

CHAPTER 13

Banking & Financial Services Modeling with Claude

النمذجة المالية لقطاع الخدمات المصرفية

Level: Advanced

Learning Objectives

- Understand the unique financial characteristics of banks versus non-financial corporations
- Build a comprehensive bank financial model using Claude, including balance sheet, income statement, and regulatory capital analysis
- Master Net Interest Margin (NIM) decomposition and interest rate sensitivity modeling
- Construct loan portfolio quality analysis with NPL ratios, provision coverage, and IFRS 9 Expected Credit Loss (ECL) staging
- Calculate and interpret Basel III/IV capital adequacy ratios (CET1, Tier 1, Total Capital) including buffers
- Model asset-liability management (ALM) with duration gap analysis and liquidity coverage metrics
- Analyze bank profitability through ROAA, ROAE, and cost-to-income ratio decomposition
- Apply DuPont analysis adapted for banking (equity multiplier, asset utilization, profit margin)
- Build stress testing scenarios for credit risk, interest rate risk, and liquidity risk
- Use Claude to generate peer benchmarking analysis across commercial, retail, and investment banks

- Understand the Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) frameworks
- Model fee income diversification and non-interest revenue streams

13.1 Industry Overview: Banking & Financial Services

The banking industry occupies a unique position in financial modeling. Unlike manufacturing or retail companies where revenue comes from selling goods and services, banks primarily earn income from the spread between what they charge borrowers and what they pay depositors. This fundamental difference means that traditional financial modeling approaches must be substantially adapted for bank analysis.

Banks operate as financial intermediaries, accepting deposits and channeling them into loans and investments. Their balance sheets are fundamentally different from non-financial corporations: assets are primarily financial instruments (loans, securities, derivatives), and liabilities are predominantly customer deposits and wholesale funding. The high leverage inherent in banking (typical equity-to-assets ratios of 8-12%) means that small changes in asset quality or interest rates can have outsized effects on profitability and solvency.

Key Financial Characteristics

- High leverage: Banks typically operate with equity-to-assets ratios of 8-12%, compared to 30-50% for non-financial firms
- Net Interest Income (NII) as primary revenue: The spread between lending rates and funding costs drives 60-80% of revenue for traditional banks
- Maturity transformation: Banks borrow short (deposits) and lend long (mortgages, corporate loans), creating inherent interest rate risk
- Regulatory capital requirements: Basel III/IV framework mandates minimum capital ratios, constraining leverage and business models

- Credit risk as dominant risk: Loan losses can rapidly erode capital, making credit quality the single most important variable
- Fee income diversification: Non-interest income from advisory, trading, wealth management, and transaction fees provides earnings stability
- Procyclical business model: Bank earnings and asset quality are closely tied to macroeconomic conditions

Revenue Drivers

Bank revenue consists of two primary components:

1. Net Interest Income (NII)

NII is the difference between interest earned on assets (loans, securities) and interest paid on liabilities (deposits, borrowings). NII is driven by: (a) the volume of earning assets, (b) the yield on those assets, (c) the cost of funding, and (d) the mix between interest-bearing and non-interest-bearing funding sources. The Net Interest Margin (NIM) — NII divided by average earning assets — is the key efficiency metric, typically ranging from 1.5% to 4.0% depending on the bank's business model and rate environment.

2. Non-Interest Income

Non-interest income includes fees and commissions (account maintenance, transaction fees, advisory fees), trading revenue (gains/losses from securities and derivatives trading), wealth management fees, insurance commissions, and gains on sale of assets. For diversified universal banks, non-interest income can represent 30-50% of total revenue.

Cost Structure

Bank costs are dominated by:

- Personnel expenses (40-55% of operating costs) — relationship managers, analysts, IT staff, branch personnel
- Technology and infrastructure (15-25%) — core banking systems, cybersecurity, digital channels

- Occupancy and depreciation (8-12%) — branch networks, data centers, office space
- Provision for credit losses (variable) — the single most volatile cost item, driven by loan quality and economic conditions
- Regulatory and compliance costs (5-10%) — growing category driven by AML/KYC, stress testing, and reporting requirements

The Cost-to-Income Ratio (CIR) is the primary efficiency metric for banks, calculated as operating expenses divided by total operating income. Well-run banks target CIR below 50%, while the global average ranges from 50-65%.

