

AI-Powered Financial Modeling & Quantitative Analysis (REITs as cases study)

Presented By

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FROM MANUAL ENTRY TO AUTOMATED WORKFLOWS
SESSION 2 | MORNING (11:15 – 12:45)

Learning Objectives

By the end of this session, participants will:

- ▶ **Conduct** comprehensive REIT financial health analysis using Chain of Thought methodology
- ▶ **Evaluate** NAV calculations, debt profiles, and dividend sustainability
- ▶ **Apply** multi-scenario analysis to REIT valuations
- ▶ **Generate** institutional-standard investment recommendations with supporting analysis

REIT Financial Analysis Framework

Core Financial Components:

- ▶ **Balance Sheet Strength:** LTV ratios, debt maturity profiles, liquidity
- ▶ **Income Statement Quality:** FFO, AFFO, dividend coverage, growth rates
- ▶ **Cash Flow Analysis:** Operating cash flows, capex requirements, free cash flow
- ▶ **Valuation Metrics:** NAV per share, P/NAV ratios, dividend yields, total returns

Step 3: Critical Analysis Using Chain of Thought

REIT-Specific Chain of Thought Framework:

- ▶ **Step 1: Assess Financial Strength** *"Because the LTV ratio is X%, debt maturity is Y years, and interest coverage is Z, this indicates..."*
- ▶ **Step 2: Evaluate Operational Performance** *"Given occupancy rates of X%, like-for-like growth of Y%, and lease expiry profile showing Z%, this suggests..."*
- ▶ **Step 3: Analyse Capital Allocation** *"With development pipeline of £X, acquisition activity of £Y, and dividend policy of Z%, management is..."*
- ▶ **Step 4: Determine Investment Merit** *"Based on financial strength, operations, and strategy, this REIT offers..."*

Chain of Thought Framework for REITs

The Four-Step Analysis Structure - Step 1: Financial Strength Analysis

Key Metrics to Analyse:

Leverage Analysis:

- LTV ratio vs sector average and covenant levels
- Net debt/EBITDA ratios and trends
- Unencumbered asset ratios for financial flexibility

Debt Profile Assessment:

- Weighted average debt maturity and refinancing schedule
- Interest rate exposure (fixed vs floating)
- Average cost of debt vs current market rates

Liquidity Analysis:

- Cash balances and undrawn facilities
- Near-term debt maturities vs available liquidity
- Asset disposal capabilities for emergency funding

Chain of Thought Framework for REITs

The Four-Step Analysis Structure - Step 1: Financial Strength Analysis

Interest Coverage and Debt Service Analysis:

Interest Coverage Ratios:

- EBITDA/Interest expense (minimum 2.0x typical covenant)
- FFO/Interest expense (more relevant for REITs)
- ICR trends over economic cycles

Debt Service Coverage:

- Operating cash flow vs total debt service
- Dividend coverage ratios post debt service
- Headroom analysis for covenant compliance

AI Analysis Prompt: "Analyse the interest coverage ratios for *[REIT]* over the past 5 years. Calculate EBITDA/Interest and FFO/Interest ratios. Compare to sector averages and covenant requirements. Assess refinancing risk given current interest rate environment."

Chain of Thought Framework for REITs

The Four-Step Analysis Structure - Step 2: Operational Performance Analysis

Rental Growth Analysis:

- Like-for-like rental growth by sector and geography
- Rent review mechanisms and indexation terms
- Market rental values vs passing rents (reversionary potential)

Occupancy Trends:

- Occupancy rates by asset class and vintage
- Void periods and re-letting timelines
- Tenant retention rates and lease renewal terms

Portfolio Quality Metrics:

- Weighted Average Lease Length (WALL) analysis
- Tenant diversification and credit quality
- Geographic and sector concentration risks

Chain of Thought Framework for REITs

The Four-Step Analysis Structure - Step 2: Operational Performance Analysis Lease Expiry Profile and Rental Reversions

Lease Maturity Analysis:

- Annual lease expiry schedule as % of rental income
- Rent review dates and mechanisms (RPI, fixed, market)
- Break clause analysis and tenant exercise probability

Reversionary Potential:

- ERV vs passing rent analysis by asset
- Rental growth assumptions vs market evidence
- Impact of capex on rental growth achievement

AI Analysis Prompt: "Examine *[REIT]*'s lease expiry profile. Calculate annual lease expiries as % of rent roll for next 5 years. Analyze ERV vs passing rents to quantify reversionary potential. Assess rent review mechanisms and likely outcomes."

