Bank Operating Model and Valuation Case Study: Shawbrook Group [LSE:SHAW] and Challenger Banks in the UK

In this case study, you'll analyze Shawbrook Group [LSE:SHAW], a "challenger bank" in the UK that is seeking to disrupt the business models of the established "high street" banks (Lloyds, Barclays, HSBC, and RBS).

You will build a segment-by-segment 3-statement projection model based on the company's most recent results, your research, and the documents provided in this case study.

Then, you will select appropriate sets of comparable public companies and precedent transactions, calculate valuation multiples for them, and build a dividend discount model (DDM), residual income (excess returns) model, and a regression analysis to value Shawbrook.

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Finally, in the last segment of this case study, you will interpret the output of the model and make recommendations from three different perspectives:

1. An **investment analyst** at a long/short equity hedge fund or asset management firm that is considering Shawbrook as a potential investment.

2. An **equity research associate** at a bulge-bracket investment bank that is writing a report on Shawbrook and needs to make a "Buy," "Sell," or "Hold" recommendation.

3. An **investment banker** that is pitching Shawbrook on a potential sale of the company, and must present his thoughts on the company's valuation and the price that potential acquirers might pay.

You will write a document that sums up your recommendations from each perspective: a stock pitch, an equity research report, and a client advisory presentation.

Company and Opportunity Overview

Shawbrook is a rapidly growing "challenger bank" in the UK, which differentiates itself from existing banks by focusing on market segments that the "high street" banks have ignored or underserved, such as small-and-mid-sized enterprise (SMEs) lending and buy-to-let (BTL) mortgages.

In the UK, the top four banks currently control 85% of small-business accounts, but they have relatively low customer satisfaction scores of only 60%.

Shawbrook believes customers are unsatisfied because new regulations, such as Basel III and CRD IV, have forced the large banks to focus on commoditized products and avoid market segments that require more customer service.

The company had £2.3 billion GBP in Gross Loans as of its most recent fiscal year, with approximately £1 billion in commercial mortgages, £500 million in asset finance, £400 million in secured lending, and £200 million in business credit and £200 million in consumer lending.

It recorded £143.5 million of revenue and £43.4 million of Net Income in the last twelve months (through June 30, 2015), and it currently trades at an LTM P/E multiple of 19x and a P/TBV multiple of 3.0x.

Shawbrook first went public on the London Stock Exchange on April 8, 2015, at an offering price of £2.90 per share. The stock price increased to nearly £4.00, but has since fallen closer to its original level, and is now at £3.28.

The company's rapid growth – its loan portfolio increased by 70% in its last fiscal year – has been driven by its strength in the buy-to-let (BTL) mortgage market, second-charge mortgages, and in asset finance.

Commercial mortgages are expected to represent half or more of the company's total loan portfolio in the future, with strong growth also expected in the other areas above.

Analysts are forecasting £50-60 million in Net Income in FY15, £70-80 million in FY16, and £90-100 million in FY17; you'll have to decide whether or not these consensus estimates are reasonable.

The "Bull Case" for Shawbrook is that the UK economy continues to perform well, the company continues to gain market share in commercial mortgages and other segments, and it maintains its loan yields despite increased competition. The company issues its first dividend next year, as planned, and increases its payout ratio over time.

The "Bear Case" is that the UK economy stagnates or goes into a recession, the company gains market share at a slower rate, and it is unable to maintain its loan yields in all segments. The company may still be able to issue its first dividend next year, but it could be for a lower-than-expected amount, and it may not grow as quickly over time.

Your job is to decide which of these views, if any, is correct, and then to make an investment recommendation (for the hedge fund/asset management and equity research cases), and a client recommendation on the company's best options going forward (for the investment banking case).

