlation visual]]



Interactive portfolio theory diagram showing risk-return relationships

2.1 Must-Know Equations

1. Expected Return

$$E(R_p) = \sum_{i=1}^n w_i E(R_i)$$

2. 2-Asset Variance

$$\sigma_p^2 = w_1^2 \sigma_1^2 + w_2^2 \sigma_2^2 + 2w_1 w_2 \rho_{12} \sigma_1 \sigma_2$$

2.2 30-Second Excel Diagnostics

Task	One-Cell Formula
Portfolio return (weights A1:A5; returns B1:B5)	=SUMPRODUCT(A1:A5,B1:B5)
Correlation (asset A vs B)	=CORREL(rangeA,rangeB)
StDev of series	=STDEV.S(range)

Open Book Cue Paste the efficient-frontier image after this section for instant visual recall.

2.3 Video Booster

“Portfolio Risk & Return in Excel” (YouTube) walks through the same formulas on screen .^[4]

3 Investment Returns & Bond Math

3.1 Holding-Period Return (HPR)

$$HPR = \frac{P_1 - P_0 + D}{P_0}$$

Excel one-liner:

```
=(P1-P0+Dividends)/P0
```

3.2 Bond Pricing Toolbox

What you need	Excel
Price (annual coup.)	=PV(y, n, -C, -F)
YTM given price	=RATE(n, C, -Price, F)
Duration	=DURATION(settlement, maturity, coupon, yld, frequency)

Walk-through: Khan Academy’s bond playlist has full worked examples .^[3]

4 Annuities & Perpetuities

Cash-flow stream	PV Formula	Excel
Ordinary annuity	$PMT \frac{1-(1+r)^{-n}}{r}$	=PV(r,n,-PMT)
Annuity due	$(Ordinary) \times (1+r)$	=PV(r,n,-PMT,1)
Level perpetuity	PMT/r	—
Growing perpetuity	$PMT_1/(r-g)$	—

Mini-check

```
=PV(0.05,10,-1000)          'ordinary
=Pv(0.05,10,-1000,,1)       'due
```

5 Financial Statements in One Glance

5.1 Balance-Sheet Skeleton

Assets = Liabilities + Equity .^[5]

Quick mental classification drill: cash ✓, A/R ✓, inventory ✓, PPE → long-term asset, AP → current liability, bonds payable → long-term liability, retained earnings → equity.

5.2 Linking Net Income to Equity

Flow Net Income → minus Dividends → Retained Earnings (equity) increase .^[5]

6 Liquidity & Leverage Ratios

Ratio	Formula	Healthy Rule-of-Thumb
Current	CA / CL	≥ 1 (but not crazy high)
Quick	(CA-Inventory) / CL	≥ 1
Debt-to-Equity	Debt / Equity	Industry specific; > 2 is highly levered

Excel shortcut:

=IF(CL=0,"-",CA/CL) for a fast current ratio check.

7 Capital Budgeting (NPV & IRR)

7.1 Key Rules

- Accept if **NPV > 0**.
- Accept if **IRR > hurdle rate**.

7.2 Speed-Model in Excel

```
CashFlows  CF0  CF1  CF2  CF3
Values      -10000 4000 4000 4000

NPV:  =NPV(0.08,CF1:CF3)+CF0    → $1,193
IRR:  =IRR(CF0:CF3)             → 13.6%
```

8 Excel “Stealth Mode” Tips for the Open-Book Exam

1. **Absolute references** Use F4 to lock cells quickly.
2. **Goal Seek** for break-even discount rates or prices (Alt → A → W → G).
3. **Named ranges** to avoid hunting for cell refs.
4. **Conditional formatting** Quickly highlight negative NPVs or ratios below 1.0.
5. **Keyboard trio** Ctrl + Shift + %, Ctrl + Shift + \$, Ctrl + 1 to flip formats fast.

9 Rapid-Fire Practice Grid

Topic	2-minute Calc to Try in Excel
TVM	PV of \$5,000 received in 7 yrs at 7%.
Bonds	Price of 10-yr, 5% coupon, YTM 4%.
Portfolio	σ_p for 50/50 assets ($\sigma=12\%$, 8% ; $\rho = 0$).
Ratios	New quick ratio after selling \$20 k inventory for cash.
NPV/IRR	Project: CF0 = -15 k; CF1-3 = 7 k.

Verify answers with built-in functions for immediate feedback.

10 Last-Lap Checklist

Action	Why
Print the formula table + diagrams (pages 1-2).	Physical quick-glance during the test.
Pre-save a blank Excel file with TVM, bond, and NPV templates.	Cuts setup time.
Bookmark Khan Academy bond & TVM videos for instant animation refresh [3] [1].	Visual recall of steps.
Practice 14-day quiz bank to cement speed (attachments).	Spaced retrieval before test day.

You’re Exam-Ready

Rehearse the mini-models until you can set them up from scratch in under two minutes, keep the visuals at hand, and remember: every question boils down to cash flows, risk, or ratios. Nail those, and you’ll cruise through the ACF exam. Good luck!

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Citations: TVM visuals and explanations , bond and portfolio video walk-throughs , concept diagram sources . [6] [7] [8] [4] [3] [1] [5] [2]

✱

2. <https://www.youtube.com/watch?v=MhvjCWfy-lw>
3. https://www.youtube.com/watch?v=Qh-M3_L4xYk
4. <https://prepnuggets.com/the-impact-of-visual-learning-on-cfa-exam-preparation/>
5. <https://www.khanacademy.org/economics-finance-domain/core-finance/money-and-banking>
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8. <https://www.weareteachers.com/financial-literacy-anchor-charts/>