Business Models

Model	Primary Revenue	Key Metrics	Examples
Commercial Bank	Corporate lending, trade finance	NIM, NPL ratio, LDR	JPMorgan (CIB), HSBC
Retail Bank	Consumer deposits, mortgages, cards	NIM, Cost-to-Income, Branch efficiency	Wells Fargo, Lloyds
Investment Bank	Advisory, underwriting, trading	Fee income ratio, FICC revenue	Goldman Sachs, Morgan Stanley
Universal Bank	Diversified across all segments	Revenue mix, Cross-sell ratio	JPMorgan, UBS, Deutsche Bank
Digital/Neo Bank	Transaction fees, interchange, BaaS	CAC, LTV, Unit economics	Revolut, Nubank, Monzo

Key Performance Indicators (KPIs)

1. Net Interest Margin (NIM)

$NIM = \text{Net Interest Income} / \text{Average Earning Assets}$

NIM measures how effectively a bank converts its earning assets into net interest income. Higher NIM indicates better spread management. Typical ranges: 1.5-2.5% for European banks, 2.5-4.0% for US and emerging market banks. NIM is sensitive to the yield curve shape, with a steeper curve generally supporting wider margins.

2. Non-Performing Loan (NPL) Ratio

$$\text{NPL Ratio} = \text{Non-Performing Loans} / \text{Total Gross Loans}$$

This measures asset quality deterioration. Loans are classified as non-performing when payments are 90+ days past due or when the borrower is unlikely to pay. Well-managed banks maintain NPL ratios below 2-3%. During economic downturns, NPL ratios can spike to 5-15% or higher.

3. Capital Adequacy Ratio (CAR)

$$\text{CET1 Ratio} = \text{Common Equity Tier 1} / \text{Risk-Weighted Assets}$$

Basel III requires minimum ratios of CET1 4.5%, Tier 1 6.0%, and Total Capital 8.0%, plus the Capital Conservation Buffer (CCB) of 2.5%. Systemically important banks face additional buffers (G-SIB surcharge of 1.0-3.5%, though the effective range in practice is 1.0-2.5% as no bank has been assigned to the highest bucket). Most well-capitalized banks operate with CET1 ratios of 12-15%.

4. Return on Average Assets (ROAA)

$$\text{ROAA} = \text{Net Income} / \text{Average Total Assets}$$

ROAA measures how efficiently a bank uses its assets to generate profit. Due to high leverage in banking, ROAA is typically 0.8-1.5% for well-performing banks. ROAA below 0.5% signals poor asset productivity.

5. Return on Average Equity (ROAE)

$$\text{ROAE} = \text{Net Income} / \text{Average Total Equity}$$

ROAE is the primary profitability metric for bank investors. Target ROAE should exceed the cost of equity (typically 10-14%). Due to the leverage multiplier, ROAE is typically 8-13x the ROAA. An ROAE above 12% is generally considered strong performance.

6. Loan-to-Deposit Ratio (LDR)

$LDR = \text{Total Loans} / \text{Total Deposits}$

LDR indicates how much of a bank's deposits are being channeled into loans. An LDR of 80-90% is generally considered healthy. Above 100% means the bank is funding loans from wholesale markets (higher risk). Below 70% may indicate the bank is not fully deploying its deposit base.

7. Liquidity Coverage Ratio (LCR)

$LCR = \text{High-Quality Liquid Assets} / \text{Net Cash Outflows (30-day stress)}$

Introduced under Basel III, LCR ensures banks hold sufficient liquid assets to survive a 30-day stress scenario. Minimum requirement is 100%. Most banks operate with LCR of 120-150%.

8. Net Stable Funding Ratio (NSFR)

$NSFR = \text{Available Stable Funding} / \text{Required Stable Funding}$

NSFR addresses longer-term funding stability, requiring banks to maintain a stable funding profile relative to their assets and off-balance sheet activities. Minimum requirement is 100%.

13.2 Deep-Dive Model: Bank Financial Model Walkthrough

In this section, we build a comprehensive bank financial model using **Claude**. The model covers balance sheet projection, NIM analysis, credit quality modeling, capital adequacy, and profitability decomposition.

Module 1: Balance Sheet Projection and Earning Asset

Mix

Use the following prompt with **Claude** to project the bank's balance sheet:

Prompt:

You are a bank financial analyst. Build a 5-year balance sheet projection for [Bank Name] with the following current-year data: Total Assets \$[X]B, Total Loans \$[Y]B, Investment Securities \$[Z]B, Total Deposits \$[W]B, Equity \$[V]B. Assume loan growth of [A]% per year, deposit growth of [B]% per year, and securities portfolio maintained at [C]% of total assets. Project all major balance sheet line items and calculate key ratios (LDR, equity/assets, securities/assets) for each year.