Part 1: Reviewing the Data

In Part 1 of this case study, you will review relevant documents and presentations for the company, including:

- Its most recent annual and interim reports and its IPO prospectus.
- Its recent investor presentations and strategy documents.
- Industry data and research from 3rd parties.
- Press releases and news reports on the challenger banks in the UK.
- The results of your "channel checks" related to Shawbrook's total addressable market, its market share, and competition from other challenger banks.

You'll also review the company's financial statements to get an idea of its strengths and weaknesses, and you'll learn how to simplify and consolidate the statements where necessary.

You should already know the basic 3-statement projection and valuation methodologies for commercial banks from Module 1, so this part of the case study will focus on the nuances required for real companies.

Part 2: Building a 3-Statement Model for Shawbrook

Once you've done the initial data gathering, you will build a 3-statement model for Shawbrook, paying particular attention to its five major segments.

Please make sure your model reflects the following points:

- **Period:** You should project the company's financial statements **five years into the future** because the company's dividends and regulatory capital policies are expected to stabilize around then.

- **Scenarios:** You should consider at least three scenarios in the model: a Base Case, an Upside Case, and a Downside Case. The Base Case should reflect moderate GDP growth and market share increases, the Downside Case should reflect a recession followed by a recovery, and the Upside Case should reflect higher-than-expected GDP growth and market share increases.

- **Loan Portfolio:** The company's Gross Loans should drive most of the other figures in the model. Project its addressable lending markets as percentages of the UK GDP, and assume the UK GDP and the company's market share grow by certain percentages each year.

- **Provisions for Credit Losses and Net Charge-Offs:** These can be percentages of the average loan balances in the five major segments.

- **Balance Sheet Projections, Interest-Earning Assets (IEA), and Interest-Bearing Liabilities (IBL):** Most of the Balance Sheet items can be linked to Loans or Deposits. Use the company's disclosures for IEA and IBL, and assume that spreads against LIBOR change or stay the same over time, based on your research. LIBOR itself should vary based on the operating scenario (Base, Upside, or Downside).

- **Income Statement, Cash Flow Statement, and Dividend Projections:** Many Income Statement items can be percentages of revenue or percentages of Gross Loans or Deposits; the Cash Flow Statement items are similar, but you can zero-out anything that is non-recurring. Dividends should be based on the company's minimum CET 1 ratio and targeted payout ratio.

- **Regulatory Capital and Key Metrics and Ratios:** Finally, make sure you calculate the company's historical and projected Common Equity Tier 1, Tier 1 Capital, Total Capital, Tangible Common Equity, and Leverage Ratio, as well as its Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR). Make reasonable estimates if the company does not disclose sufficient detail to calculate all of these.

  You should also create a summary page that shows its key operational, financial, and regulatory metrics and ratios.

Part 3: Selecting Public Comps and Precedent Transactions and Valuing Shawbrook on a Relative Basis

Once you have completed the 3-statement projections for Shawbrook, you will begin the valuation process by selecting **comparable public companies** and **precedent transactions** and calculating valuation multiples for both sets.

Please use the following guidelines for this exercise:

- **Selection Criteria:** Make sure you consider the industry classification, size (e.g., Total Assets or Total Loans or Deposits), geography, and, for the precedent transactions, the time period.

- **Required Metrics and Multiples:** You should use the Last Twelve Months (LTM) and 1-year and 2-year forward P/E and P/TBV multiples. These multiples will be correlated with Net Income Growth and Return on Tangible Common Equity (ROTCE), so make sure you include both of those as well. For precedent transactions, only worry about *historical* multiples.

- **Non-Recurring Charges:** If you see an obvious non-recurring charge in the financial statements, you can adjust for it. However, don't spend hours poring over each company's statements to find every last oddity. For the precedent transactions, focus on picking the right set of transactions and do not worry about normalizing the numbers.