Chain of Thought Framework for REITs

The Four-Step Analysis Structure - Net Asset Value (NAV) Analysis

NAV Calculation Components:

- ▶ Property valuations and methodology (DCF, yield, comparable)
- ▶ Valuation frequency and external validation
- ▶ NAV adjustments for trading properties, developments, other assets

NAV Quality Assessment:

- ▶ Valuation assumptions vs market evidence
- ▶ Valuer track record and independence
- ▶ Sensitivity analysis for key assumptions (yields, rents, voids)

Discount/Premium Analysis:

- ▶ Current P/NAV ratio vs historical range
- ▶ Peer comparison and sector averages
- ▶ Factors driving premium/discount (liquidity, growth, quality)

Chain of Thought Framework for REITs

The Four-Step Analysis Structure - NAV Sensitivity and Valuation Risk

Key Valuation Sensitivities:

► Yield assumptions (+/- 25bps impact on NAV)

British Land Base Case:

- NAV per share: £4.35
- Total property value: £8,500m
- Shares outstanding: 950m
- Current average yield: 6.5%
- Annual rent roll: £380m
- Occupancy: 89%
- Assumed rental growth: 2.0% p.a.
- Portfolio split: 65% Office, 25% Retail, 10% Mixed-use

Market Cycle Considerations:

- NAV evolution through property cycles
- Valuation methodology changes in different market conditions
- Discount/premium volatility patterns



Chain of Thought Framework for REITs

The Four-Step Analysis Structure - Dividend Sustainability Analysis

Coverage Ratio Analysis:

- ▶ FFO (Funds From Operations) per share calculation
- ▶ AFFO (Adjusted FFO) for maintenance capex
- ▶ Dividend coverage ratios and sustainability

Cash Flow Analysis:

- ▶ Operating cash flows vs dividend payments
- ▶ Capex requirements (maintenance vs growth)
- ▶ Free cash flow generation capacity

Distribution Policy Assessment:

- ▶ Dividend policy statements and track record
- ▶ Scrip dividend options and take-up rates
- ▶ Special dividend history and rationale

Chain of Thought Framework for REITs

The Four-Step Analysis Structure - FFO and AFFO Deep Dive

FFO Calculation:

- ▶ Net income + depreciation + impairments - gains on sales
- ▶ FFO per share growth rates and trends
- ▶ FFO yield (FFO per share / share price)

AFFO Adjustments:

- ▶ FFO - maintenance capex - straight-line rent adjustments
- ▶ AFFO per share and dividend coverage
- ▶ Free cash flow after growth capex

AI Analysis Prompt: "Calculate FFO and AFFO for [REIT] over past 5 years. Analyse dividend coverage ratios using both metrics. Assess sustainability of current dividend level. Compare FFO/AFFO yields to peer group and 10-year gilt yield."

Chain of Thought Framework for REITs

The Four-Step Analysis Structure - Step 3: Capital Allocation Analysis

Development Pipeline Assessment:

- ▶ Pipeline value and IRR assumptions
- ▶ Planning risk and delivery timelines
- ▶ Pre-letting levels and market demand

Acquisition Activity:

- ▶ Acquisition yields vs portfolio yields
- ▶ Strategic rationale and value creation
- ▶ Integration costs and synergies

Disposal Strategy:

- ▶ Asset disposal proceeds vs book values
- ▶ Capital recycling efficiency
- ▶ Portfolio optimization through disposals

Chain of Thought Framework for REITs

The Four-Step Analysis Structure - Development Pipeline Evaluation

Development Metrics:

