BFSI FINANCIAL STRUCTURE APPLICATION IN BFSI SECTOR

BSFI Financial Modelling in Excel

Step 0: Setup

1. Open a **new Excel workbook**.
2. Create separate sheets:
    - Inputs → for assumptions & drivers
    - Income Statement → revenue & expense projections
    - Balance Sheet → assets & liabilities
    - Cash Flow Statement → operational & financing flows
    - Valuation → DCF, multiples, summary outputs
    - Charts → visualizations & KPIs

Step 1: Collect Historical Data

1. Import **3–5 years of historical financial statements** (Income Statement, Balance Sheet, Cash Flow) for your target BSFI company.
2. Arrange in a clean tabular format.
3. Identify key metrics:
    - Banks: NIM, ROA, ROE, CAR
    - Insurance: Premiums, Claims, Combined Ratio, Solvency
    - NBFC: Loan book, NPA ratios, IRR

Step 2: Input Assumptions

1. In the Inputs sheet, define **drivers** for the next 3–5 years:
    - Growth rates (loans, premiums, revenue)
    - Interest rates, credit spreads
    - Expense ratios (operating costs, claims)
    - Tax rates
    - Capital adequacy & dividend policy

2. **Example layout**:

Parameter	Year 1	Year 2	Year 3	Notes
Loan growth	12%	10%	10%	Bank loan book
NIM	3.5%	3.6%	3.7%	Net interest margin

Step 3: Build the Income Statement

1. Start with **Revenue / Interest Income / Premiums** using growth assumptions.
2. Subtract **Expenses / Claims / Interest Expense**.
3. Calculate **Operating Profit** → subtract **Taxes** → **Net Profit**.
4. Include **ratios** (ROA, ROE, Cost-to-Income) for analysis.

Step 4: Build the Balance Sheet

1. Forecast **Assets**:
    - Banks: Loans, Investments, Cash
    - Insurance: Premium receivables, Investments
2. Forecast **Liabilities**:
    - Deposits, Borrowings, Reserves
3. Ensure **Assets = Liabilities + Equity**.
4. Calculate key ratios: CAR (Capital Adequacy), Solvency Ratio.

Step 5: Build the Cash Flow Statement

1. **Operating Cash Flow**: Start with Net Profit, adjust for non-cash items & changes in working capital.
2. **Investing Cash Flow**: Forecast CapEx or investments.
3. **Financing Cash Flow**: Debt issuance/repayment, dividends.
4. Reconcile **closing cash** with Balance Sheet.

Step 6: Link Statements

1. Ensure **dynamic links**:
    - Net profit flows into equity
    - Depreciation & amortization flows into cash flow
    - Assets and liabilities updates feed back into ratios

Step 7: Perform Valuation

1. **Discounted Cash Flow (DCF):**
    - Free Cash Flow = Net Profit + Non-cash items – CapEx ± ΔWorking Capital
    - Discount using WACC → Calculate Present Value
2. **Relative Valuation (Multiples):**
    - P/E, P/B, EV/EBITDA
    - Compare with peers
3. Summarize valuation metrics in Valuation sheet.

Step 8: Sensitivity & Scenario Analysis

1. Create a **Data Table** in Excel to test changes in key drivers:
    - Interest rate ±1%
    - Loan growth ±5%
    - Claim ratio ±10%
2. Use **Scenario Manager / Goal Seek** for multiple outcomes.

Step 9: Visualization & KPIs

1. Create charts for:
    - Revenue & Profit trends
    - Loan growth & NPA trends
    - ROA / ROE / CAR / Solvency ratio
2. Highlight insights in Charts sheet for quick reporting.

Step 10: Audit & Review

1. Check **formula consistency** and **link integrity**.
2. Compare historical model outputs with actual results.
3. Validate ratios & KPIs against industry benchmarks.

BFSI (Banking, Financial Services, and Insurance) financial structure in the context of **financial modeling and valuation**, we are focusing on how these organizations structure their balance sheets, funding, and capital, which directly impacts valuation methods like DCF, comparable company analysis, or LBO models.