- **Adjustments for Excess or Deficit Capital:** Be aware that some companies may have **excess or deficit capital**, i.e. CET 1 above or below the targeted or median levels for the industry. You have to adjust for this because companies usually use excess capital in "less productive" ways and because deficit capital indicates that companies need additional funding. To make these adjustments, you will need to modify **almost every metric** – Net Income, Book Value, Tangible Book Value, and the returns-based metrics.

To estimate after-tax earnings on excess capital, you should use **Excess Capital * Risk-Free Rate * (1 – Tax Rate)**, and subtract this figure from the company's normal Net Income (and if the company has deficit capital, you *add* this figure). You should use Shawbrook's targeted CET 1 Ratio for the optimal/targeted capital levels of the comparable companies.

- **Calendarization:** The metrics and multiples for the precedent transactions should be based on the most recent Last Twelve Months (LTM) period from just before the deal was *announced*. For example, if the deal was announced on April 10th and the seller's Q1 numbers were not yet available, use its full fiscal-year numbers from December 31st the year before. On the other hand, if the deal was announced on May 15th and the Q1 numbers were available, use the twelve months between April 1st last year and March 31st this year for the numbers.

  For the public comps, make sure each the LTM period for each comparable company is as of June 30th of Shawbrook's current fiscal year (most UK-based banks report only half-year and full-year results).

Part 4: Regression Analysis for ROTCE and P / TBV Multiples

In addition to the "standard" methodologies, you can also use a **regression analysis** to value a commercial bank.

To set up this analysis, you select a broad set of comparable companies (e.g., all UK-based banks) and then plot ROE and P/BV or ROTCE and P/TBV on a graph to determine the relationship between them.

If two banks are of a similar size with a similar business model, the bank with the higher ROE will tend to trade at a higher P/BV multiple.

Once you determine the relationship between these variables (e.g., P/TBV = -0.2 + 11.3 * ROTCE), you can apply it to Shawbrook to determine its implied P/TBV multiple and then its implied Equity Value.

Please use the following assumptions for this analysis:

- **Set of Comparable Companies:** Please use the <u>entire</u> set of publicly traded, UK-based commercial banks. The banking industry in the UK is quite consolidated, so this is a smaller set than you might think (~15 companies).

- **Metrics:** Focus on each bank's 2-year forward P/TBV, and correlate that multiple with the ROTCE for the same period. You can decide whether a linear, quadratic, or other regression makes the most sense.

- **Excess or Deficit Capital:** You don't need to adjust for excess or deficit capital here; the set is so broad that different banks have different "optimal" capital levels, so it's not feasible to apply a single CET 1 ratio to everything.

Part 5: Building a Dividend Discount Model (DDM) and a Residual Income (Excess Returns) Model for Shawbrook

In this part of the case study, you'll build a **dividend discount model (DDM)** and a **residual income (excess returns) model** for Shawbrook based on your 3-statement operating model.

Both models are set up in similar ways since you must project Net Income and Dividends based on the company's targeted capital levels, asset growth, and risk-weighted assets.

A bank's implied equity value in a DDM equals the present value of the bank's dividends plus the present value of its Terminal Value.

But in a residual income model, the bank's implied equity value equals its current Common Book Value plus the present value of its "excess returns" (Return on Common Equity * Common Equity – Cost of Equity * Common Equity in future periods) plus the PV of the Terminal Value of these "excess returns" (if one exists).

There are advantages and disadvantages to each approach, but the Residual Income Model may work better for companies that are not currently issuing dividends while the DDM is more effective for companies with stabilized dividend issuances.

Please follow these guidelines in your analysis:

- **Stages:** Since Shawbrook is not currently issuing dividends, you'll have to create a multi-stage dividend discount model. In Phase I, which should correspond to your 3-statement model, the company starts issuing dividends and increases its payout ratio. In Phase II, the payout ratio will still increase but begin to stabilize, and in Phase III, it will stabilize as the company's loan growth slows and its ROTCE declines.

