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INDUSTRY-SPECIFIC MODELING

Bank Financial Modeling

Format: 100% Excel

Duration: 3 Days

The standard financial analysis and valuation methodologies that apply to most companies do not apply to industries that “use money to make money”. Balance Sheet based companies, such as banks, play by different rules and methodologies based on the unique nature of their businesses. First, start off with an interactive primer on commercial banks and their financial statement terminology and drivers. Then, build a fully integrated bank financial model that addresses the key drivers of profitability, cash flow, and valuation. Focus is placed on: projecting the Balance Sheet line items which drive the entire model; estimating interest-earning assets and interest-bearing liabilities which drives profitability; projecting loan portfolio growth, provisions for credit losses, and net charge-offs which determine overall impact on the financial statements. Complete the model by projecting different fee revenue sources and integrating the Cash Flow Statement. Finish the model by calculating and analyzing capital adequacy ratios, financial performance indicators and valuation metrics.

Learning Objectives:

- IS: best practices in calculating net interest income via average asset and liability balances
- BS: forecast the different line items of a bank and learn how a bank model is balanced
- Credit Losses: different ways to approach estimating provisions for credit losses
- Regulatory Ratios: calculate risk weighted assets and Tier I and II capital ratios

Learning Goals:

- **PRIMER: Banks (Commercial Banks & Investment Banks)**

Banking Industry Overview

- Overview of main banking functions (commercial, investment, asset management)
- Quality of book of loans and analysis of net charge-offs
- Critical credit ratios and capital adequacy analysis; Tier 1 and II definitions and Basel II impact
- Impact of Interest Rates, importance of term structure and credit spreads

Banking Financial Statement Terminology & Drivers

- Net Interest Income Margin (Interest Expense net against Revenue not COGS)
- Analysis of Balance Sheet Assets & Liabilities
- Drivers of EPS growth
- Valuation Parameters: key banking valuation multiples (PE, PEG, Book Value, ROE)

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Bank Financial Modeling (continued)

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BANK FINANCIAL MODELING

- **Balance Sheet:**

- Project gross loan balance, provisions for credit losses, gross charge-offs, recoveries, net charge-offs, net loan balance based on important key trends and ratios
- Analyze detailed components of and balance scope vs depth in projecting mix of loan portfolio
- Project the critical funding requirements on the liability side of the Balance Sheet to support the loans and asset side of the Balance Sheet based on bank modeling best practices
- Dynamically calculate the critical fed funds sold and purchased line items
- Properly incorporate the equity account based on financing activities from Cash Flow Statement
- Calculate crucial interest-earning assets and interest-bearing liabilities from the Balance Sheet
- Estimate asset yield, funding costs and net interest spread to minimize forecasting error

- **Income Statement:**

- Calculate future Net Interest Income and margin from IEA and IBL
- Project line items that constitute non-interest fee revenue beyond using simple % growth rates
- Incorporate and dynamically integrate provision for credit losses on IS and BS
- Estimate compensation and overhead expenses to round out the Income Statement
- Correctly incorporate and integrate share buybacks and issuances, treasury options, restricted stock units and stock-based compensation into all three financial statements (IS, BS, CF)

- **Cash Flow Statement:**

- Construct automated Cash Flow Statement based on the Income Statement and Balance Sheet
- Differentiate between a bank's financial statements by properly allocating and including correct components of CFO, CFI and CFF
- Understand and appreciate which line items are impossible to calculate independently and must be lumped and grouped together to arrive at the net impact instead of tediously (and incorrectly) trying to project every single item
- Build more supporting detailed schedules to project dividends and stock repurchases and issuances and have it properly flow through the rest of the financials

- **Financial & Capital Ratios and Valuation Metrics:**

- Construct and analyze internal profitability ratios to analyze core performance of the bank
- Calculate profitability ratios and asset utilization ratios for direct comparisons
- Reconstruct and estimate Tier I and Total Capital (Tier I and II), risk weighted assets, adjusted assets and corresponding capital adequacy ratios for regulatory supervision
- Calculate current market multiples and valuation metrics relevant for a bank