- ▶ Total pipeline value and phasing
- ▶ Development yields on cost vs market yields
- ▶ Pre-let ratios and tenant quality

Risk Assessment:

- ▶ Planning consent status and risks
- ▶ Construction cost inflation exposure
- ▶ Market demand validation for developments

AI Analysis Prompt: *"Evaluate [REIT]'s development pipeline. Calculate development yields on cost vs current market yields. Assess planning risks, pre-let levels, and expected completion timeline. Estimate NAV impact from successful delivery."*

Chain of Thought Framework for REITs

The Four-Step Analysis Structure - Multi-Scenario REIT Valuation

Three-Scenario Framework:

Bear Case

(25% probability):

- ▶ Interest rates remain elevated, yields expand +50bps
- ▶ Rental growth turns negative (-2% to -5%)
- ▶ Development pipeline delayed/impaired
- ▶ Dividend cut required to maintain balance sheet strength

Base Case

(50% probability):

- ▶ Interest rates stabilize, yields unchanged
- ▶ Modest rental growth (+1% to +3%)
- ▶ Development pipeline delivers on schedule
- ▶ Dividend maintained with modest growth

Bull Case

(25% probability):

- ▶ Interest rates decline, yields contract -25bps
- ▶ Strong rental growth (+4% to +8%)
- ▶ Development pipeline exceeds expectations
- ▶ Dividend growth accelerates



Chain of Thought Framework for REITs

The Four-Step Analysis Structure - Multi-Scenario REIT Valuation Scenario Modelling Implementation

Comprehensive Scenario Prompt:

"Create three scenarios for **[REIT]** over 24 months:

Bear Case: Interest rates 6%+, property yields expand 50bps, rental growth -3%, development delays, potential dividend cut

Base Case: Interest rates 5%, yields stable, rental growth +2%, developments on track, dividend maintained

Bull Case: Interest rates 4%, yields contract 25bps, rental growth +6%, developments exceed expectations, dividend growth

For each scenario calculate: NAV per share, share price (assuming discount narrows), total return (dividend + capital), probability-weighted expected return, key risk factors and catalysts"

Chain of Thought Framework for REITs

The Four-Step Analysis Structure - Sector and Market Context Analysis

Property Market Analysis:

- Sector-specific market conditions (office, retail, industrial)
- Supply/demand dynamics and future pipeline
- Rental growth prospects by geography and asset class
- Yield movements and investment market activity

Macro Environment:

- Interest rate expectations and impact on REITs
- Economic growth and employment trends
- Regulatory changes affecting property sector
- ESG requirements and compliance costs

Chain of Thought Framework for REITs

The Four-Step Analysis Structure - Step 4: Investment Recommendation Framework

Investment Committee Format:

Executive Summary:

1. Clear recommendation:

BUY/HOLD/SELL with target price

2. Investment thesis: 3-4 key supporting factors

3. Financial highlights: Key metrics and peer comparison

4. Risk factors: 3-4 primary concerns

5. Catalysts and timing: Expected value drivers and timeframe

Supporting Analysis:

- Detailed financial analysis and scenario outcomes
- NAV analysis and valuation methodology
- Dividend sustainability and yield attractiveness
- Management track record and strategy assessment

Sample Chain of Thought Analysis - British Land

AI Prompt Used:

"Analyse British Land using Chain of Thought methodology. LTV: 42%, Occupancy: 89%, NAV discount: 18%, Development pipeline: £2.1bn at 7.2% yield on cost, Office exposure: 65%, Interest coverage: 4.1x, Dividend yield: 6.2%"

AI Response – try in Claude, ChatGPT and Gemini 2.5

Quantifying Qualitative Factors

Why Quantify Qualitative Elements?

- ▶ **Systematic comparison** across different REITs
- ▶ **Objective evaluation** of subjective factors
- ▶ **Consistent scoring** methodology for portfolio decisions
- ▶ **AI-assisted analysis** of complex qualitative data

Questions and Discussion