The balance sheet projection forms the foundation of the bank model. Key considerations include:

- Loan growth must be consistent with the bank's target markets, competitive position, and risk appetite
- Deposit growth drives funding availability — a bank cannot sustainably grow loans faster than deposits without increasing wholesale funding reliance
- The investment securities portfolio serves dual purposes: liquidity buffer and interest income generation
- Risk-weighted assets (RWA) must be projected alongside the balance sheet to assess capital adequacy

Balance Sheet Item	Year 1	Year 2	Year 3	Year 4	Year 5
Total Loans	\$85.0B	\$91.8B	\$99.1B	\$107.1B	\$115.6B
Investment Securities	\$25.0B	\$26.5B	\$28.1B	\$29.8B	\$31.6B
Other Earning Assets	\$10.0B	\$10.5B	\$11.0B	\$11.6B	\$12.2B
Total Assets	\$130.0B	\$139.3B	\$149.2B	\$159.9B	\$171.4B

Total Deposits	\$100.0B	\$107.0B	\$114.5B	\$122.5B	\$131.1B
Wholesale Funding	\$15.0B	\$16.5B	\$18.2B	\$20.0B	\$22.0B
Total Equity	\$13.0B	\$14.0B	\$15.1B	\$16.3B	\$17.5B
LDR	85.0%	85.8%	86.6%	87.4%	88.2%

Module 2: Net Interest Margin (NIM) Decomposition

NIM is the single most important profitability driver for traditional banks. A comprehensive NIM model requires decomposing both the asset yield and funding cost sides:

Asset Yield Components:

- Loan yield: Driven by the mix of fixed vs. floating rate loans, credit quality (higher risk = higher yield), and competitive dynamics
- Securities yield: Driven by portfolio duration, credit quality, and reinvestment rates
- Interbank/central bank deposits: Short-term rates, typically lowest yielding

Funding Cost Components:

- Demand deposits (current accounts): Zero or near-zero cost — the most valuable funding source
- Savings deposits: Low cost, typically 50-150bps below policy rate
- Time deposits (CDs/fixed deposits): Higher cost, rate-sensitive, provides funding stability
- Wholesale funding (interbank, bonds, repos): Market-rate funding, most expensive and volatile

Prompt:

Model bank NIM decomposition: Total earning assets $\$[X]B$ with yield breakdown — loans at $[A]\%$, securities at $[B]\%$, interbank at $[C]\%$. Funding mix: demand deposits $\$[D]B$ at 0.1% , savings $\$[E]B$ at $[F]\%$, time deposits $\$[G]B$ at $[H]\%$, wholesale $\$[I]B$ at $[J]\%$. Calculate NIM, interest spread, and sensitivity to parallel rate shifts of +100bps and -100bps. Show the impact on NII in dollar terms.

Component	Volume (\$B)	Rate/Cost	Interest (\$M)
Loans	85.0	5.20%	4,420
Securities	25.0	3.80%	950
Interbank	10.0	4.50%	450
Total Earning Assets	120.0	4.85%	5,820
Demand Deposits	30.0	0.10%	30
Savings Deposits	25.0	2.50%	625
Time Deposits	35.0	4.00%	1,400
Wholesale Funding	15.0	4.80%	720
Total Funding	105.0	2.64%	2,775
Net Interest Income			3,045
NIM		2.54%	

Module 3: Credit Quality and Loan Loss Provisioning (IFRS

9)

Credit quality modeling is arguably the most critical — and most difficult — element of bank financial analysis. Under IFRS 9, banks must classify loans into three stages and recognize Expected Credit Losses (ECL) accordingly:

IFRS 9 ECL Staging:

- Stage 1 — Performing: Loans with no significant increase in credit risk since origination. Provision = 12-month ECL.
- Stage 2 — Underperforming: Loans with significant increase in credit risk but not yet credit-impaired. Provision = Lifetime ECL.
- Stage 3 — Non-performing: Credit-impaired loans (90+ days past due or unlikely to pay). Provision = Lifetime ECL.

The ECL calculation for each stage requires three inputs: Probability of Default (PD), Loss Given Default (LGD), and Exposure at Default (EAD). These parameters must be estimated under multiple macroeconomic scenarios (base, upside, downside) and probability-weighted.