BFSI firms differ from typical corporates because their primary activities are **financial intermediation, risk management, and capital allocation** rather than producing physical goods or services. This affects their:

- **Assets** → Mostly financial instruments, loans, securities, investments.
- **Liabilities** → Mainly deposits, borrowings, and insurance obligations.
- **Equity** → Tier 1 & Tier 2 capital (for banks), shareholders' equity, retained earnings.

Key Segments

a) Banking

- **Retail Banking:** Savings accounts, personal loans, credit cards, mortgages.
- **Corporate Banking:** Loans, cash management, treasury services for businesses.
- **Investment Banking:** M&A advisory, underwriting, trading, IPO management.
- **Digital Banking/Neo-banks:** Online-only banks and mobile-based services.

b) Financial Services

- **Wealth & Asset Management:** Managing investments for individuals and institutions.
- **Brokerage & Trading:** Buying/selling securities, derivatives, commodities.
- **Fintech:** Innovative financial technology like payment apps, P2P lending, digital wallets.

c) Insurance

- **Life Insurance:** Policies paying beneficiaries after the insured event.
- **General Insurance:** Covers property, health, automobiles, travel, etc.
- **Reinsurance:** Insurance for insurance companies to spread risk.

Key Characteristics:

Aspect	Typical BFSI Items	Notes
Assets	Loans & advances, investment securities, cash & balances with central banks, receivables	Banks' assets are largely interest-earning.
Liabilities	Customer deposits, debt instruments, borrowings, insurance policy reserves	Liabilities are mainly funding sources; cost of funding is key.
Equity	Paid-up capital, reserves, retained earnings, regulatory capital	Regulatory requirements (Basel III for banks) affect leverage.

Key Components in Financial Modeling

a) Asset Side

- **Loans & Advances** – Core income generator for banks; modeled with interest rates, credit growth, and NPA provisions.
- **Investments & Securities** – Treasuries, bonds, and equity investments; important for interest income and liquidity.
- **Other Assets** – Derivatives, receivables, intangible assets, etc.

b) Liability Side

- **Deposits** – Major source of funding; broken down by term, retail vs corporate.
- **Borrowings** – Interbank borrowings, debt securities, subordinated debt.
- **Insurance Reserves (for insurance companies)** – Policyholder liabilities, claim reserves, and actuarial assumptions.

c) Equity / Capital

- **Regulatory Capital** – CET1, Tier 1, Tier 2 for banks.
- **Shareholder Equity** – Paid-up capital, retained earnings.
- **Capital Adequacy Ratios** – Basel III ratios like CAR are essential in valuation.

Financial Modeling Considerations

When building a BFSI financial model:

1. **Revenue Modeling**
    - Banks → Net Interest Income + Fee & Commission Income + Trading Gains
    - Insurance → Premium Income – Claims + Investment Income
2. **Cost Modeling**
    - Interest expenses (cost of deposits/borrowings)
    - Operating expenses (staff, technology, rent)
    - Provisions & Claims
3. **Balance Sheet Projections**
    - Loans & deposits growth tied to macroeconomic assumptions
    - Capital structure maintained to meet regulatory ratios
4. **Key Ratios**
    - NIM (Net Interest Margin)
    - ROA / ROE
    - Cost-to-Income Ratio
    - Solvency Ratio (for insurance)
    - CAR (Capital Adequacy Ratio) for banks

Valuation Implications

- **Discounted Cash Flow (DCF)**
    - Free Cash Flow to Equity (FCFE) often used since cash flow to debt holders is integrated in liabilities.
    - Regulatory capital constraints affect growth and leverage assumptions.
- **Market Multiples**
    - P/BV (Price to Book Value) more relevant than P/E due to financial leverage.
    - P/ABV (Adjusted Book Value) for stressed assets or insurance companies.
- **Other Adjustments**
    - Loan loss provisions or insurance claim reserves must be explicitly modeled.
    - Non-performing assets (NPA) significantly affect asset quality.