- **Financial Projections:** These should flow in from the 3-statement model you built for Shawbrook. However, you'll have to project beyond the end of the 5-year period because you should show what happens **when the dividend payout ratio stabilizes**. At the minimum, you should create **10-year projections**, but you may decide to go beyond

that. Make simple assumptions for asset growth, risk-weighted assets, and Net Income to drive these projections.

- **Cost of Equity:** Cost of Equity is difficult to determine because many of Shawbrook's comparable companies are newly public. We recommend calculating Cost of Equity for these companies using CAPM and the Dividend Growth Rate method, and then doing the same for a broader set of banks in the UK. In both models, Cost of Equity should decline over time as the company's growth rate slows down.

- **Excess or Deficit Capital:** As with the comparable companies, capital levels will once again be an issue in these models.

  In the Dividend Discount Model, we recommend ignoring excess or deficit capital and assuming that the company issues dividends such that its CET 1 Ratio reaches the targeted ratio over time. If you set it up this way, you can avoid time-consuming adjustments to a company's ROTCE and Tangible Book Value and reflect capital level changes with dividends instead (if a company has excess capital, it will issue higher-than-expected dividends, and vice versa with deficit capital).

  You cannot take this approach in the Residual Income Model because it is based on the difference between Return on Common Equity and Cost of Equity, not dividends. So you will need to adjust the company's Net Income to Common and Common Book Value for excess/deficit capital and associated earnings.

- **Terminal Value:** As with the traditional DCF analysis, you can also use the Multiples Method (based on P/BV, P/TBV, or P/E) or the Long-Term Growth Rate Method (which will give you an implied multiple) to estimate the Terminal Value. For the Residual Income Model, you will have to use the Long-Term Growth Rate Method because Terminal Value is based on the difference between ROCE and Cost of Equity.

- **Sensitivity Tables:** Do not go crazy with the sensitivity tables. Remember that your model already includes three main operational scenarios, so it is unnecessary to sensitize every last assumption.

  Focus on the assumptions **specific to these models**, such as the initial Cost of Equity, the Terminal ROCE or ROTCE, the Terminal Multiple, and the Terminal Asset Growth Rate.

Part 6: Interpreting the Output of the Valuation and Making Investment Recommendations and Strategic Recommendations to Clients

In this last segment of the case study, **you'll learn how financiers and bankers use valuations in real life** – to make investment recommendations and to advise clients on their options.

You'll begin by linking together the output from all the methodologies used in this course and creating the "football field" graph to get an overview of the company's implied value.

Then, you'll learn how an investment banker, equity research associate, and hedge fund/asset management analyst would interpret the numbers differently.

To do that, you will create three key documents based on this type of valuation:

1. **Stock Pitch for Hedge Fund and Asset Management Roles:** You'll learn how to structure your investment thesis, how to determine catalysts and risk factors, and how to use the output of this valuation to make an investment recommendation grounded in reality.

    Note that a stock pitch should ideally reflect how <u>your views</u> of the company are **very different** from the "consensus" view. So you should rely on the channel checks and incorporate them into your analysis, which means that the loan growth rates, interest spreads, charge-offs, provisions, and more will all be different.

2. **Equity Research Report:** While this is similar to the stock pitch above, the format, writing style, and conclusions will be different because banks try to portray companies in positive ways. As a result, "Buy" recommendations tend to be most common, although "Hold" recommendations are also possible in uncertain times. "Sell" recommendations are rare.

3. **Investment Banking Client Recommendation:** Finally, you'll learn how a banker would advise Shawbrook on the price to expect in a sell-side M&A process where the Board of Directors decides to sell the company. You'll also learn how a bank might structure and present its recommendations in a concise way.

By the end of this module, you'll understand **valuation** – the most important concept in financial modeling – in incredible depth, from both a buy-side and sell-side perspective.

More importantly, you'll **outperform other candidates** in interviews and on the job because you'll understand not only the "What" and the "How," but also the "Why" and the "What Next" better than anyone else.