Prompt:

Build an IFRS 9 ECL model for a loan portfolio of \$[X]B. Current staging: Stage 1 [A]% of portfolio with 12-month PD of [B]% and LGD of [C]%; Stage 2 [D]% with lifetime PD of [E]% and LGD of [F]%; Stage 3 [G]% with LGD of [H]%. Model three macro scenarios (base 50% weight, upside 20%, downside 30%) with PD multipliers of 1.0x, 0.7x, and 1.8x respectively. Calculate total ECL provision and provision coverage ratio.

Stage	Exposure (\$B)	PD	LGD	ECL (\$M)	Coverage
Stage 1	72.2 (85%)	0.8%	35%	202	0.28%
Stage 2	8.5 (10%)	8.5%	40%	289	3.40%

Stage 3	4.3 (5%)	100%	55%	2,365	55.0%
Total Portfolio	85.0			2,856	3.36%

Module 4: Capital Adequacy Analysis (Basel III/IV)

Capital adequacy is the cornerstone of bank regulation. The Basel framework requires banks to hold minimum capital against risk-weighted assets (RWA). Understanding the capital stack and its components is essential for bank financial modeling.

Capital Components:

- CET1 (Common Equity Tier 1): Ordinary shares + retained earnings + accumulated OCI — the highest quality capital
- Additional Tier 1 (AT1): Perpetual non-cumulative preference shares and contingent convertible bonds (CoCos)
- Tier 2: Subordinated debt with maturity > 5 years, general provisions (limited)

Capital Requirements (Basel III with buffers):

Requirement	CET1	Tier 1	Total Capital
Minimum	4.50%	6.00%	8.00%
+ CCB (2.5%)	7.00%	8.50%	10.50%
+ D-SIB (1.0%)	8.00%	9.50%	11.50%
+ G-SIB (1.0-3.5%)	8.0-10.5%	9.5-12.0%	11.5-14.0%
+ CCyB (0-2.5%)	Variable	Variable	Variable

Prompt:

Calculate comprehensive capital adequacy for [Bank Name]: CET1 capital \$[X]B, AT1 \$[Y]B, Tier 2 \$[Z]B, Credit RWA \$[A]B, Market RWA \$[B]B, Operational RWA \$[C]B. Assess against Basel III minimums plus Capital Conservation Buffer (2.5%) and any applicable systemic buffers. Calculate excess capital above requirements and estimate maximum dividend payout capacity. Also compute the leverage ratio (Tier 1 / Total Exposure).

Module 5: Profitability Decomposition (Bank DuPont)

The traditional DuPont framework must be adapted for banks due to the fundamentally different nature of bank balance sheets and income generation:

Bank DuPont Decomposition:

$$\text{ROAE} = \text{Net Profit Margin} \times \text{Asset Utilization} \times \text{Equity Multiplier}$$

Where:

- Net Profit Margin = Net Income / Total Revenue (operating efficiency)
- Asset Utilization = Total Revenue / Average Assets (asset productivity)
- Equity Multiplier = Average Assets / Average Equity (leverage)

For banks, an extended decomposition is more insightful:

$$\text{ROAE} = \text{NIM} \times (\text{Earning Assets}/\text{Assets}) \times (\text{Assets}/\text{Equity}) \times (1 - \text{Provision Rate}) \times (1 - \text{Tax Rate}) \times (1 + \text{Non-Interest Income Ratio})$$

Prompt:

Perform a bank DuPont decomposition for [Bank Name] with: Net Income \$[X]M, Total Revenue \$[Y]M, Average Assets \$[Z]B, Average Equity \$[W]B, NIM [A]%, Earning Assets/Total Assets [B]%, Provision/Loans [C]%, Effective Tax Rate [D]%, Non-Interest Income/Total Revenue [E]%. Decompose ROAE into its component drivers and identify the primary sources of profitability or underperformance versus peers.

DuPont Component	Bank A	Bank B	Peer Average

ROAE	14.2%	9.8%	11.5%
Net Profit Margin	32.5%	24.1%	28.0%
Asset Utilization	3.8%	3.5%	3.6%
Equity Multiplier	11.5x	11.6x	11.4x
NIM	2.8%	2.3%	2.5%
Cost-to-Income	48%	62%	55%
Provision Rate	0.45%	0.85%	0.60%

Module 6: Asset-Liability Management (ALM) and Liquidity

ALM is the practice of managing the risks arising from mismatches between a bank's assets and liabilities, particularly in terms of interest rate sensitivity and maturity profiles.