APPLICATIONS IN THE BFSI (BANKING, FINANCIAL SERVICES, AND INSURANCE) SECTOR

The BFSI sector uses applications mainly for:

1. **Operational efficiency** – Automating repetitive tasks and processes.
2. **Risk management** – Fraud detection, credit scoring, insurance underwriting.
3. **Customer experience** – Personalization, faster services, digital access.
4. **Regulatory compliance** – Ensuring safety, transparency, and adherence to norms.

1. Banking Applications

- **Digital Banking & Payments**
  - Mobile banking apps, UPI, NEFT/RTGS, contactless payments.
  - Digital wallets and instant loan disbursals.
- **Risk & Credit Management**
  - Credit scoring using AI/ML models.
  - Fraud detection in transactions.
- **Customer Relationship Management**
  - Personalized offers, chatbot services, customer segmentation.

Application	**Impact on Financial Modeling**	**Impact on Valuation**
Digital banking & payments	Increases transaction volume, reduces operating costs; affects revenue growth assumptions	Higher revenue growth, improved cost-to-income ratio → higher ROE → higher valuation multiples
AI-driven credit scoring	Reduces NPA (Non-Performing Assets) by better risk assessment	Improves asset quality → lower loan loss provisions → higher Net Income → higher DCF value
Fraud detection & cybersecurity	Reduces financial losses and regulatory penalties	Lower unexpected expenses → more predictable cash flows → reduces risk discount in valuation

2. Financial Services Applications

- **Investment & Wealth Management**
  - Robo-advisors for portfolio allocation.
  - Algorithmic trading and predictive analytics.
- **Fintech Solutions**
  - Peer-to-peer lending platforms.
  - Blockchain for secure settlements.
- **Data Analytics**
  - Predictive analytics for market trends.
  - Portfolio risk assessment and optimization.

Application	**Impact on Financial Modeling**	**Impact on Valuation**
Robo-advisors & automated wealth management	Increases AUM (Assets Under Management) with lower operating costs	Higher recurring revenue → better margins → higher P/B or P/E multiples
Algorithmic trading	Potential for higher trading gains	Increases non-interest income → boosts net income → higher valuation
Predictive analytics for risk & portfolio	Reduces default or investment risk	Improves risk-adjusted returns → lowers WACC → higher DCF valuation

3. Insurance Applications

- **Underwriting & Risk Assessment**
  - AI-driven policy pricing.
  - Predictive modeling for claim probability.
- **Claims Processing**
  - Automated claim approvals using machine learning.
  - Fraud detection in insurance claims.

- **Customer Engagement**
  - Personalized insurance plans.
  - Chatbots for policy queries and renewals.

Application	**Impact on Financial Modeling**	**Impact on Valuation**
AI underwriting & pricing	Optimizes premiums and reduces claim probability	Higher net premiums → improved margins → higher P/B and EV/EBIT multiples
Automated claims processing	Reduces operational costs & claim settlement time	Lower expense ratio → higher profitability → better ROE and valuation
Fraud detection in claims	Minimizes unexpected claim payouts	More predictable cash flows → reduces risk discount → increases valuation reliability

4. Cross-Sector BFSI Applications

- **Regulatory Compliance**
    - Anti-money laundering (AML) solutions.
    - KYC (Know Your Customer) automation.
- **Blockchain & Smart Contracts**
    - Secure, transparent transactions.
    - Streamlined settlements in insurance and banking.

- **Cybersecurity**
    - Protecting sensitive financial data.
    - Threat detection using AI.

Application	**Impact on Financial Modeling**	**Impact on Valuation**
Regulatory compliance automation	Reduces fines and compliance costs	More stable cash flows → lower risk → higher valuation
Blockchain & smart contracts	Reduces settlement time and counterparty risk	Improves efficiency and reliability → positive effect on margins & cash flows
Cybersecurity solutions	Protects financial data & reduces fraud losses	Reduces unexpected losses → more stable earnings → higher valuation multiples