Interest Rate Risk — Gap Analysis:

The repricing gap measures the difference between rate-sensitive assets (RSA) and rate-sensitive liabilities (RSL) across time buckets. A positive gap ($RSA > RSL$) means the bank benefits from rising rates; a negative gap means it benefits from falling rates.

Prompt:

Build an ALM gap analysis for [Bank Name]. Rate-sensitive assets by bucket: 0-3 months \$[A]B, 3-6 months \$[B]B, 6-12 months \$[C]B, 1-5 years \$[D]B, 5+ years \$[E]B. Rate-sensitive liabilities by bucket: 0-3 months \$[F]B, 3-6 months \$[G]B, 6-12 months \$[H]B, 1-5 years \$[I]B, 5+ years \$[J]B. Calculate cumulative gap, gap ratio, and estimate NII impact of a +200bps parallel shift.

Liquidity Management:

Beyond LCR and NSFR, banks must manage their liquidity buffer composition, intraday liquidity, and contingency funding plans. The High-Quality Liquid Assets (HQLA) portfolio typically includes:

- Level 1 HQLA: Cash, central bank reserves, sovereign bonds (0% haircut)
- Level 2A HQLA: Agency bonds, covered bonds rated AA- or above (15% haircut)
- Level 2B HQLA: Corporate bonds rated A+ to BBB-, certain equities (25-50% haircut)

13.3 Quick Reference Prompts

Prompt 1: NIM Trend Analysis and Sensitivity

Prompt:

Analyze NIM trends for [Bank Name] over 5 years. Current NIM: [X]%, earning asset yield: [Y]%, cost of funds: [Z]%. Decompose NIM changes into volume effects (earning asset growth), rate effects (yield/cost changes), and mix effects (asset/liability composition shifts). Model NIM sensitivity to parallel rate shifts of ± 50 bps, ± 100 bps, and ± 200 bps. Include the impact of deposit beta assumptions (30%, 50%, 70%).

Prompt 2: Loan Portfolio Quality Deep Dive

Prompt:

Analyze loan portfolio quality for [Bank Name]: Total loans \$[X]B, NPL \$[Y]M, Stage 2 loans \$[Z]M, provision stock \$[W]M, write-offs \$[V]M. Calculate NPL ratio, NPL coverage ratio, Stage 2 ratio, cost of risk (provisions/average loans), and net charge-off rate. Compare against regulatory thresholds and peer benchmarks. Flag any concentration risks by sector, geography, or single-name exposure.

Prompt 3: Capital Planning and Stress Testing

Prompt:

Build a capital planning model for [Bank Name]: CET1 $\$[X]B$, RWA $\$[Y]B$, projected net income $\$[Z]B$, RWA growth $[W]\%$. Model three scenarios: (1) Base case — normal credit losses, stable margins; (2) Mild recession — NPL ratio doubles, NIM compresses 30bps, RWA increases 5%; (3) Severe recession — NPL ratio triples, NIM compresses 60bps, RWA increases 15%. For each scenario, project CET1 ratio over 3 years and determine maximum sustainable dividend payout.

Prompt 4: Fee Income Analysis and Revenue

Diversification

Prompt:

Analyze fee income composition for [Bank Name]: Total non-interest income $\$[X]M$, broken down by advisory/underwriting $\$[A]M$, wealth management $\$[B]M$, transaction banking $\$[C]M$, trading revenue $\$[D]M$, insurance commissions $\$[E]M$. Calculate fee income ratio (non-interest income/total revenue), growth rates by category, and revenue diversification index. Benchmark against universal bank peers and identify opportunities for fee income expansion.

Prompt 5: Cost Efficiency and Operating Leverage

Prompt:

Analyze operational efficiency for [Bank Name]: Total revenue $\$[X]B$, operating expenses $\$[Y]B$ (staff costs $\$[A]B$, technology $\$[B]M$, occupancy $\$[C]M$, other $\$[D]M$). Calculate cost-to-income ratio, revenue per employee, cost per employee, and branch efficiency metrics. Model operating leverage: if revenue grows $[E]\%$ and costs grow

[F]%, what is the resulting improvement in CIR? Identify top-3 cost reduction levers with estimated savings.

Prompt 6: Peer Benchmarking Analysis

Prompt:

Perform comprehensive peer benchmarking for [Bank Name] against [Peer 1], [Peer 2], [Peer 3]. Compare across: (1) Profitability — ROAE, ROAA, NIM, cost-to-income; (2) Asset quality — NPL ratio, coverage ratio, cost of risk; (3) Capital — CET1 ratio, leverage ratio, RWA density; (4) Growth — loan growth, deposit growth, fee income growth; (5) Valuation — P/B, P/E, dividend yield. Identify relative strengths and weaknesses. Present results in a scorecard format with quartile rankings.

Prompt 7: Interest Rate Scenario Modeling

Prompt:

Model the impact of three interest rate scenarios on [Bank Name]: (1) Rates rise 200bps over 12 months; (2) Rates cut 150bps over 12 months; (3) Yield curve flattens (short rates +100bps, long rates flat). Bank data: floating-rate loans [X]% of portfolio, fixed-rate loans repricing schedule [provide], deposit beta [Y]%, wholesale funding at floating rate [Z]%. For each scenario, project NII impact, NIM change, securities portfolio mark-to-market, and overall P&L impact over 1 and 3 years.

Prompt 8: Digital Banking and Fintech Impact Assessment

Prompt:

Assess digital transformation metrics for [Bank Name]: digital adoption rate [X]%, mobile transactions [Y]% of total, digital acquisition cost \$[Z] vs. branch cost \$[W], digital revenue per customer \$[A] vs. branch \$[B]. Model the financial impact of shifting

[C]% of branch transactions to digital over 3 years. Calculate: branch closure savings, technology investment required, net cost impact, and effect on cost-to-income ratio. Compare digital KPIs against neobank benchmarks.

13.4 Banking Financial Modeling Cheat Sheet

Core Banking Formulas

Metric	Formula	Typical Range
NIM	Net Interest Income / Avg Earning Assets	1.5% - 4.0%
Interest Spread	Earning Asset Yield - Cost of Funds	1.0% - 3.5%
NPL Ratio	Non-Performing Loans / Gross Loans	< 3% (healthy)
NPL Coverage	Loan Loss Provisions / NPL	> 100% (strong)
Cost of Risk	Provision Charge / Avg Loans	0.2% - 1.5%
CET1 Ratio	CET1 Capital / RWA	> 10.5% (incl CCB)
Leverage Ratio	Tier 1 Capital / Total Exposure	> 3% (minimum)
ROAA	Net Income / Avg Total Assets	0.8% - 1.5%

ROAE	Net Income / Avg Total Equity	10% - 18%
Cost-to-Income	Opex / Total Operating Income	< 55% (efficient)
LDR	Total Loans / Total Deposits	80% - 90%
LCR	HQLA / Net Cash Outflows (30-day)	> 100% (regulatory)
NSFR	Available Stable Funding / Required Stable Funding	> 100% (regulatory)
RWA Density	RWA / Total Assets	30% - 60%
Texas Ratio	(NPL + OREO) / (Tangible Equity + Loan Loss Reserves)	< 100% (healthy)
TBVPS	(Total Equity - Intangibles - Preferred) / Shares Outstanding	Varies

Bank Balance Sheet Template

Assets		Liabilities & Equity	
Cash & Central Bank	\$X	Demand Deposits	\$X
Interbank Lending	\$X	Savings Deposits	\$X
Loans & Advances	\$X	Time Deposits	\$X

Investment Securities	\$X	Interbank Borrowings	\$X
Trading Assets	\$X	Debt Securities Issued	\$X
Fixed Assets	\$X	Other Liabilities	\$X
Intangible Assets	\$X	Subordinated Debt	\$X
Other Assets	\$X	Total Equity	\$X
Total Assets	\$X	Total Liabilities & Equity	\$X

Commercial vs. Investment vs. Retail Bank Comparison

Dimension	Commercial Bank	Investment Bank	Retail Bank
Primary Revenue	NII from corporate loans	Fees & trading gains	NII from mortgages/cards
Key Risk	Credit concentration	Market & counterparty	Consumer credit cycle
NIM Range	2.0-3.5%	0.5-1.5%	2.5-4.0%
Fee Income %	20-35%	60-80%	15-30%
CIR Range	45-55%	60-75%	50-65%
Capital Intensity	High (credit RWA)	High (market RWA)	Moderate
Regulatory Focus	Credit risk, LDR	Trading book, leverage	Consumer protection

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